PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

HYDROLOGIC REPORT

TO

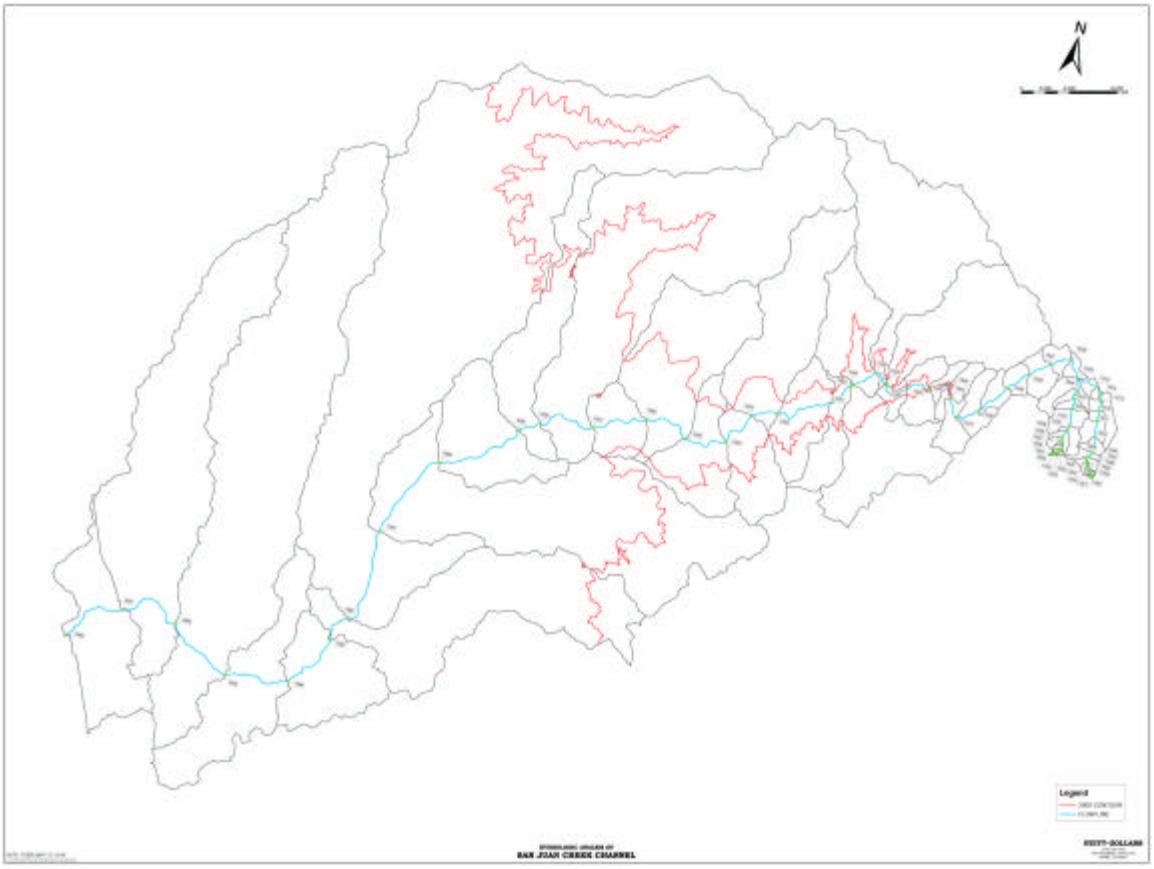
THE BASELINE HYDROLOGIC CONDITIONS

SAN JUAN AND UPPER SAN MATEO WATERSHEDS

PREPARED FOR

RANCHO MISSION VIEJO

APRIL 2, 2004



VOLUME I

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INTRODUCTION

Huitt-Zollars, Inc. was requested by Rancho Mission Viejo, L.L.C. to prepare a hydrologic model that is in conformance to the County of Orange criteria. After meeting with the County, Huitt-Zollars was told they could use the methodology as followed within the Rivertech Study prepared in 1987 for the San Juan Watershed. Huitt-Zollars prepared this analysis to show the changes between the existing condition and the proposed B-4 Ranch Plan Development Alternative. The Huitt-Zollars' report is a supplement to the baseline hydrologic conditions for San Juan and Upper San Mateo Watersheds, prepared by Philip Williams & Associates. This supplement will give the County a sensitivity analysis between the two hydrologic models as it pertains to changes between the existing conditions and proposed development.

The Hydrologic Analysis for the San Juan Creek Main Stem has been completed to the downstream boundary of the Rancho Mission Viejo (Ranch) property, approximately 2¼ miles upstream of the Interstate 5 crossing. The watershed encompasses almost 107 square miles that extend into the Cleveland National Forest, Santa Ana Mountains, and the Elsinore Mountains in Riverside County. The watershed elevations range from approximately 130 feet above sea level at the downstream Ranch boundary to over 3,500 feet above sea level at the headwaters.

2-Year, 10-Year, and 100-Year Expected Value and 100-Year High Confidence analyses were prepared. The hydrologic analyses were completed in accordance with the 1986 Orange County Hydrology Manual and 1995 Orange County Hydrology Manual Addendum No. 1. The application of the procedures outlined in these two documents and the assumptions used to develop hydrologic parameters are described in this report.

MODEL OVERVIEW

Since the procedures of the Orange County Hydrology Manual were calibrated to a single area unit hydrograph, a series of single area unit hydrographs have been prepared along the San Juan Creek Main Steam. Working downstream, a rational method analysis was prepared for the headwaters of San Juan Creek, which is the Morrell Canyon area. As soon as the total upstream tributary drainage area exceeded 640 acres, a unit hydrograph was calculated based on parameters from the rational method analysis such as basin lag. The peak flow rates from the two methods were compared. If the rational method peak flow rate was larger, then this flow rate was used to route flows downstream to the next concentration node. If the unit hydrograph peak flow rate was larger, then this flow rate was used to route flows downstream to the next concentration node. The travel time was calculated to this concentration node and used to estimate a new basin lag for development of a unit hydrograph that included the additional area tributary at this concentration node. This process was continued downstream with concentration nodes located at major confluences or other points of significance such as Ortega Highway crossings. Due to differences in methodology for different return events, specifically, the 2-Year Expected Value analysis versus the others analyzed, two distinct models were created.

To model the 10-Year and 100-Year Expected Value and 100-Year High Confidence analyses, the Advanced Engineering Software RATSCx program was utilized. The RATSCx program allows for both rational method and unit hydrograph method analyses to be completed using one data file. By using the RATSCx program, parameters such as rainfall depths and land use/soil type combinations are input on a sub-area basis and tabulated for calculations of loss

rates. Additionally, the hydraulic calculations to estimate travel times between concentration nodes and, ultimately, basin lag are internal to the program. A limitation of the program is that S-Graph proportions can only be specified on a data file basis. Therefore, 34 separate RATSCx data files were developed, one for each concentration node, and linked together using a network file that executes the data files in upstream to downstream order.

To model the 2-Year Expected Value analysis, both the Advanced Engineering Software RATSCx and FLOODSCx programs were utilized. The RATSCx program was used to develop the rational method analysis to the first hydrograph location. According to the Orange County Hydrology Manual Addendum No. 1, Fp = 0.60 in/hr for all areas independent of soil type. Unfortunately, the RATSCx program requires that these Fp values be manually specified and, thus, does not tabulate soil types or curve numbers that could be used to develop loss rates for a unit hydrograph analysis. Therefore, the FLOODSCx program was used to develop unit hydrographs based on data calculated both from the rational method analysis and from other tabulations of rainfall and land use/soil type combinations. The time of concentration (Tc) from the rational method was used to calculate the basin lag at the first unit hydrograph location. Rainfall, S-Graph proportions, losses, and channel routing information, including travel times, Tc's, and downstream basin lag estimates, were calculated outside of the FLOODSCx program.

ASSUMPTIONS

Base Maps and Topographic Data

Due to the size and extents of the watershed, the base map for the existing and proposed condition model was created using three and four separate sources, respectively. Both base maps used aerial topography with 2-foot, 5-foot, and 10-foot contour intervals in the vicinity of the Ranch that represent existing conditions of the area. Beyond the extents of the aerial topography, USGS digital topography was utilized to the County boundary. Outside of the County, raster images of USGS quadrangle maps were used. Additionally, the base map for the proposed condition utilized mass grade topographic information that was spliced into existing aerial topography for each of the proposed development bubbles.

Rainfall

Rainfall intensities and depths were derived from the Orange County Hydrology Manual. Two rainfall zones were incorporated; Non-Mountainous for areas below the 2,000' elevation and Mountainous for areas above the 2,000' elevation. For sub-areas in both zones, weighted averages were calculated. Rainfall intensities and depths for Non-Mountainous and Mountainous zones are presented in Tables 1 and 2.

In the 10-Year and 100-Year Expected Value and 100-Year High Confidence analyses, rainfall depths were input into the model on a sub-area basis. In the 2-Year Expected Value analysis, rainfall depths were specified for the entire upstream tributary area.

Land Use

As part of the Philip Williams & Associates (PWA) report titled, "Baseline Hydrologic Conditions – San Juan & Upper San Mateo Watersheds," dated May 30, 2001, PWA developed "Land Use Sub-Categories" for the HEC-1 model. Based on descriptions of these sub-categories, the land uses were mapped to hydrologic land uses for input into the models according to Table 3. PWA prepared land use mapping for both the existing and several proposed development conditions. For the proposed condition hydrologic analysis, only one, the Ranch Plan Alternative (B4G), land use plan was evaluated.

RAINFALL INTENSITIES

Non-Mountainous (Elevations <2,000')

2-Year Expected Value		10-Year Expected Value		100-Year Expected Value		100-Year High Confidence	
Time (min)	Intensity (in/hr)	Time (min)	Intensity (in/hr)	Time (min)	Intensity (in/hr)	Time (min)	Intensity (in/hr)
5	1.58	5	3.19	5	4.82	5	6.19
10	1.06	10	2.16	10	3.26	10	4.16
15	0.84	15	1.72	15	2.59	15	3.30
20	0.72	20	1.46	20	2.20	20	2.80
30	0.57	30	1.16	30	1.75	30	2.22
60	0.38	60	0.79	60	1.18	60	1.49
120	0.26	120	0.53	120	0.80	120	1.00

Mountainous (Elevations >2,000')

2-Year Expected Value		10-Year Expected Value		100-Year Expected Value		100-Year High Confidence	
Time (min)	Intensity (in/hr)	Time (min)	Intensity (in/hr)	Time (min)	Intensity (in/hr)	Time (min)	Intensity (in/hr)
5	2.45	5	5.10	5	7.60	5	10.00
10	1.44	10	3.10	10	4.50	10	6.00
15	1.09	15	2.50	15	3.50	15	4.50
20	0.84	20	1.80	20	2.75	20	3.60
30	0.63	30	1.35	30	2.10	30	2.75
60	0.46	60	1.00	60	1.52	60	1.95
120	0.37	120	0.77	120	1.20	120	1.55

Table 1 – Rainfall Intensities

RAINFALL DEPTHS

Non-Mountainous (Elevations <2,000')

2-Year Expected Value		10-Year Expected Value		100-Year Expected Value		100-Year High Confidence	
Time ()	Intensity (in)	Time ()	Intensity (in)	Time ()	Intensity (in)	Time ()	Intensity (in)
5-Min	0.13	5-Min	0.26	5-Min	0.40	5-Min	0.52
30-Min	0.28	30-Min	0.59	30-Min	0.87	30-Min	1.09
1-Hr	0.37	1-Hr	0.78	1-Hr	1.15	1-Hr	1.45
3-Hr	0.62	3-Hr	1.31	3-Hr	1.94	3-Hr	2.43
6-Hr	0.85	6-Hr	1.81	6-Hr	2.71	6-Hr	3.36
24-Hr	1.44	24-Hr	3.03	24-Hr	4.49	24-Hr	5.63

Mountainous (Elevations >2,000')

2-Year Expected Value		10-Year Expected Value		100-Year Expected Value		100-Year High Confidence	
Time ()	Intensity (in)	Time ()	Intensity (in)	Time ()	Intensity (in)	Time ()	Intensity (in)
5-Min	0.18	5-Min	0.40	5-Min	0.63	5-Min	0.78
30-Min	0.32	30-Min	0.68	30-Min	1.04	30-Min	1.34
1-Hr	0.46	1-Hr	0.99	1-Hr	1.51	1-Hr	1.94
3-Hr	0.94	3-Hr	2.10	3-Hr	3.08	3-Hr	3.96
6-Hr	1.46	6-Hr	3.14	6-Hr	4.81	6-Hr	6.19
24-Hr	2.67	24-Hr	5.71	24-Hr	8.76	24-Hr	11.27

Table 1 – Rainfall Depths

LAND USE MAPPING

Land Use Sub-Category	Hydrologic Land Use
General Transportation	Commercial
General Urban Commercial	Commercial
General Developed Areas	5-7 Dwellings/Acre
Fluctuating Shoreline	Public Park
Lakes/Open Water	Public Park
General Disturbed Areas	Barren (Poor)
Broadleaf Chaparral	Chaparral, Broadleaf (Fair)
Broadleaf Chaparral and Sage	Chaparral, Broadleaf (Fair)
Chaparral – Sage Scrub	Chaparral, Broadleaf (Fair)
General Chaparral	Chaparral, Broadleaf (Fair)
Rural Residential	Chaparral, Broadleaf (Fair)
Narrowleaf Chaparral	Chaparral, Narrowleaf (Fair)
General Grassland	Grass (Fair)
Live Oak Savanna	Grass (Fair)
Sumac Savanna	Grass (Fair)
Disturbed Wetlands	Meadows or Cienegas (Fair)
Meadow and Marsh	Meadows or Cienegas (Good)
General Sage Scrub	Open Brush (Fair)
Rock with Plants	Open Brush (Fair)
Sage Scrub- Grassland	Open Brush (Fair)
Streams and Creeks	Open Brush (Fair)
Forest	Woodland (Fair)
Woodland and Riparian	Woodland (Fair)
General Agriculture	Fallow (Poor)
General Nurseries	Orchards, Evergreen (Fair)
General Orchards	Orchards, Evergreen (Fair)
Irrigated Row Crops	Pasture, Dryland (Fair)
Row Crops	Pasture, Dryland (Fair)
General Parks	Turf (Fair)

Table 3 – Land Use Mapping

Hydrologic Soils

Hydrologic soils were assigned based on the Orange County Hydrology Manual.

Antecedent Moisture Condition

As outlined in the Orange County Hydrology Manual Addendum No. 1, Antecedent Moisture Condition (AMC) II was used for all analyses.

Depth Area Adjustments

As outlined in the Orange County Hydrology Manual, Sierra Madre depth area adjustments were chosen for all calculations.

S-Graphs

At the direction of the County, S-Graph proportions were assigned to be in significant agreement with the Rivertech, Inc. report titled, "San Juan Creek Channel – Facility L01 – Hydrology Study," dated June 1987. In the downstream reaches of the Rivertech Study, the sub-area S-Graph proportions could not be resolved, so assumptions were made based on topography and existing development patterns. For the proposed condition analysis, development bubble areas were assumed to change from "Valley – Undeveloped" to "Valley – Developed."

In the 10-Year and 100-Year Expected Value and 100-Year High Confidence analyses, S-Graph proportions were input into the model on a sub-area basis. In the 2-Year Expected Value analysis, S-Graph proportions were specified for the entire upstream tributary area.

Channel Geometry

At the direction of the County, channel geometry was designed to be in significant agreement with the Rivertech, Inc. report titled, "San Juan Creek Channel – Facility L01 – Hydrology Study," dated June 1987. Channels were sized to convey the 100-year High Confidence peak flow rates without overtopping. Additionally, the 100-Year High Confidence analysis was used as the determining factor in insuring that travel times for individual reaches met the County criteria outlined in the Hydrology Manual on pages D-12 and D-15.

Sub-Areas

In general, sub-areas were developed so that the sub-area sizes gradually increased as the study progressed downstream. After the first hydrograph was developed on San Juan Creek Main Stem, concentration nodes were located at major confluences or other points of significance such as Ortega Highway crossings. Generally these concentration nodes defined the sub-areas rather than the sub-area size defining the concentration node. Increments in sub-area sizes were, for the most part, less than four square miles. However, there are a few large canyons, such as Hot Spring, Lucas, Bell, and Canada Gobernadora, that drain a significantly larger watershed and the sub-area size increment was correspondingly large.

San Juan Creek - Main Stem
Hydrologic Summary - Existing Condition

Node	Location	Total Area (acres)	Total Area (sq. mi.)	Peak Flow Rate 2-Year EV (cfs)	10-Year EV (cfs)	100-Year EV (cfs)	100-Year HC (cfs)
1046	Ortega Highway Crossing	2,446	3.82	303	1,422	2,558	3,548
1047	Decker Canyon	4,302	6.72	480	2,259	4,126	5,749
1048	Long Canyon	7,127	11.14	772	3,463	6,408	8,754
1050	Bear Canyon	9,516	14.87	921	4,342	7,968	10,721
1053	Lion Canyon	12,821	20.03	1,131	5,044	9,556	13,140
1057	Ortega Highway Crossing	17,423	27.22	1,240	5,713	10,764	14,815
1058	Hot Spring Canyon	23,888	37.33	1,529	7,046	13,168	18,404
1059	Cold Spring Canyon	25,469	39.80	1,529	7,213	13,463	18,926
1060	Ortega Highway Crossing	26,855	41.96	1,529	7,213	13,519	18,927
1061	Lucas Canyon	32,181	50.28	1,545	7,500	14,709	20,621
1062	Bell Canyon - Ranch Boundary	46,437	72.56	1,874	9,035	17,977	26,074
1063	Verdugo Canyon	49,892	77.96	1,953	9,226	18,572	26,925
1065	Trampas Canyon	53,123	83.00	1,953	9,255	18,730	26,943
1066	Canada Gobernadora	61,427	95.98	1,953	9,443	19,596	28,242
1067	Canada Chiquita	66,611	104.08	1,977	9,656	20,187	28,984
1068	Ranch Boundary	68,205	106.57	1,977	9,658	20,247	28,984

San Juan Creek - Main Stem
Hydrologic Summary - Proposed Condition

Node	Location	Total Area (acres)	Total Area (sq. mi.)	Peak Flow Rate 2-Year EV (cfs)	10-Year EV (cfs)	100-Year EV (cfs)	100-Year HC (cfs)
1046	Ortega Highway Crossing	2,446	3.82	303	1,422	2,558	3,548
1047	Decker Canyon	4,302	6.72	480	2,259	4,126	5,749
1048	Long Canyon	7,127	11.14	772	3,463	6,408	8,754
1050	Bear Canyon	9,516	14.87	921	4,342	7,968	10,721
1053	Lion Canyon	12,821	20.03	1,131	5,044	9,556	13,140
1057	Ortega Highway Crossing	17,423	27.22	1,240	5,713	10,764	14,815
1058	Hot Spring Canyon	23,888	37.33	1,529	7,046	13,168	18,404
1059	Cold Spring Canyon	25,469	39.80	1,529	7,213	13,463	18,926
1060	Ortega Highway Crossing	26,855	41.96	1,529	7,213	13,519	18,927
1061	Lucas Canyon	32,181	50.28	1,545	7,500	14,709	20,621
1062	Bell Canyon - Ranch Boundary	46,437	72.56	1,874	9,035	17,977	26,074
1063	Verdugo Canyon	49,888	77.95	1,952	9,244	18,594	26,953
1065	Trampas Canyon	53,247	83.20	1,952	9,429	18,961	27,132
1066	Canada Gobernadora	61,500	96.09	1,952	9,766	20,030	28,752
1067	Canada Chiquita	66,685	104.20	1,952	9,963	20,638	29,486
1068	Ranch Boundary	68,245	106.63	1,952	10,006	20,753	29,527

San Juan Creek - Main Stem
Hydrologic Summary - 2-Year - Expected Value

Existing Condition

Node	Location	Total Area (ac)	Total Area (sq. mi.)	Longest Flowpath (ft)	Lag (hr)	Peak Flow Rate (cfs)	Runoff Volume (ac-ft)
1046	Ortega Highway Crossing	2,446	3.82	33,774	1.57	303	161
1047	Decker Canyon	4,302	6.72	33,995	1.58	480	271
1048	Long Canyon	7,127	11.14	35,596	1.61	772	499
1050	Bear Canyon	9,516	14.87	38,140	1.67	921	627
1053	Lion Canyon	12,821	20.03	48,059	1.89	1,131	830
1057	Ortega Highway Crossing	17,423	27.22	65,104	2.23	1,240	1,021
1058	Hot Spring Canyon	23,888	37.33	70,549	2.35	1,529	1,332
1059	Cold Spring Canyon	25,469	39.80	72,734	2.41	1,529	1,343
1060	Ortega Highway Crossing	26,855	41.96	80,562	2.60	1,529	1,343
1061	Lucas Canyon	32,181	50.28	88,566	2.82	1,545	1,446
1062	Bell Canyon - Ranch Boundary	46,437	72.56	96,841	3.06	1,874	1,805
1063	Verdugo Canyon	49,892	77.96	99,693	3.12	1,953	1,901
1065	Trampas Canyon	53,123	83.00	110,849	3.38	1,953	1,901
1066	Canada Gobernadora	61,427	95.98	117,144	3.59	1,953	1,901
1067	Canada Chiquita	66,611	104.08	123,345	3.77	1,977	1,989
1068	Ranch Boundary	68,205	106.57	129,669	3.95	1,977	2,004

Proposed Condition

Node	Location	Total Area (ac)	Total Area (sq. mi.)	Longest Flowpath (ft)	Lag (hr)	Peak Flow Rate (cfs)	Runoff Volume (ac-ft)
1046	Ortega Highway Crossing	2,446	3.82	33,774	1.57	303	161
1047	Decker Canyon	4,302	6.72	33,995	1.58	480	271
1048	Long Canyon	7,127	11.14	35,596	1.61	772	499
1050	Bear Canyon	9,516	14.87	38,140	1.67	921	627
1053	Lion Canyon	12,821	20.03	48,059	1.89	1,131	830
1057	Ortega Highway Crossing	17,423	27.22	65,104	2.23	1,240	1,021
1058	Hot Spring Canyon	23,888	37.33	70,549	2.35	1,529	1,332
1059	Cold Spring Canyon	25,469	39.80	72,734	2.41	1,529	1,343
1060	Ortega Highway Crossing	26,855	41.96	80,562	2.60	1,529	1,343
1061	Lucas Canyon	32,181	50.28	88,566	2.82	1,545	1,446
1062	Bell Canyon - Ranch Boundary	46,437	72.56	96,841	3.06	1,874	1,805
1063	Verdugo Canyon	49,888	77.95	99,693	3.12	1,952	1,900
1065	Trampas Canyon	53,247	83.20	110,849	3.38	1,952	1,900
1066	Canada Gobernadora	61,500	96.09	117,144	3.59	1,952	1,900
1067	Canada Chiquita	66,685	104.20	123,345	3.77	1,952	1,922
1068	Ranch Boundary	68,245	106.63	129,669	3.95	1,952	1,939

San Juan Creek - Main Stem
Hydrologic Summary - 10-Year - Expected Value

Existing Condition

Node	Location	Total Area (ac)	Total Area (sq. mi.)	Longest Flowpath (ft)	Lag (hr)	Peak Flow Rate (cfs)	Runoff Volume (ac-ft)
1046	Ortega Highway Crossing	2,446	3.82	33,774	0.92	1,422	638
1047	Decker Canyon	4,302	6.72	33,995	0.92	2,259	1,111
1048	Long Canyon	7,127	11.14	35,596	0.94	3,463	1,919
1050	Bear Canyon	9,516	14.87	38,140	0.98	4,342	2,484
1053	Lion Canyon	12,821	20.03	48,059	1.11	5,044	3,316
1057	Ortega Highway Crossing	17,423	27.22	65,104	1.32	5,713	4,174
1058	Hot Spring Canyon	23,888	37.33	70,549	1.39	7,046	5,467
1059	Cold Spring Canyon	25,469	39.80	72,734	1.42	7,213	5,659
1060	Ortega Highway Crossing	26,855	41.96	80,562	1.54	7,213	5,700
1061	Lucas Canyon	32,181	50.28	88,566	1.67	7,500	6,401
1062	Bell Canyon - Ranch Boundary	46,437	72.56	96,841	1.80	9,035	8,144
1063	Verdugo Canyon	49,892	77.96	99,693	1.84	9,226	8,415
1065	Trampas Canyon	53,123	83.00	110,849	1.99	9,255	8,606
1066	Canada Gobernadora	61,427	95.98	117,144	2.11	9,443	9,211
1067	Canada Chiquita	66,611	104.08	123,345	2.22	9,656	9,632
1068	Ranch Boundary	68,205	106.57	129,669	2.32	9,658	9,777

Proposed Condition

Node	Location	Total Area (ac)	Total Area (sq. mi.)	Longest Flowpath (ft)	Lag (hr)	Peak Flow Rate (cfs)	Runoff Volume (ac-ft)
1046	Ortega Highway Crossing	2,446	3.82	33,774	0.92	1,422	638
1047	Decker Canyon	4,302	6.72	33,995	0.92	2,259	1,111
1048	Long Canyon	7,127	11.14	35,596	0.94	3,463	1,919
1050	Bear Canyon	9,516	14.87	38,140	0.98	4,342	2,484
1053	Lion Canyon	12,821	20.03	48,059	1.11	5,044	3,316
1057	Ortega Highway Crossing	17,423	27.22	65,104	1.32	5,713	4,174
1058	Hot Spring Canyon	23,888	37.33	70,549	1.39	7,046	5,467
1059	Cold Spring Canyon	25,469	39.80	72,734	1.42	7,213	5,659
1060	Ortega Highway Crossing	26,855	41.96	80,562	1.54	7,213	5,700
1061	Lucas Canyon	32,181	50.28	88,566	1.67	7,500	6,401
1062	Bell Canyon - Ranch Boundary	46,437	72.56	96,841	1.80	9,035	8,144
1063	Verdugo Canyon	49,888	77.95	99,693	1.84	9,244	8,431
1065	Trampas Canyon	53,247	83.20	110,849	1.99	9,429	8,741
1066	Canada Gobernadora	61,500	96.09	117,144	2.11	9,766	9,462
1067	Canada Chiquita	66,685	104.20	123,345	2.22	9,963	9,849
1068	Ranch Boundary	68,245	106.63	129,669	2.32	10,006	10,026

San Juan Creek - Main Stem
Hydrologic Summary - 100-Year - Expected Value

Existing Condition

Node	Location	Total Area (ac)	Total Area (sq. mi.)	Longest Flowpath (ft)	Lag (hr)	Peak Flow Rate (cfs)	Runoff Volume (ac-ft)
1046	Ortega Highway Crossing	2,446	3.82	33,774	0.81	2,558	1,191
1047	Decker Canyon	4,302	6.72	33,995	0.82	4,126	2,086
1048	Long Canyon	7,127	11.14	35,596	0.83	6,408	3,547
1050	Bear Canyon	9,516	14.87	38,140	0.86	7,968	4,611
1053	Lion Canyon	12,821	20.03	48,059	0.97	9,556	6,074
1057	Ortega Highway Crossing	17,423	27.22	65,104	1.14	10,764	7,710
1058	Hot Spring Canyon	23,888	37.33	70,549	1.21	13,168	10,119
1059	Cold Spring Canyon	25,469	39.80	72,734	1.23	13,463	10,503
1060	Ortega Highway Crossing	26,855	41.96	80,562	1.33	13,519	10,675
1061	Lucas Canyon	32,181	50.28	88,566	1.43	14,709	12,057
1062	Bell Canyon - Ranch Boundary	46,437	72.56	96,841	1.54	17,977	15,436
1063	Verdugo Canyon	49,892	77.96	99,693	1.57	18,572	16,036
1065	Trampas Canyon	53,123	83.00	110,849	1.69	18,730	16,477
1066	Canada Gobernadora	61,427	95.98	117,144	1.79	19,596	17,779
1067	Canada Chiquita	66,611	104.08	123,345	1.87	20,187	18,601
1068	Ranch Boundary	68,205	106.57	129,669	1.95	20,247	18,871

Proposed Condition

Node	Location	Total Area (ac)	Total Area (sq. mi.)	Longest Flowpath (ft)	Lag (hr)	Peak Flow Rate (cfs)	Runoff Volume (ac-ft)
1046	Ortega Highway Crossing	2,446	3.82	33,774	0.81	2,558	1,191
1047	Decker Canyon	4,302	6.72	33,995	0.82	4,126	2,086
1048	Long Canyon	7,127	11.14	35,596	0.83	6,408	3,547
1050	Bear Canyon	9,516	14.87	38,140	0.86	7,968	4,611
1053	Lion Canyon	12,821	20.03	48,059	0.97	9,556	6,074
1057	Ortega Highway Crossing	17,423	27.22	65,104	1.14	10,764	7,710
1058	Hot Spring Canyon	23,888	37.33	70,549	1.21	13,168	10,119
1059	Cold Spring Canyon	25,469	39.80	72,734	1.23	13,463	10,503
1060	Ortega Highway Crossing	26,855	41.96	80,562	1.33	13,519	10,675
1061	Lucas Canyon	32,181	50.28	88,566	1.43	14,709	12,057
1062	Bell Canyon - Ranch Boundary	46,437	72.56	96,841	1.54	17,977	15,436
1063	Verdugo Canyon	49,888	77.95	99,693	1.57	18,594	16,054
1065	Trampas Canyon	53,247	83.20	110,849	1.69	18,961	16,638
1066	Canada Gobernadora	61,500	96.09	117,144	1.79	20,030	18,077
1067	Canada Chiquita	66,685	104.20	123,345	1.87	20,638	18,872
1068	Ranch Boundary	68,245	106.63	129,669	1.95	20,753	19,179

San Juan Creek - Main Stem
Hydrologic Summary - 100-Year - High Confidence

Existing Condition

Node	Location	Total Area (ac)	Total Area (sq. mi.)	Longest Flowpath (ft)	Lag (hr)	Peak Flow Rate (cfs)	Runoff Volume (ac-ft)
1046	Ortega Highway Crossing	2,446	3.82	33,774	0.76	3,548	1,661
1047	Decker Canyon	4,302	6.72	33,995	0.76	5,749	2,914
1048	Long Canyon	7,127	11.14	35,596	0.78	8,754	4,922
1050	Bear Canyon	9,516	14.87	38,140	0.80	10,721	6,405
1053	Lion Canyon	12,821	20.03	48,059	0.91	13,140	8,445
1057	Ortega Highway Crossing	17,423	27.22	65,104	1.06	14,815	10,694
1058	Hot Spring Canyon	23,888	37.33	70,549	1.12	18,404	14,052
1059	Cold Spring Canyon	25,469	39.80	72,734	1.15	18,926	14,597
1060	Ortega Highway Crossing	26,855	41.96	80,562	1.23	18,927	14,863
1061	Lucas Canyon	32,181	50.28	88,566	1.33	20,621	16,822
1062	Bell Canyon - Ranch Boundary	46,437	72.56	96,841	1.42	26,074	21,691
1063	Verdugo Canyon	49,892	77.96	99,693	1.45	26,925	22,580
1065	Trampas Canyon	53,123	83.00	110,849	1.56	26,943	23,163
1066	Canada Gobernadora	61,427	95.98	117,144	1.64	28,242	25,046
1067	Canada Chiquita	66,611	104.08	123,345	1.72	28,984	26,243
1068	Ranch Boundary	68,205	106.57	129,669	1.79	28,984	26,626

Proposed Condition

Node	Location	Total Area (ac)	Total Area (sq. mi.)	Longest Flowpath (ft)	Lag (hr)	Peak Flow Rate (cfs)	Runoff Volume (ac-ft)
1046	Ortega Highway Crossing	2,446	3.82	33,774	0.76	3,548	1,661
1047	Decker Canyon	4,302	6.72	33,995	0.76	5,749	2,914
1048	Long Canyon	7,127	11.14	35,596	0.78	8,754	4,922
1050	Bear Canyon	9,516	14.87	38,140	0.80	10,721	6,405
1053	Lion Canyon	12,821	20.03	48,059	0.91	13,140	8,445
1057	Ortega Highway Crossing	17,423	27.22	65,104	1.06	14,815	10,694
1058	Hot Spring Canyon	23,888	37.33	70,549	1.12	18,404	14,052
1059	Cold Spring Canyon	25,469	39.80	72,734	1.15	18,926	14,597
1060	Ortega Highway Crossing	26,855	41.96	80,562	1.23	18,927	14,863
1061	Lucas Canyon	32,181	50.28	88,566	1.33	20,621	16,822
1062	Bell Canyon - Ranch Boundary	46,437	72.56	96,841	1.42	26,074	21,691
1063	Verdugo Canyon	49,888	77.95	99,693	1.45	26,953	22,599
1065	Trampas Canyon	53,247	83.20	110,849	1.56	27,132	23,342
1066	Canada Gobernadora	61,500	96.09	117,144	1.64	28,752	25,365
1067	Canada Chiquita	66,685	104.20	123,345	1.72	29,486	26,525
1068	Ranch Boundary	68,245	106.63	129,669	1.79	29,527	26,945

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

TECHNICAL APPENDIX I-A
HYDROLOGIC ANALYSIS
UPSTREAM AREAS
2-YEAR EXPECTED VALUE

Rainfall Depths
2-Year - Expected Value - Upstream Areas

	Area	< 2000	> 2000	Rainfall Depth							Area	< 2000	> 2000	Rainfall Depth					
Subarea	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr	Node	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr
		X		0.13	0.28	0.37	0.62	0.85	1.44			X		0.13	0.28	0.37	0.62	0.85	1.44
			X	0.18	0.32	0.46	0.94	1.46	2.67				X	0.18	0.32	0.46	0.94	1.46	2.67
1000	1.3	0.0	1.3	0.18	0.32	0.46	0.94	1.46	2.67	1001	1.3	0.0	1.3	0.18	0.32	0.46	0.94	1.46	2.67
1001	1.2	0.0	1.2	0.18	0.32	0.46	0.94	1.46	2.67	1002	2.5	0.0	2.5	0.18	0.32	0.46	0.94	1.46	2.67
1002	2.4	0.0	2.4	0.18	0.32	0.46	0.94	1.46	2.67	1003	4.9	0.0	4.9	0.18	0.32	0.46	0.94	1.46	2.67
1003	3.3	0.0	3.3	0.18	0.32	0.46	0.94	1.46	2.67	1004	8.2	0.0	8.2	0.18	0.32	0.46	0.94	1.46	2.67
1004	5.5	0.0	5.5	0.18	0.32	0.46	0.94	1.46	2.67	1005	13.7	0.0	13.7	0.18	0.32	0.46	0.94	1.46	2.67
1005	7.8	0.0	7.8	0.18	0.32	0.46	0.94	1.46	2.67	1006	21.5	0.0	21.5	0.18	0.32	0.46	0.94	1.46	2.67
1006	10.1	0.0	10.1	0.18	0.32	0.46	0.94	1.46	2.67	1007	31.6	0.0	31.6	0.18	0.32	0.46	0.94	1.46	2.67
1007	19.2	0.0	19.2	0.18	0.32	0.46	0.94	1.46	2.67	1008	50.8	0.0	50.8	0.18	0.32	0.46	0.94	1.46	2.67
1008	32.5	0.0	32.5	0.18	0.32	0.46	0.94	1.46	2.67	1009	83.3	0.0	83.3	0.18	0.32	0.46	0.94	1.46	2.67
1009	43.3	0.0	43.3	0.18	0.32	0.46	0.94	1.46	2.67	1010	126.6	0.0	126.6	0.18	0.32	0.46	0.94	1.46	2.67
1010	77.7	0.0	77.7	0.18	0.32	0.46	0.94	1.46	2.67	1011	204.3	0.0	204.3	0.18	0.32	0.46	0.94	1.46	2.67
1011	26.0	0.0	26.0	0.18	0.32	0.46	0.94	1.46	2.67	1012	230.3	0.0	230.3	0.18	0.32	0.46	0.94	1.46	2.67
1012	24.7	0.0	24.7	0.18	0.32	0.46	0.94	1.46	2.67	1013	255.0	0.0	255.0	0.18	0.32	0.46	0.94	1.46	2.67
1013	81.9	0.0	81.9	0.18	0.32	0.46	0.94	1.46	2.67	1014	336.9	0.0	336.9	0.18	0.32	0.46	0.94	1.46	2.67
1014	16.0	0.0	16.0	0.18	0.32	0.46	0.94	1.46	2.67	1015	352.9	0.0	352.9	0.18	0.32	0.46	0.94	1.46	2.67
1015	36.7	0.0	36.7	0.18	0.32	0.46	0.94	1.46	2.67										
1020	0.9	0.0	0.9	0.18	0.32	0.46	0.94	1.46	2.67	1021	1.3	0.0	1.3	0.18	0.32	0.46	0.94	1.46	2.67
1021	0.8	0.0	0.8	0.18	0.32	0.46	0.94	1.46	2.67	1022	2.1	0.0	2.1	0.18	0.32	0.46	0.94	1.46	2.67
1022	1.2	0.0	1.2	0.18	0.32	0.46	0.94	1.46	2.67	1023	3.3	0.0	3.3	0.18	0.32	0.46	0.94	1.46	2.67
1023	0.7	0.0	0.7	0.18	0.32	0.46	0.94	1.46	2.67	1024	4.0	0.0	4.0	0.18	0.32	0.46	0.94	1.46	2.67
1024	3.1	0.0	3.1	0.18	0.32	0.46	0.94	1.46	2.67	1025	7.1	0.0	7.1	0.18	0.32	0.46	0.94	1.46	2.67
1025	3.3	0.0	3.3	0.18	0.32	0.46	0.94	1.46	2.67	1026	10.4	0.0	10.4	0.18	0.32	0.46	0.94	1.46	2.67
1026	7.0	0.0	7.0	0.18	0.32	0.46	0.94	1.46	2.67	1027	17.4	0.0	17.4	0.18	0.32	0.46	0.94	1.46	2.67
1027	3.2	0.0	3.2	0.18	0.32	0.46	0.94	1.46	2.67	1028	20.6	0.0	20.6	0.18	0.32	0.46	0.94	1.46	2.67
1028	17.8	0.0	17.8	0.18	0.32	0.46	0.94	1.46	2.67	1029	38.4	0.0	38.4	0.18	0.32	0.46	0.94	1.46	2.67
1029	31.5	0.0	31.5	0.18	0.32	0.46	0.94	1.46	2.67	1030	69.9	0.0	69.9	0.18	0.32	0.46	0.94	1.46	2.67
1030	55.9	0.0	55.9	0.18	0.32	0.46	0.94	1.46	2.67	1031	125.8	0.0	125.8	0.18	0.32	0.46	0.94	1.46	2.67
1031	109.5	0.0	109.5	0.18	0.32	0.46	0.94	1.46	2.67	1032	235.3	0.0	235.3	0.18	0.32	0.46	0.94	1.46	2.67
1032	36.2	0.0	36.2	0.18	0.32	0.46	0.94	1.46	2.67	1033	271.5	0.0	271.5	0.18	0.32	0.46	0.94	1.46	2.67
1033	31.7	0.0	31.7	0.18	0.32	0.46	0.94	1.46	2.67	1034	303.2	0.0	303.2	0.18	0.32	0.46	0.94	1.46	2.67
1034	133.6	0.0	133.6	0.18	0.32	0.46	0.94	1.46	2.67	1035	826.4	0.0	826.4	0.18	0.32	0.46	0.94	1.46	2.67
1035	53.2	0.0	53.2	0.18	0.32	0.46	0.94	1.46	2.67	1036	879.6	0.0	879.6	0.18	0.32	0.46	0.94	1.46	2.67

Rainfall Depths
2-Year - Expected Value - Upstream Areas

	Area	< 2000	> 2000	Rainfall Depth							Area	< 2000	> 2000	Rainfall Depth					
Subarea	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr	Node	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr
		X		0.13	0.28	0.37	0.62	0.85	1.44			X		0.13	0.28	0.37	0.62	0.85	1.44
			X	0.18	0.32	0.46	0.94	1.46	2.67				X	0.18	0.32	0.46	0.94	1.46	2.67
1036	96.7	0.0	96.7	0.18	0.32	0.46	0.94	1.46	2.67	1037	976.3	0.0	976.3	0.18	0.32	0.46	0.94	1.46	2.67
1037	165.6	0.0	165.6	0.18	0.32	0.46	0.94	1.46	2.67	1038	1,141.9	0.0	1,141.9	0.18	0.32	0.46	0.94	1.46	2.67
1038	102.5	0.0	102.5	0.18	0.32	0.46	0.94	1.46	2.67	1039	1,244.4	0.0	1,244.4	0.18	0.32	0.46	0.94	1.46	2.67
1039	115.0	0.0	115.0	0.18	0.32	0.46	0.94	1.46	2.67	1040	1,359.4	0.0	1,359.4	0.18	0.32	0.46	0.94	1.46	2.67
1040	218.1	0.0	218.1	0.18	0.32	0.46	0.94	1.46	2.67	1041	1,577.5	0.0	1,577.5	0.18	0.32	0.46	0.94	1.46	2.67
1041	194.4	0.0	194.4	0.18	0.32	0.46	0.94	1.46	2.67	1042	1,771.9	0.0	1,771.9	0.18	0.32	0.46	0.94	1.46	2.67
1042	156.0	5.3	150.7	0.18	0.32	0.46	0.93	1.44	2.63	1043	1,927.9	5.3	1,922.6	0.18	0.32	0.46	0.94	1.46	2.67
1043	89.5	8.2	81.3	0.18	0.32	0.45	0.91	1.40	2.56	1044	2,017.4	13.5	2,003.9	0.18	0.32	0.46	0.94	1.46	2.66
1044	318.0	46.7	271.3	0.17	0.31	0.45	0.89	1.37	2.49	1045	2,335.4	60.2	2,275.2	0.18	0.32	0.46	0.93	1.44	2.64
1045	110.6	51.5	59.1	0.16	0.30	0.42	0.79	1.18	2.10	1046	2,446.0	111.7	2,334.3	0.18	0.32	0.46	0.93	1.43	2.61
1046	1,855.8	39.8	1,816.0	0.18	0.32	0.46	0.93	1.45	2.64	1047	4,301.8	151.5	4,150.3	0.18	0.32	0.46	0.93	1.44	2.63
1047	2,825.3	45.9	2,779.4	0.18	0.32	0.46	0.93	1.45	2.65	1048	7,127.1	197.4	6,929.7	0.18	0.32	0.46	0.93	1.44	2.64
1048	1,002.1	197.7	804.4	0.17	0.31	0.44	0.88	1.34	2.43	1049	8,129.2	395.1	7,734.1	0.18	0.32	0.46	0.92	1.43	2.61
1049	1,386.9	160.0	1,226.9	0.17	0.32	0.45	0.90	1.39	2.53	1050	9,516.1	555.1	8,961.0	0.18	0.32	0.45	0.92	1.42	2.60
1050	460.3	103.7	356.6	0.17	0.31	0.44	0.87	1.32	2.39	1051	9,976.4	658.8	9,317.6	0.18	0.32	0.45	0.92	1.42	2.59
1051	751.7	342.1	409.6	0.16	0.30	0.42	0.79	1.18	2.11	1052	10,728.1	1,000.9	9,727.2	0.18	0.32	0.45	0.91	1.40	2.56
1052	2,093.6	251.0	1,842.6	0.17	0.32	0.45	0.90	1.39	2.52	1053	12,821.7	1,251.9	11,569.8	0.18	0.32	0.45	0.91	1.40	2.55
1053	806.2	334.8	471.4	0.16	0.30	0.42	0.81	1.21	2.16	1054	13,627.9	1,586.7	12,041.2	0.17	0.32	0.45	0.90	1.39	2.53
1054	1,031.5	558.9	472.6	0.15	0.30	0.41	0.77	1.13	2.00	1055	14,659.4	2,145.6	12,513.8	0.17	0.31	0.45	0.89	1.37	2.49
1055	2,235.0	922.0	1,313.0	0.16	0.30	0.42	0.81	1.21	2.16	1056	16,894.4	3,067.6	13,826.8	0.17	0.31	0.44	0.88	1.35	2.45
1056	529.0	485.4	43.6	0.13	0.28	0.38	0.65	0.90	1.54	1057	17,423.4	3,553.0	13,870.4	0.17	0.31	0.44	0.87	1.34	2.42
1057	6,465.8	2,416.0	4,049.8	0.16	0.31	0.43	0.82	1.23	2.21	1058	23,889.2	5,969.0	17,920.2	0.17	0.31	0.44	0.86	1.31	2.36
1058	1,581.0	1,203.3	377.7	0.14	0.29	0.39	0.70	1.00	1.73	1059	25,470.2	7,172.3	18,297.9	0.17	0.31	0.43	0.85	1.29	2.32
1059	1,385.9	1,385.9	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1060	26,856.1	8,558.2	18,297.9	0.16	0.31	0.43	0.84	1.27	2.28
1060	5,326.4	3,700.7	1,625.7	0.15	0.29	0.40	0.72	1.04	1.82	1061	32,182.5	12,258.9	19,923.6	0.16	0.30	0.43	0.82	1.23	2.20
1061	14,256.1	10,745.9	3,510.2	0.14	0.29	0.39	0.70	1.00	1.74	1062	46,438.6	23,004.8	23,433.8	0.16	0.30	0.42	0.78	1.16	2.06

Channel Hydraulics, Travel Times, Times of Concentration, and Lag Estimates
2-Year - Expected Value - Upstream Areas

U/S Node	D/S Node	U/S Elevation	D/S Elevation	Length (ft)	Manning (n)	Base (ft)	Sideslope (z)	Height (ft)	Q(2) (cfs)	Dn (ft)	V (fps)	Tt (min)	Tc (min)	Lag (hr)
	1035		2840		Data from Rational Method Analysis:				36				63.21	0.84
1035	1036	2840	2800	1878	0.040	10	1	10	151	1.85	6.91	4.53	67.74	0.90
1036	1037	2800	2760	1959	0.040	10	1	10	152	1.87	6.81	4.79	72.53	0.97
1037	1038	2760	2700	2116	0.040	10	1	10	158	1.75	7.72	4.57	77.10	1.03
1038	1039	2700	2600	2298	0.040	10	1	10	179	1.65	9.29	4.12	81.22	1.08
1039	1040	2600	2400	3287	0.040	10	1	10	185	1.53	10.52	5.21	86.43	1.15
1040	1041	2400	2200	2212	0.050	10	1	10	205	1.65	10.68	3.45	89.88	1.20
1041	1042	2200	2000	1708	0.050	10	1	10	232	1.64	12.14	2.35	92.23	1.23
1042	1043	2000	1990	1322	0.040	20	1	10	252	2.27	4.98	4.42	96.65	1.29
1043	1044	1990	1980	1681	0.040	25	1	10	273	2.24	4.47	6.27	102.92	1.37
1044	1045	1980	1960	2360	0.040	25	1	10	273	2.02	5.01	7.85	110.77	1.48
1045	1046	1960	1915	2743	0.040	25	1	10	296	1.74	6.38	7.17	117.93	1.57
1046	1047	1915	1910	221	0.040	25	1	10	303	1.60	7.13	0.52	118.45	1.58
1047	1048	1910	1750	1601	0.050	25	1	10	480	1.54	11.72	2.28	120.73	1.61
1048	1049	1750	1670	2254	0.050	25	1	15	772	2.80	9.93	3.78	124.51	1.66
1049	1050	1670	1665	290	0.050	25	1	15	827	3.61	8.00	0.60	125.11	1.67
1050	1051	1665	1630	2134	0.050	30	1	15	921	3.51	7.82	4.55	129.66	1.73
1051	1052	1630	1410	5523	0.050	30	1	15	955	2.75	10.59	8.69	138.35	1.84
1052	1053	1410	1297	2262	0.050	30	1	15	976	2.61	11.49	3.28	141.63	1.89
1053	1054	1297	1235	3488	0.040	30	1	15	1,131	3.39	9.98	5.82	147.46	1.97
1054	1055	1235	1115	3993	0.040	30	1	15	1,131	2.90	11.86	5.61	153.07	2.04
1055	1056	1115	978	4363	0.040	30	1	15	1,162	2.91	12.14	5.99	159.06	2.12
1056	1057	978	800	5201	0.050	30	1	15	1,254	3.39	11.08	7.83	166.89	2.23
1057	1058	800	657	5445	0.050	35	1	15	1,254	3.35	9.77	9.29	176.18	2.35
1058	1059	657	630	2185	0.040	50	1	15	1,529	3.34	8.58	4.24	180.42	2.41
1059	1060	630	518	7828	0.040	50	1	15	1,529	3.20	8.99	14.51	194.93	2.60
1060	1061	518	435	8004	0.040	55	1	15	1,529	3.32	7.89	16.91	211.84	2.82
1061	1062	435	345	8275	0.040	60	1	15	1,545	3.13	7.82	17.63	229.47	3.06

Losses

Node	U1035
Total Area (ac)	826.2
24-Hour Rainfall Depth (in)	2.67
Fm (in/hr)	0.60
Y-Bar	0.74

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	181.4	554.1	90.7	0.0	181.4	554.1	90.7
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Woodland (Fair)	100	36	60	73	79	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.34	0.52	0.66	0.73
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.11	0.28	0.40
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.04	0.23	0.40	0.52
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.02	0.19	0.36	0.47
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.02	0.20	0.38	0.47
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.07	0.22	0.34
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.15	0.32	0.44
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.08	0.25	0.36
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.32	0.52	0.66	0.76
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.14	0.32	0.42
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.01	0.19	0.36	0.47
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.14	0.32	0.42

Losses

Node	U1036
Total Area (ac)	879.4
24-Hour Rainfall Depth (in)	2.67
Fm (in/hr)	0.60
Y-Bar	0.75

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	31.3	21.9	0.0	0.0	212.7	576.0	90.7
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Woodland (Fair)	100	36	60	73	79	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.34	0.52	0.66	0.73
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.11	0.28	0.40
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.04	0.23	0.40	0.52
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.02	0.19	0.36	0.47
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.02	0.20	0.38	0.47
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.07	0.22	0.34
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.15	0.32	0.44
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.08	0.25	0.36
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.32	0.52	0.66	0.76
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.14	0.32	0.42
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.01	0.19	0.36	0.47
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.14	0.32	0.42

Losses

Node	U1037
Total Area (ac)	976.2
24-Hour Rainfall Depth (in)	2.67
Fm (in/hr)	0.60
Y-Bar	0.75

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	40.4	56.4	0.0	0.0	253.1	632.4	90.7
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Woodland (Fair)	100	36	60	73	79	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.34	0.52	0.66	0.73
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.11	0.28	0.40
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.04	0.23	0.40	0.52
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.02	0.19	0.36	0.47
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.02	0.20	0.38	0.47
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.07	0.22	0.34
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.15	0.32	0.44
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.08	0.25	0.36
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.32	0.52	0.66	0.76
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.14	0.32	0.42
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.01	0.19	0.36	0.47
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.14	0.32	0.42

Losses

Node	U1038
Total Area (ac)	1,141.9
24-Hour Rainfall Depth (in)	2.67
Fm (in/hr)	0.60
Y-Bar	0.75

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	17.1	137.1	11.5	0.0	270.2	769.5	102.2
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Woodland (Fair)	100	36	60	73	79	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.34	0.52	0.66	0.73
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.11	0.28	0.40
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.04	0.23	0.40	0.52
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.02	0.19	0.36	0.47
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.02	0.20	0.38	0.47
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.07	0.22	0.34
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.15	0.32	0.44
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.08	0.25	0.36
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.32	0.52	0.66	0.76
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.14	0.32	0.42
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.01	0.19	0.36	0.47
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.14	0.32	0.42

Losses

Node	U1039
Total Area (ac)	1,244.4
24-Hour Rainfall Depth (in)	2.67
Fm (in/hr)	0.60
Y-Bar	0.74

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	3.2	10.5	88.8	0.0	273.4	780.0	191.0
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Woodland (Fair)	100	36	60	73	79	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.34	0.52	0.66	0.73
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.11	0.28	0.40
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.04	0.23	0.40	0.52
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.02	0.19	0.36	0.47
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.02	0.20	0.38	0.47
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.07	0.22	0.34
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.15	0.32	0.44
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.08	0.25	0.36
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.32	0.52	0.66	0.76
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.14	0.32	0.42
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.01	0.19	0.36	0.47
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.14	0.32	0.42

Losses

Node	U1040
Total Area (ac)	1,359.4
24-Hour Rainfall Depth (in)	2.67
Fm (in/hr)	0.60
Y-Bar	0.73

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.0	0.0	115.0	0.0	273.4	780.0	306.0
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Woodland (Fair)	100	36	60	73	79	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.34	0.52	0.66	0.73
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.11	0.28	0.40
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.04	0.23	0.40	0.52
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.02	0.19	0.36	0.47
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.02	0.20	0.38	0.47
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.07	0.22	0.34
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.15	0.32	0.44
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.08	0.25	0.36
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.32	0.52	0.66	0.76
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.14	0.32	0.42
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.01	0.19	0.36	0.47
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.14	0.32	0.42

Losses

Node	U1041
Total Area (ac)	1,577.5
24-Hour Rainfall Depth (in)	2.67
Fm (in/hr)	0.60
Y-Bar	0.71

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.0	61.2	156.9	0.0	273.4	841.2	462.9
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Woodland (Fair)	100	36	60	73	79	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.34	0.52	0.66	0.73
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.11	0.28	0.40
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.04	0.23	0.40	0.52
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.02	0.19	0.36	0.47
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.02	0.20	0.38	0.47
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.07	0.22	0.34
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.15	0.32	0.44
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.08	0.25	0.36
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.32	0.52	0.66	0.76
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.14	0.32	0.42
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.01	0.19	0.36	0.47
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.14	0.32	0.42

Losses

Node	U1042
Total Area (ac)	1,771.9
24-Hour Rainfall Depth (in)	2.67
Fm (in/hr)	0.60
Y-Bar	0.71

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.0	169.6	24.8	0.0	273.4	1,010.8	487.7
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Woodland (Fair)	100	36	60	73	79	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.34	0.52	0.66	0.73
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.11	0.28	0.40
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.04	0.23	0.40	0.52
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.02	0.19	0.36	0.47
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.02	0.20	0.38	0.47
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.07	0.22	0.34
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.15	0.32	0.44
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.08	0.25	0.36
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.32	0.52	0.66	0.76
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.14	0.32	0.42
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.01	0.19	0.36	0.47
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.14	0.32	0.42

Losses

Node	U1043
Total Area (ac)	1,927.8
24-Hour Rainfall Depth (in)	2.67
Fm (in/hr)	0.60
Y-Bar	0.71

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	7.4	0.0	42.5	106.0	7.4	273.4	1,053.3	593.7
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Woodland (Fair)	100	36	60	73	79	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.34	0.52	0.66	0.73
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.11	0.28	0.40
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.04	0.23	0.40	0.52
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.02	0.19	0.36	0.47
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.02	0.20	0.38	0.47
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.07	0.22	0.34
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.15	0.32	0.44
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.08	0.25	0.36
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.32	0.52	0.66	0.76
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.14	0.32	0.42
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.01	0.19	0.36	0.47
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.14	0.32	0.42

Losses

Node	U1044
Total Area (ac)	2,017.4
24-Hour Rainfall Depth (in)	2.66
Fm (in/hr)	0.60
Y-Bar	0.71

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	2.2	0.0	27.6	59.8	9.6	273.4	1,080.9	653.5
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Woodland (Fair)	100	36	60	73	79	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.19	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.34	0.52	0.66	0.73
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.11	0.28	0.40
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.04	0.23	0.40	0.52
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.02	0.19	0.36	0.47
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.02	0.20	0.38	0.47
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.07	0.22	0.34
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.15	0.32	0.44
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.08	0.25	0.36
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.32	0.52	0.66	0.76
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.14	0.32	0.42
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.01	0.19	0.36	0.47
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.14	0.32	0.42

Losses

Node	U1045
Total Area (ac)	2,335.4
24-Hour Rainfall Depth (in)	2.64
Fm (in/hr)	0.60
Y-Bar	0.71

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	40.9	179.4	97.7	9.6	314.3	1,260.3	751.2
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Woodland (Fair)	100	36	60	73	79	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.33	0.51	0.66	0.72
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.11	0.28	0.40
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.04	0.23	0.40	0.51
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.01	0.18	0.35	0.46
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.02	0.20	0.37	0.46
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.06	0.21	0.33
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.15	0.31	0.44
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.08	0.24	0.35
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.31	0.51	0.66	0.76
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.13	0.31	0.42
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.01	0.18	0.35	0.46
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.13	0.31	0.42

Losses

Node	U1046
Total Area (ac)	2,446.0
24-Hour Rainfall Depth (in)	2.61
Fm (in/hr)	0.60
Y-Bar	0.71

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	30.7	79.9	0.0	9.6	345.0	1,340.2	751.2
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Woodland (Fair)	100	36	60	73	79	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.27
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.27
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.27
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.27
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.27
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.33	0.51	0.66	0.72
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.11	0.27	0.39
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.04	0.22	0.39	0.51
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.01	0.18	0.35	0.46
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.02	0.19	0.37	0.46
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.06	0.21	0.33
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.14	0.31	0.44
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.08	0.24	0.35
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.31	0.51	0.66	0.76
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.13	0.31	0.41
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.01	0.18	0.35	0.46
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.13	0.31	0.41

Losses

Node	U1047
Total Area (ac)	4,301.8
24-Hour Rainfall Depth (in)	2.63
Fm (in/hr)	0.60
Y-Bar	0.72

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	146.3	1,591.1	118.4	9.6	491.3	2,931.3	869.6
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Woodland (Fair)	100	36	60	73	79	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.33	0.51	0.66	0.72
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.11	0.28	0.39
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.04	0.23	0.39	0.51
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.01	0.18	0.35	0.46
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.02	0.20	0.37	0.46
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.06	0.21	0.33
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.14	0.31	0.44
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.08	0.24	0.35
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.31	0.51	0.66	0.76
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.13	0.31	0.42
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.01	0.18	0.35	0.46
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.13	0.31	0.42

Losses

Node	U1048
Total Area (ac)	7,126.9
24-Hour Rainfall Depth (in)	2.64
Fm (in/hr)	0.60
Y-Bar	0.68

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.5	0.0	0.0	0.0	0.5	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.4	10.5	2.4	0.0	0.4	10.5	2.4
Chaparral, Broadleaf (Fair)	100	40	63	75	81	3.6	59.5	926.7	805.9	13.2	550.8	3,858.0	1,675.5
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	299.2	567.3	0.0	0.0	299.2	567.3
Grass (Fair)	100	50	69	79	84	0.0	0.1	10.7	3.1	0.0	0.1	10.7	3.1
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	0.0	0.0	23.3	0.0	0.0	0.0	23.3
Woodland (Fair)	100	36	60	73	79	3.3	16.7	40.4	51.5	3.3	16.7	40.4	51.5
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.28
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.33	0.51	0.66	0.72
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.11	0.28	0.40
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.04	0.23	0.40	0.51
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.01	0.18	0.35	0.46
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.02	0.20	0.37	0.46
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.06	0.21	0.33
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.15	0.31	0.44
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.08	0.24	0.35
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.31	0.51	0.66	0.76
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.13	0.31	0.42
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.01	0.18	0.35	0.46
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.13	0.31	0.42

Losses

Node	U1049
Total Area (ac)	8,128.9
24-Hour Rainfall Depth (in)	2.61
Fm (in/hr)	0.60
Y-Bar	0.68

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	3.4	0.0	0.0	0.0	3.9	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.4	10.5	2.4
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	10.2	267.8	391.5	13.2	561.0	4,125.8	2,067.0
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	2.0	128.1	149.6	0.0	2.0	427.3	716.9
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	0.0	0.1	10.7	3.1
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.3
Woodland (Fair)	100	36	60	73	79	0.0	11.1	4.7	33.6	3.3	27.8	45.1	85.1
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.27
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.27
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.27
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.27
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.27
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.33	0.51	0.66	0.72
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.11	0.27	0.39
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.04	0.22	0.39	0.51
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.01	0.18	0.35	0.46
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.02	0.19	0.37	0.46
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.06	0.21	0.33
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.14	0.31	0.44
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.08	0.24	0.35
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.31	0.51	0.66	0.76
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.13	0.31	0.41
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.01	0.18	0.35	0.46
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.13	0.31	0.41

Losses

Node	U1050
Total Area (ac)	9,515.8
24-Hour Rainfall Depth (in)	2.60
Fm (in/hr)	0.60
Y-Bar	0.69

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.4	10.5	2.4
Chaparral, Broadleaf (Fair)	100	40	63	75	81	41.6	85.7	1,084.0	175.6	54.8	646.7	5,209.8	2,242.6
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	2.0	427.3	716.9
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	0.0	0.1	10.7	3.1
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.3
Woodland (Fair)	100	36	60	73	79	0.0	0.0	0.0	0.0	3.3	27.8	45.1	85.1
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.27
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.27
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.27
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.27
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.27
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.33	0.51	0.65	0.72
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.11	0.27	0.39
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.04	0.22	0.39	0.51
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.01	0.18	0.35	0.46
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.02	0.19	0.37	0.46
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.06	0.21	0.33
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.14	0.31	0.44
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.08	0.24	0.35
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.31	0.51	0.65	0.76
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.13	0.31	0.41
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.01	0.18	0.35	0.46
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.13	0.31	0.41

Losses

Node	U1051
Total Area (ac)	9,976.1
24-Hour Rainfall Depth (in)	2.59
Fm (in/hr)	0.60
Y-Bar	0.69

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.4	10.5	2.4
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.0	297.0	163.3	54.8	646.7	5,506.8	2,405.9
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	2.0	427.3	716.9
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	0.0	0.1	10.7	3.1
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.3
Woodland (Fair)	100	36	60	73	79	0.0	0.0	0.0	0.0	3.3	27.8	45.1	85.1
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.27
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.27
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.27
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.27
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.05	0.18	0.27
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.33	0.51	0.65	0.72
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.11	0.27	0.39
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.04	0.22	0.39	0.51
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.01	0.18	0.35	0.46
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.02	0.19	0.37	0.46
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.06	0.21	0.33
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.14	0.31	0.43
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.08	0.24	0.35
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.31	0.51	0.65	0.75
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.13	0.31	0.41
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.01	0.18	0.35	0.46
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.13	0.31	0.41

Losses

Node	U1052
Total Area (ac)	10,727.7
24-Hour Rainfall Depth (in)	2.56
Fm (in/hr)	0.60
Y-Bar	0.69

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.4	10.5	2.4
Chaparral, Broadleaf (Fair)	100	40	63	75	81	19.1	0.0	198.4	507.4	73.9	646.7	5,705.2	2,913.3
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	26.7	0.0	2.0	427.3	743.6
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	0.0	0.1	10.7	3.1
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.3
Woodland (Fair)	100	36	60	73	79	0.0	0.0	0.0	0.0	3.3	27.8	45.1	85.1
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.04	0.18	0.27
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.04	0.18	0.27
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.04	0.18	0.27
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.04	0.18	0.27
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.04	0.18	0.27
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.32	0.50	0.65	0.72
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.10	0.27	0.38
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.04	0.22	0.38	0.50
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.01	0.18	0.34	0.45
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.02	0.19	0.36	0.45
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.06	0.20	0.32
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.14	0.30	0.43
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.07	0.23	0.34
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.30	0.50	0.65	0.75
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.13	0.30	0.41
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.01	0.18	0.34	0.45
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.13	0.30	0.41

Losses

Node	U1053
Total Area (ac)	12,821.3
24-Hour Rainfall Depth (in)	2.55
Fm (in/hr)	0.60
Y-Bar	0.68

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	21.4	2.9	0.0	0.0	25.3	2.9
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.2	0.7	0.0	0.0	0.2	0.7
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.7	0.0	0.0	0.4	11.2	2.4
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	4.5	214.7	717.0	73.9	651.2	5,919.9	3,630.3
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	2.2	85.0	674.4	0.0	4.2	512.3	1,418.0
Grass (Fair)	100	50	69	79	84	0.0	0.0	7.6	10.2	0.0	0.1	18.3	13.3
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	0.0	35.4	44.5	0.0	0.0	35.4	67.8
Woodland (Fair)	100	36	60	73	79	0.0	31.4	92.5	148.3	3.3	59.2	137.6	233.4
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.04	0.17	0.27
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.04	0.17	0.27
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.04	0.17	0.27
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.04	0.17	0.27
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.04	0.17	0.27
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.32	0.50	0.65	0.72
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.10	0.27	0.38
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.04	0.22	0.38	0.50
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.01	0.17	0.34	0.45
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.02	0.19	0.36	0.45
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.06	0.20	0.32
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.14	0.30	0.43
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.07	0.23	0.34
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.30	0.50	0.65	0.75
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.12	0.30	0.41
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.01	0.17	0.34	0.45
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.12	0.30	0.41

Losses

Node	U1054
Total Area (ac)	13,627.5
24-Hour Rainfall Depth (in)	2.53
Fm (in/hr)	0.60
Y-Bar	0.68

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	25.3	2.9
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.4	11.2	2.4
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.0	435.0	271.3	73.9	651.2	6,354.9	3,901.6
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	36.0	5.3	0.0	4.2	548.3	1,423.3
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	0.0	0.1	18.3	13.3
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	0.0	7.8	26.9	0.0	0.0	43.2	94.7
Woodland (Fair)	100	36	60	73	79	0.0	0.0	10.2	13.7	3.3	59.2	147.8	247.1
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.04	0.17	0.26
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.04	0.17	0.26
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.04	0.17	0.26
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.04	0.17	0.26
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.04	0.17	0.26
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.32	0.50	0.65	0.71
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.10	0.26	0.38
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.03	0.22	0.38	0.50
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.01	0.17	0.34	0.45
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.01	0.19	0.36	0.45
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.06	0.20	0.32
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.13	0.30	0.43
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.07	0.23	0.34
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.30	0.50	0.65	0.75
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.12	0.30	0.40
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.01	0.17	0.34	0.45
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.12	0.30	0.40

Losses

Node	U1055
Total Area (ac)	14,658.9
24-Hour Rainfall Depth (in)	2.49
Fm (in/hr)	0.60
Y-Bar	0.68

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	25.3	2.9
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.4	11.2	2.4
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.0	43.8	659.6	73.9	651.2	6,398.7	4,561.2
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	35.8	86.6	0.0	4.2	584.1	1,509.9
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	0.0	0.1	18.3	13.3
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	0.0	21.4	129.7	0.0	0.0	64.6	224.4
Woodland (Fair)	100	36	60	73	79	0.0	0.0	11.1	43.4	3.3	59.2	158.9	290.5
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.04	0.17	0.26
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.04	0.17	0.26
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.04	0.17	0.26
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.04	0.17	0.26
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.04	0.17	0.26
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.31	0.50	0.64	0.71
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.10	0.26	0.38
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.03	0.21	0.38	0.50
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.01	0.17	0.33	0.45
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.01	0.18	0.35	0.45
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.05	0.20	0.31
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.13	0.29	0.42
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.07	0.23	0.33
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.29	0.50	0.64	0.75
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.12	0.29	0.40
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.01	0.17	0.33	0.45
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.12	0.29	0.40

Losses

Node	U1056
Total Area (ac)	16,893.7
24-Hour Rainfall Depth (in)	2.45
Fm (in/hr)	0.60
Y-Bar	0.68

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	25.3	2.9
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.4	11.2	2.4
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	11.5	566.6	433.4	73.9	662.7	6,965.3	4,994.6
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	2.9	601.9	298.4	0.0	7.1	1,186.0	1,808.3
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	0.0	0.1	18.3	13.3
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	0.0	9.1	116.9	0.0	0.0	73.7	341.3
Woodland (Fair)	100	36	60	73	79	0.0	15.1	84.6	94.4	3.3	74.3	243.5	384.9
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.04	0.16	0.25
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.04	0.16	0.25
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.04	0.16	0.25
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.04	0.16	0.25
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.04	0.16	0.25
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.31	0.49	0.64	0.71
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.09	0.25	0.37
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.03	0.21	0.37	0.49
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.01	0.16	0.33	0.44
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.01	0.18	0.35	0.44
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.05	0.19	0.31
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.13	0.29	0.42
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.07	0.22	0.33
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.29	0.49	0.64	0.74
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.11	0.29	0.39
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.01	0.16	0.33	0.44
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.11	0.29	0.39

Losses

Node	U1057
Total Area (ac)	17,422.5
24-Hour Rainfall Depth (in)	2.45
Fm (in/hr)	0.60
Y-Bar	0.68

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	25.3	2.9
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.4	11.2	2.4
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.0	2.0	208.8	73.9	662.7	6,967.3	5,203.4
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.3	63.6	0.0	7.1	1,186.3	1,871.9
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	0.0	0.1	18.3	13.3
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.9	0.0	0.0	0.0	0.9	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	0.0	40.2	155.2	0.0	0.0	113.9	496.5
Woodland (Fair)	100	36	60	73	79	0.0	0.0	0.0	57.8	3.3	74.3	243.5	442.7
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.04	0.16	0.25
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.04	0.16	0.25
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.04	0.16	0.25
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.04	0.16	0.25
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.04	0.16	0.25
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.91	0.91	0.91	0.91
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.31	0.49	0.64	0.71
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.09	0.25	0.37
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.03	0.21	0.37	0.49
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.01	0.16	0.33	0.44
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.01	0.18	0.35	0.44
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.05	0.19	0.31
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.13	0.29	0.42
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.07	0.22	0.33
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.29	0.49	0.64	0.74
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.11	0.29	0.39
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.01	0.16	0.33	0.44
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.11	0.29	0.39

Losses

Node	U1058
Total Area (ac)	23,888.1
24-Hour Rainfall Depth (in)	2.36
Fm (in/hr)	0.60
Y-Bar	0.68

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	2.2	1.1	0.9	0.0	2.2	1.1	0.9
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.7	1.3	0.4	0.9	0.7	1.3	25.7	3.8
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
Barren (Poor)	100	78	86	91	93	0.0	2.4	0.0	0.0	0.0	2.8	11.2	2.4
Chaparral, Broadleaf (Fair)	100	40	63	75	81	96.5	37.5	1,027.5	1,472.4	170.4	700.2	7,994.8	6,675.8
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	30.0	15.7	572.5	1,735.7	30.0	22.8	1,758.8	3,607.6
Grass (Fair)	100	50	69	79	84	0.0	17.5	17.0	2.1	0.0	17.6	35.3	15.4
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	2.9	0.0	0.0	0.0	3.8	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	12.0	0.0	163.5	407.8	12.0	0.0	277.4	904.3
Woodland (Fair)	100	36	60	73	79	91.0	206.3	252.8	295.0	94.3	280.6	496.3	737.7
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.03	0.15	0.24
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.90	0.90	0.90	0.90
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.03	0.15	0.24
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.90	0.90	0.90	0.90
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.03	0.15	0.24
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.90	0.90	0.90	0.90
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.03	0.15	0.24
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.90	0.90	0.90	0.90
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.03	0.15	0.24
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.90	0.90	0.90	0.90
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.30	0.48	0.63	0.70
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.08	0.24	0.36
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.02	0.19	0.36	0.48
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.01	0.15	0.32	0.43
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.01	0.17	0.34	0.43
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.04	0.18	0.30
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.12	0.28	0.40
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.06	0.21	0.32
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.28	0.48	0.63	0.74
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.10	0.28	0.38
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.15	0.32	0.43
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.10	0.28	0.38

Losses

Node	U1059
Total Area (ac)	25,469.0
24-Hour Rainfall Depth (in)	2.32
Fm (in/hr)	0.60
Y-Bar	0.69

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.7	0.0	3.4	0.0	2.9	1.1	4.3
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.7	1.3	25.7	3.8
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
Barren (Poor)	100	78	86	91	93	0.0	0.0	3.8	0.0	0.0	2.8	15.0	2.4
Chaparral, Broadleaf (Fair)	100	40	63	75	81	21.3	0.0	403.9	289.7	191.7	700.2	8,398.7	6,965.5
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	8.9	0.0	167.5	287.3	38.9	22.8	1,926.3	3,894.9
Grass (Fair)	100	50	69	79	84	0.0	0.0	7.0	0.1	0.0	17.6	42.3	15.5
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.2	0.0	0.0	3.8	0.2
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	15.8	0.0	145.4	117.7	27.8	0.0	422.8	1,022.0
Woodland (Fair)	100	36	60	73	79	23.8	2.5	36.9	45.0	118.1	283.1	533.2	782.7
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.03	0.15	0.24
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.90	0.90	0.90	0.90
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.03	0.15	0.24
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.90	0.90	0.90	0.90
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.03	0.15	0.24
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.90	0.90	0.90	0.90
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.03	0.15	0.24
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.90	0.90	0.90	0.90
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.03	0.15	0.24
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.90	0.90	0.90	0.90
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.29	0.47	0.62	0.69
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.08	0.24	0.35
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.02	0.19	0.35	0.47
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.15	0.31	0.42
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.01	0.16	0.33	0.42
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.04	0.17	0.29
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.11	0.27	0.40
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.05	0.20	0.31
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.27	0.47	0.62	0.73
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.10	0.27	0.37
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.15	0.31	0.42
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.10	0.27	0.37

Losses

Node	U1060
Total Area (ac)	26,854.8
24-Hour Rainfall Depth (in)	2.28
Fm (in/hr)	0.60
Y-Bar	0.70

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	3.7	5.1	1.3	1.7	3.7	8.0	2.4	6.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.7	1.3	25.7	3.8
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
Barren (Poor)	100	78	86	91	93	0.0	0.0	2.5	0.0	0.0	2.8	17.5	2.4
Chaparral, Broadleaf (Fair)	100	40	63	75	81	37.8	17.6	209.7	46.1	229.5	717.8	8,608.4	7,011.6
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.2	0.0	6.1	38.0	39.1	22.8	1,932.4	3,932.9
Grass (Fair)	100	50	69	79	84	0.0	1.3	28.4	30.1	0.0	18.9	70.7	45.6
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.2
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	124.1	11.8	502.6	129.8	151.9	11.8	925.4	1,151.8
Woodland (Fair)	100	36	60	73	79	68.9	18.0	9.9	91.1	187.0	301.1	543.1	873.8
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.03	0.14	0.23
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.90	0.90	0.90	0.90
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.03	0.14	0.23
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.90	0.90	0.90	0.90
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.03	0.14	0.23
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.90	0.90	0.90	0.90
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.03	0.14	0.23
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.90	0.90	0.90	0.90
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.03	0.14	0.23
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.90	0.90	0.90	0.90
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.28	0.47	0.62	0.69
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.08	0.23	0.35
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.02	0.18	0.35	0.47
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.14	0.30	0.42
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.01	0.16	0.32	0.42
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.04	0.17	0.28
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.11	0.27	0.39
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.05	0.20	0.30
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.27	0.47	0.62	0.73
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.10	0.27	0.37
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.14	0.30	0.42
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.10	0.27	0.37

Losses

Node	U1061
Total Area (ac)	32,181.3
24-Hour Rainfall Depth (in)	2.20
Fm (in/hr)	0.60
Y-Bar	0.71

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	8.1	2.9	0.1	3.6	11.8	10.9	2.5	9.6
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	9.1	0.0	17.1	23.6	9.8	1.3	42.8	27.4
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
Barren (Poor)	100	78	86	91	93	0.2	0.0	18.2	34.2	0.2	2.8	35.7	36.6
Chaparral, Broadleaf (Fair)	100	40	63	75	81	72.7	0.0	1,119.8	1,067.4	302.2	717.8	9,728.2	8,079.0
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	8.7	1.6	195.3	574.7	47.8	24.4	2,127.7	4,507.6
Grass (Fair)	100	50	69	79	84	4.0	0.8	128.6	99.7	4.0	19.7	199.3	145.3
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.2
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	97.5	18.3	739.9	651.2	249.4	30.1	1,665.3	1,803.0
Woodland (Fair)	100	36	60	73	79	70.5	16.2	132.2	210.3	257.5	317.3	675.3	1,084.1
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.02	0.13	0.22
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.90	0.90	0.90	0.90
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.02	0.13	0.22
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.90	0.90	0.90	0.90
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.02	0.13	0.22
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.90	0.90	0.90	0.90
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.02	0.13	0.22
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.90	0.90	0.90	0.90
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.02	0.13	0.22
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.90	0.90	0.90	0.90
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.27	0.46	0.61	0.68
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.07	0.22	0.33
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.02	0.17	0.33	0.46
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.13	0.29	0.40
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.15	0.31	0.40
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.03	0.16	0.27
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.10	0.25	0.38
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.05	0.19	0.29
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.25	0.46	0.61	0.72
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.09	0.25	0.36
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.13	0.29	0.40
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.09	0.25	0.36

Losses

Node	U1062
Total Area (ac)	46,437.3
24-Hour Rainfall Depth (in)	2.06
Fm (in/hr)	0.59
Y-Bar	0.72

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	5.6	64.5	161.3	225.3	17.4	75.4	163.8	234.9
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	1.0	2.3	6.9	0.8	10.8	3.6	49.7	28.2
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	6.2	8.7	2.9	0.0	6.2	8.9	3.6
Barren (Poor)	100	78	86	91	93	6.9	5.0	40.7	84.9	7.1	7.8	76.4	121.5
Chaparral, Broadleaf (Fair)	100	40	63	75	81	36.5	13.8	1,292.0	1,418.6	338.7	731.6	######	9,497.6
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	1.8	17.1	389.3	1,546.1	49.6	41.5	2,517.0	6,053.7
Grass (Fair)	100	50	69	79	84	60.3	51.1	190.1	865.2	64.3	70.8	389.4	1,010.5
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	3.1	0.0	0.0	3.8	3.3
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2
Open Brush (Fair)	100	46	66	77	83	138.5	258.2	2,310.8	2,760.5	387.9	288.3	3,976.1	4,563.5
Woodland (Fair)	100	36	60	73	79	444.4	74.1	636.8	963.3	701.9	391.4	1,312.1	2,047.4
Fallow (Poor)	100	77	86	91	94	0.0	2.7	0.0	0.0	0.0	2.7	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	2.2	0.0	0.0	0.2	2.2	0.0	0.0	0.2
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	1.3	10.0	87.0	57.8	1.3	10.0	87.0	57.8

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.12	0.20
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.12	0.20
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.12	0.20
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.12	0.20
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.12	0.20
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.25	0.43	0.59	0.66
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.06	0.20	0.31
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.01	0.15	0.31	0.43
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.12	0.27	0.38
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.13	0.29	0.38
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.02	0.14	0.25
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.08	0.23	0.36
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.03	0.17	0.27
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.23	0.43	0.59	0.71
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.07	0.23	0.33
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.12	0.27	0.38
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.07	0.23	0.33

```
******************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------------
  FILE NAME: LU35002E.DAT
  TIME/DATE OF STUDY: 10:35 04/01/2004
==============================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==============================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =    2.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  2.450
   2)  10.000;  1.440
   3)  15.000;  1.090
   4)  20.000;  0.840
   5)  30.000;  0.630
   6)  60.000;  0.460
   7) 120.000;  0.350
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ==================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

******************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1001.00 IS CODE =  21
------------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
==============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   330.00
  ELEVATION DATA: UPSTREAM(FEET) =   3210.00  DOWNSTREAM(FEET) =   3190.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   12.581
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.333
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      -        1.30      0.60      1.00     0   12.58
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      0.86
  TOTAL AREA(ACRES) =      1.30   PEAK FLOW RATE(CFS) =      0.86

******************************************************************************
  FLOW PROCESS FROM NODE   1001.00 TO NODE   1002.00 IS CODE =  51
------------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3190.00  DOWNSTREAM(FEET) =   3175.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   154.00   CHANNEL SLOPE =  0.0974
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      0.86
  FLOW VELOCITY(FEET/SEC.) =   2.89   FLOW DEPTH(FEET) =   0.24
  TRAVEL TIME(MIN.) =   0.89   Tc(MIN.) =  13.47
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1002.00 =   484.00 FEET.

******************************************************************************
  FLOW PROCESS FROM NODE   1001.00 TO NODE   1002.00 IS CODE =  81
------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==============================================================================
  MAINLINE Tc(MIN) =  13.47
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.197
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED              -        1.20      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.20      SUBAREA RUNOFF(CFS) =    0.65
  EFFECTIVE AREA(ACRES) =      2.50   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      2.50       PEAK FLOW RATE(CFS) =       1.34

******************************************************************************
  FLOW PROCESS FROM NODE   1002.00 TO NODE   1003.00 IS CODE =  51
------------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3175.00  DOWNSTREAM(FEET) =   3160.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   136.00   CHANNEL SLOPE =  0.1103
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      1.34
  FLOW VELOCITY(FEET/SEC.) =   3.52   FLOW DEPTH(FEET) =   0.29
  TRAVEL TIME(MIN.) =   0.64   Tc(MIN.) =  14.11
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1003.00 =   620.00 FEET.

******************************************************************************
  FLOW PROCESS FROM NODE   1002.00 TO NODE   1003.00 IS CODE =  81
------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==============================================================================
  MAINLINE Tc(MIN) =  14.11
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.152
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED              -        0.30      0.60      1.00     -
  USER-DEFINED              -        2.10      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
```

```
  SUBAREA AREA(ACRES) =    2.40      SUBAREA RUNOFF(CFS) =    1.19
  EFFECTIVE AREA(ACRES) =      4.90   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      4.90       PEAK FLOW RATE(CFS) =       2.44

****************************************************************************
  FLOW PROCESS FROM NODE   1003.00 TO NODE   1004.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3160.00  DOWNSTREAM(FEET) =   3120.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   357.00   CHANNEL SLOPE =  0.1120
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      2.44
  FLOW VELOCITY(FEET/SEC.) =   3.74   FLOW DEPTH(FEET) =   0.29
  TRAVEL TIME(MIN.) =   1.59   Tc(MIN.) =  15.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1004.00 =   977.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1003.00 TO NODE   1004.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  15.70
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.055
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -        0.10      0.60      1.00     -
  USER-DEFINED               -        3.20      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.30      SUBAREA RUNOFF(CFS) =    1.35
  EFFECTIVE AREA(ACRES) =      8.20   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      8.20       PEAK FLOW RATE(CFS) =       3.36

****************************************************************************
  FLOW PROCESS FROM NODE   1004.00 TO NODE   1005.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3120.00  DOWNSTREAM(FEET) =   3100.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   332.00   CHANNEL SLOPE =  0.0602
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      3.36
  FLOW VELOCITY(FEET/SEC.) =   3.35   FLOW DEPTH(FEET) =   0.41
  TRAVEL TIME(MIN.) =   1.65   Tc(MIN.) =  17.35
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1005.00 =  1309.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1004.00 TO NODE   1005.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.35
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  0.972
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -        5.50      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    5.50      SUBAREA RUNOFF(CFS) =    1.84
  EFFECTIVE AREA(ACRES) =     13.70   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     13.70       PEAK FLOW RATE(CFS) =       4.59

****************************************************************************
  FLOW PROCESS FROM NODE   1005.00 TO NODE   1006.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3100.00  DOWNSTREAM(FEET) =   3080.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   195.00   CHANNEL SLOPE =  0.1026
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      4.59
  FLOW VELOCITY(FEET/SEC.) =   4.46   FLOW DEPTH(FEET) =   0.42
  TRAVEL TIME(MIN.) =   0.73   Tc(MIN.) =  18.08
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1006.00 =  1504.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1005.00 TO NODE   1006.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.08
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  0.936
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -        7.80      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    7.80      SUBAREA RUNOFF(CFS) =    2.36
  EFFECTIVE AREA(ACRES) =     21.50   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     21.50       PEAK FLOW RATE(CFS) =       6.50

****************************************************************************
  FLOW PROCESS FROM NODE   1006.00 TO NODE   1007.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3080.00  DOWNSTREAM(FEET) =   3075.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   220.00   CHANNEL SLOPE =  0.0227
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      6.50
  FLOW VELOCITY(FEET/SEC.) =   2.77   FLOW DEPTH(FEET) =   0.64
  TRAVEL TIME(MIN.) =   1.32   Tc(MIN.) =  19.41
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1007.00 =  1724.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1006.00 TO NODE   1007.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.41
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  0.870
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -       10.10      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   10.10      SUBAREA RUNOFF(CFS) =    2.45
  EFFECTIVE AREA(ACRES) =     31.60   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
```

```
  TOTAL AREA(ACRES) =     31.60       PEAK FLOW RATE(CFS) =       7.67

****************************************************************************
  FLOW PROCESS FROM NODE   1007.00 TO NODE   1008.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3075.00  DOWNSTREAM(FEET) =   3060.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   340.00   CHANNEL SLOPE =  0.0441
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      7.67
  FLOW VELOCITY(FEET/SEC.) =   3.66   FLOW DEPTH(FEET) =   0.58
  TRAVEL TIME(MIN.) =   1.55   Tc(MIN.) =  20.95
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1008.00 =  2064.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1007.00 TO NODE   1008.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  20.95
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  0.820
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED                -       14.60      0.60      1.00     -
  USER-DEFINED                -        4.60      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   19.20      SUBAREA RUNOFF(CFS) =    3.80
  EFFECTIVE AREA(ACRES) =     50.80   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     50.80       PEAK FLOW RATE(CFS) =      10.06

****************************************************************************
  FLOW PROCESS FROM NODE   1008.00 TO NODE   1009.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3060.00  DOWNSTREAM(FEET) =   3040.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   409.00   CHANNEL SLOPE =  0.0489
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     10.06
  FLOW VELOCITY(FEET/SEC.) =   3.93   FLOW DEPTH(FEET) =   0.56
  TRAVEL TIME(MIN.) =   1.74   Tc(MIN.) =  22.69
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1009.00 =  2473.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1008.00 TO NODE   1009.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  22.69
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  0.784
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED                -        9.60      0.60      1.00     -
  USER-DEFINED                -       22.90      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   32.50      SUBAREA RUNOFF(CFS) =    5.37
  EFFECTIVE AREA(ACRES) =     83.30   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
```

```
  TOTAL AREA(ACRES) =     83.30       PEAK FLOW RATE(CFS) =      13.77

****************************************************************************
  FLOW PROCESS FROM NODE   1009.00 TO NODE   1010.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3040.00  DOWNSTREAM(FEET) =   3000.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1354.00   CHANNEL SLOPE =  0.0295
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     13.77
  FLOW VELOCITY(FEET/SEC.) =   3.50   FLOW DEPTH(FEET) =   0.69
  TRAVEL TIME(MIN.) =   6.45   Tc(MIN.) =  29.14
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1010.00 =  3827.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1009.00 TO NODE   1010.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  29.14
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  0.648
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED                -       22.50      0.60      1.00     -
  USER-DEFINED                -       20.80      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   43.30      SUBAREA RUNOFF(CFS) =    1.88
  EFFECTIVE AREA(ACRES) =    126.60   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    126.60       PEAK FLOW RATE(CFS) =      13.77
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1010.00 TO NODE   1011.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3000.00  DOWNSTREAM(FEET) =   2960.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1293.00   CHANNEL SLOPE =  0.0309
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     13.77
  FLOW VELOCITY(FEET/SEC.) =   3.55   FLOW DEPTH(FEET) =   0.68
  TRAVEL TIME(MIN.) =   6.06   Tc(MIN.) =  35.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1011.00 =  5120.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1010.00 TO NODE   1011.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  35.20
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  0.601
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED                -       24.80      0.60      1.00     -
  USER-DEFINED                -       52.80      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   77.60      SUBAREA RUNOFF(CFS) =    0.05
  EFFECTIVE AREA(ACRES) =    204.20   AREA-AVERAGED Fm(INCH/HR) =  0.60
```

```
 AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    204.20       PEAK FLOW RATE(CFS) =      13.77
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE   1011.00 TO NODE   1012.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   2960.00  DOWNSTREAM(FEET) =   2940.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   900.00   CHANNEL SLOPE =  0.0222
 CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   6.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     13.77
 FLOW VELOCITY(FEET/SEC.) =   3.05   FLOW DEPTH(FEET) =   0.68
 TRAVEL TIME(MIN.) =   4.92   Tc(MIN.) =  40.12
 LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1012.00 =  6020.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1011.00 TO NODE   1012.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  40.12
 *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  0.573
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 USER-DEFINED               -       10.90      0.60      1.00     -
 USER-DEFINED               -       15.10      0.60      1.00     -
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 * RAINFALL INTENSITY IS LESS THAN AREA-AVERAGED Fp;
 * IMPERVIOUS AREA USED FOR RUNOFF ESTIMATES.
 SUBAREA AREA(ACRES) =   26.00      SUBAREA RUNOFF(CFS) =    0.00
 EFFECTIVE AREA(ACRES) =    230.20   AREA-AVERAGED Fm(INCH/HR) =  0.60
 AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
 * RAINFALL INTENSITY IS LESS THAN AREA-AVERAGED Fp;
 * IMPERVIOUS AREA USED FOR RUNOFF ESTIMATES.
 TOTAL AREA(ACRES) =    230.20       PEAK FLOW RATE(CFS) =      13.77
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE   1012.00 TO NODE   1013.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   2940.00  DOWNSTREAM(FEET) =   2920.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   830.00   CHANNEL SLOPE =  0.0241
 CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   6.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     13.77
 FLOW VELOCITY(FEET/SEC.) =   3.13   FLOW DEPTH(FEET) =   0.66
 TRAVEL TIME(MIN.) =   4.42   Tc(MIN.) =  44.54
 LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1013.00 =  6850.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1012.00 TO NODE   1013.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  44.54
 *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  0.548
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 USER-DEFINED               -       3.20      0.60      1.00     -
 USER-DEFINED               -      21.50      0.60      1.00     -
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 * RAINFALL INTENSITY IS LESS THAN AREA-AVERAGED Fp;
 * IMPERVIOUS AREA USED FOR RUNOFF ESTIMATES.
 SUBAREA AREA(ACRES) =   24.70      SUBAREA RUNOFF(CFS) =    0.00
 EFFECTIVE AREA(ACRES) =    254.90   AREA-AVERAGED Fm(INCH/HR) =  0.60
 AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
 * RAINFALL INTENSITY IS LESS THAN AREA-AVERAGED Fp;
 * IMPERVIOUS AREA USED FOR RUNOFF ESTIMATES.
 TOTAL AREA(ACRES) =    254.90       PEAK FLOW RATE(CFS) =      13.77
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE   1013.00 TO NODE   1014.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   2920.00  DOWNSTREAM(FEET) =   2905.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   564.00   CHANNEL SLOPE =  0.0266
 CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   6.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     13.77
 FLOW VELOCITY(FEET/SEC.) =   3.22   FLOW DEPTH(FEET) =   0.64
 TRAVEL TIME(MIN.) =   2.92   Tc(MIN.) =  47.46
 LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1014.00 =  7414.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1013.00 TO NODE   1014.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  47.46
 *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  0.531
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 USER-DEFINED               -       79.00      0.60      1.00     -
 USER-DEFINED               -        2.90      0.60      1.00     -
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 * RAINFALL INTENSITY IS LESS THAN AREA-AVERAGED Fp;
 * IMPERVIOUS AREA USED FOR RUNOFF ESTIMATES.
 SUBAREA AREA(ACRES) =   81.90      SUBAREA RUNOFF(CFS) =    0.00
 EFFECTIVE AREA(ACRES) =    336.80   AREA-AVERAGED Fm(INCH/HR) =  0.60
 AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
 * RAINFALL INTENSITY IS LESS THAN AREA-AVERAGED Fp;
 * IMPERVIOUS AREA USED FOR RUNOFF ESTIMATES.
 TOTAL AREA(ACRES) =    336.80       PEAK FLOW RATE(CFS) =      13.77
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE   1014.00 TO NODE   1015.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   2905.00  DOWNSTREAM(FEET) =   2880.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   901.00   CHANNEL SLOPE =  0.0277
 CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   7.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     13.77
 FLOW VELOCITY(FEET/SEC.) =   3.15   FLOW DEPTH(FEET) =   0.58
 TRAVEL TIME(MIN.) =   4.77   Tc(MIN.) =  52.23
 LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1015.00 =  8315.00 FEET.
```

```
****************************************************************************
  FLOW PROCESS FROM NODE   1014.00 TO NODE   1015.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  52.23
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  0.504
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -       1.80      0.60      1.00     -
  USER-DEFINED               -      14.10      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  * RAINFALL INTENSITY IS LESS THAN AREA-AVERAGED Fp;
  * IMPERVIOUS AREA USED FOR RUNOFF ESTIMATES.
  SUBAREA AREA(ACRES) =   15.90      SUBAREA RUNOFF(CFS) =    0.00
  EFFECTIVE AREA(ACRES) =    352.70   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  * RAINFALL INTENSITY IS LESS THAN AREA-AVERAGED Fp;
  * IMPERVIOUS AREA USED FOR RUNOFF ESTIMATES.
  TOTAL AREA(ACRES) =    352.70       PEAK FLOW RATE(CFS) =      13.77
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1015.00 TO NODE   1035.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2880.00  DOWNSTREAM(FEET) =   2840.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1895.00   CHANNEL SLOPE =  0.0211
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     13.77
  FLOW VELOCITY(FEET/SEC.) =   2.87   FLOW DEPTH(FEET) =   0.63
  TRAVEL TIME(MIN.) =  11.00   Tc(MIN.) =  63.23
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1035.00 = 10210.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1015.00 TO NODE   1035.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  63.23
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  0.454
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -       8.00      0.60      1.00     -
  USER-DEFINED               -      28.80      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  * RAINFALL INTENSITY IS LESS THAN AREA-AVERAGED Fp;
  * IMPERVIOUS AREA USED FOR RUNOFF ESTIMATES.
  SUBAREA AREA(ACRES) =   36.80      SUBAREA RUNOFF(CFS) =    0.00
  EFFECTIVE AREA(ACRES) =    389.50   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  * RAINFALL INTENSITY IS LESS THAN AREA-AVERAGED Fp;
  * IMPERVIOUS AREA USED FOR RUNOFF ESTIMATES.
  TOTAL AREA(ACRES) =    389.50       PEAK FLOW RATE(CFS) =      13.77
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1035.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  63.23
  RAINFALL INTENSITY(INCH/HR) =   0.45
  AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =   389.50
  TOTAL STREAM AREA(ACRES) =   389.50
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     13.77

****************************************************************************
  FLOW PROCESS FROM NODE   1020.00 TO NODE   1021.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   330.00
  ELEVATION DATA: UPSTREAM(FEET) =   3525.00  DOWNSTREAM(FEET) =   3485.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   10.952
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.373
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      -        0.70      0.60      1.00     0   10.95
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      -        0.30      0.60      1.00     0   10.95
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      0.70
  TOTAL AREA(ACRES) =      1.00   PEAK FLOW RATE(CFS) =      0.70

****************************************************************************
  FLOW PROCESS FROM NODE   1021.00 TO NODE   1022.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3485.00  DOWNSTREAM(FEET) =   3440.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   191.00   CHANNEL SLOPE =  0.2356
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      0.70
  FLOW VELOCITY(FEET/SEC.) =   3.67   FLOW DEPTH(FEET) =   0.16
  TRAVEL TIME(MIN.) =   0.87   Tc(MIN.) =  11.82
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1022.00 =   521.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1021.00 TO NODE   1022.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.82
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.313
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -       0.10      0.60      1.00     -
  USER-DEFINED               -       0.80      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.90      SUBAREA RUNOFF(CFS) =    0.58
  EFFECTIVE AREA(ACRES) =      1.90   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.90       PEAK FLOW RATE(CFS) =       1.22
```

```
 ************************************************************************
  FLOW PROCESS FROM NODE   1022.00 TO NODE   1023.00 IS CODE =  51
 ------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
 ========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3440.00  DOWNSTREAM(FEET) =   3400.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   227.00   CHANNEL SLOPE =  0.1762
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      1.22
  FLOW VELOCITY(FEET/SEC.) =   3.96   FLOW DEPTH(FEET) =   0.25
  TRAVEL TIME(MIN.) =   0.96   Tc(MIN.) =  12.78
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1023.00 =   748.00 FEET.

 ************************************************************************
  FLOW PROCESS FROM NODE   1022.00 TO NODE   1023.00 IS CODE =  81
 ------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ========================================================================
  MAINLINE Tc(MIN) =  12.78
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.246
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -       1.20      0.60       1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.20      SUBAREA RUNOFF(CFS) =    0.70
  EFFECTIVE AREA(ACRES) =      3.10   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      3.10       PEAK FLOW RATE(CFS) =       1.80

 ************************************************************************
  FLOW PROCESS FROM NODE   1023.00 TO NODE   1024.00 IS CODE =  51
 ------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
 ========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3400.00  DOWNSTREAM(FEET) =   3280.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   160.00   CHANNEL SLOPE =  0.7500
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      1.80
  FLOW VELOCITY(FEET/SEC.) =   7.45   FLOW DEPTH(FEET) =   0.20
  TRAVEL TIME(MIN.) =   0.36   Tc(MIN.) =  13.13
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1024.00 =   908.00 FEET.

 ************************************************************************
  FLOW PROCESS FROM NODE   1023.00 TO NODE   1024.00 IS CODE =  81
 ------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ========================================================================
  MAINLINE Tc(MIN) =  13.13
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.221
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -       0.10      0.60       1.00     -
  USER-DEFINED               -       0.60      0.60       1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.70      SUBAREA RUNOFF(CFS) =    0.39
  EFFECTIVE AREA(ACRES) =      3.80   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      3.80       PEAK FLOW RATE(CFS) =       2.12
```

```
 ************************************************************************
  FLOW PROCESS FROM NODE   1024.00 TO NODE   1025.00 IS CODE =  51
 ------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
 ========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3280.00  DOWNSTREAM(FEET) =   3240.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   138.00   CHANNEL SLOPE =  0.2899
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      2.12
  FLOW VELOCITY(FEET/SEC.) =   5.61   FLOW DEPTH(FEET) =   0.29
  TRAVEL TIME(MIN.) =   0.41   Tc(MIN.) =  13.54
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1025.00 =  1046.00 FEET.

 ************************************************************************
  FLOW PROCESS FROM NODE   1024.00 TO NODE   1025.00 IS CODE =  81
 ------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ========================================================================
  MAINLINE Tc(MIN) =  13.54
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.192
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -       2.80      0.60       1.00     -
  USER-DEFINED               -       0.30      0.60       1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.10      SUBAREA RUNOFF(CFS) =    1.65
  EFFECTIVE AREA(ACRES) =      6.90   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      6.90       PEAK FLOW RATE(CFS) =       3.68

 ************************************************************************
  FLOW PROCESS FROM NODE   1025.00 TO NODE   1026.00 IS CODE =  51
 ------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
 ========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3240.00  DOWNSTREAM(FEET) =   3200.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   200.00   CHANNEL SLOPE =  0.2000
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      3.68
  FLOW VELOCITY(FEET/SEC.) =   5.17   FLOW DEPTH(FEET) =   0.31
  TRAVEL TIME(MIN.) =   0.64   Tc(MIN.) =  14.19
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1026.00 =  1246.00 FEET.

 ************************************************************************
  FLOW PROCESS FROM NODE   1025.00 TO NODE   1026.00 IS CODE =  81
 ------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ========================================================================
  MAINLINE Tc(MIN) =  14.19
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.147
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -       1.50      0.60       1.00     -
  USER-DEFINED               -       1.80      0.60       1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.30      SUBAREA RUNOFF(CFS) =    1.62
  EFFECTIVE AREA(ACRES) =     10.20   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     10.20       PEAK FLOW RATE(CFS) =       5.02
```

```
****************************************************************************
  FLOW PROCESS FROM NODE   1026.00 TO NODE   1027.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3200.00  DOWNSTREAM(FEET) =   3120.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   477.00   CHANNEL SLOPE =  0.1677
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      5.02
  FLOW VELOCITY(FEET/SEC.) =   5.45   FLOW DEPTH(FEET) =   0.39
  TRAVEL TIME(MIN.) =   1.46   Tc(MIN.) =  15.65
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1027.00 =  1723.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1026.00 TO NODE   1027.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  15.65
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.058
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -        3.90      0.60      1.00     -
  USER-DEFINED               -        3.10      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    7.00      SUBAREA RUNOFF(CFS) =    2.88
  EFFECTIVE AREA(ACRES) =     17.20   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     17.20       PEAK FLOW RATE(CFS) =       7.09

****************************************************************************
  FLOW PROCESS FROM NODE   1027.00 TO NODE   1028.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3120.00  DOWNSTREAM(FEET) =   3100.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   273.00   CHANNEL SLOPE =  0.0733
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      7.09
  FLOW VELOCITY(FEET/SEC.) =   4.26   FLOW DEPTH(FEET) =   0.48
  TRAVEL TIME(MIN.) =   1.07   Tc(MIN.) =  16.71
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1028.00 =  1996.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1027.00 TO NODE   1028.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.71
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.004
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -        2.70      0.60      1.00     -
  USER-DEFINED               -        0.50      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.20      SUBAREA RUNOFF(CFS) =    1.16
  EFFECTIVE AREA(ACRES) =     20.40   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     20.40       PEAK FLOW RATE(CFS) =       7.43
```

```
****************************************************************************
  FLOW PROCESS FROM NODE   1028.00 TO NODE   1029.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3100.00  DOWNSTREAM(FEET) =   3080.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   212.00   CHANNEL SLOPE =  0.0943
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      7.43
  FLOW VELOCITY(FEET/SEC.) =   4.72   FLOW DEPTH(FEET) =   0.45
  TRAVEL TIME(MIN.) =   0.75   Tc(MIN.) =  17.46
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1029.00 =  2208.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1028.00 TO NODE   1029.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.46
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  0.967
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -        4.60      0.60      1.00     -
  USER-DEFINED               -        4.40      0.60      1.00     -
  USER-DEFINED               -        8.70      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   17.70      SUBAREA RUNOFF(CFS) =    5.85
  EFFECTIVE AREA(ACRES) =     38.10   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     38.10       PEAK FLOW RATE(CFS) =      12.59

****************************************************************************
  FLOW PROCESS FROM NODE   1029.00 TO NODE   1030.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3080.00  DOWNSTREAM(FEET) =   3000.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   781.00   CHANNEL SLOPE =  0.1024
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     12.59
  FLOW VELOCITY(FEET/SEC.) =   5.74   FLOW DEPTH(FEET) =   0.61
  TRAVEL TIME(MIN.) =   2.27   Tc(MIN.) =  19.73
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1030.00 =  2989.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1029.00 TO NODE   1030.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.73
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  0.854
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -       24.90      0.60      1.00     -
  USER-DEFINED               -        6.60      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   31.50      SUBAREA RUNOFF(CFS) =    7.19
  EFFECTIVE AREA(ACRES) =     69.60   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     69.60       PEAK FLOW RATE(CFS) =      15.89
```

```
****************************************************************************
  FLOW PROCESS FROM NODE   1030.00 TO NODE   1031.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3000.00  DOWNSTREAM(FEET) =   2980.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   392.00   CHANNEL SLOPE =  0.0510
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     15.89
  FLOW VELOCITY(FEET/SEC.) =   4.61   FLOW DEPTH(FEET) =   0.73
  TRAVEL TIME(MIN.) =   1.42   Tc(MIN.) =  21.15
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1031.00 =  3381.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1030.00 TO NODE   1031.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  21.15
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  0.816
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -       53.50      0.60      1.00     -
  USER-DEFINED               -        2.40      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   55.90      SUBAREA RUNOFF(CFS) =   10.87
  EFFECTIVE AREA(ACRES) =    125.50   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    125.50       PEAK FLOW RATE(CFS) =      24.40

****************************************************************************
  FLOW PROCESS FROM NODE   1031.00 TO NODE   1032.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2980.00  DOWNSTREAM(FEET) =   2920.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1552.00   CHANNEL SLOPE =  0.0387
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     24.40
  FLOW VELOCITY(FEET/SEC.) =   4.61   FLOW DEPTH(FEET) =   0.90
  TRAVEL TIME(MIN.) =   5.61   Tc(MIN.) =  26.76
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1032.00 =  4933.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1031.00 TO NODE   1032.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  26.76
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  0.698
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -       65.60      0.60      1.00     -
  USER-DEFINED               -       44.00      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  109.60      SUBAREA RUNOFF(CFS) =    9.69
  EFFECTIVE AREA(ACRES) =    235.10   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    235.10       PEAK FLOW RATE(CFS) =      24.40
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1032.00 TO NODE   1033.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2920.00  DOWNSTREAM(FEET) =   2900.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   976.00   CHANNEL SLOPE =  0.0205
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     24.40
  FLOW VELOCITY(FEET/SEC.) =   3.48   FLOW DEPTH(FEET) =   0.89
  TRAVEL TIME(MIN.) =   4.68   Tc(MIN.) =  31.44
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1033.00 =  5909.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1032.00 TO NODE   1033.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  31.44
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  0.622
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -       35.60      0.60      1.00     -
  USER-DEFINED               -        0.60      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   36.20      SUBAREA RUNOFF(CFS) =    0.72
  EFFECTIVE AREA(ACRES) =    271.30   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    271.30       PEAK FLOW RATE(CFS) =      24.40
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1033.00 TO NODE   1034.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2900.00  DOWNSTREAM(FEET) =   2880.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   942.00   CHANNEL SLOPE =  0.0212
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     24.40
  FLOW VELOCITY(FEET/SEC.) =   3.52   FLOW DEPTH(FEET) =   0.88
  TRAVEL TIME(MIN.) =   4.46   Tc(MIN.) =  35.90
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1034.00 =  6851.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1033.00 TO NODE   1034.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  35.90
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  0.597
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -       30.50      0.60      1.00     -
  USER-DEFINED               -        1.20      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  * RAINFALL INTENSITY IS LESS THAN AREA-AVERAGED Fp;
  * IMPERVIOUS AREA USED FOR RUNOFF ESTIMATES.
```

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  SUBAREA AREA(ACRES) =   31.70      SUBAREA RUNOFF(CFS) =    0.00
  EFFECTIVE AREA(ACRES) =    303.00   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  * RAINFALL INTENSITY IS LESS THAN AREA-AVERAGED Fp;
  * IMPERVIOUS AREA USED FOR RUNOFF ESTIMATES.
  TOTAL AREA(ACRES) =    303.00       PEAK FLOW RATE(CFS) =      24.40
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1034.00 TO NODE   1035.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2880.00  DOWNSTREAM(FEET) =   2840.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1097.00   CHANNEL SLOPE =  0.0365
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     24.40
  FLOW VELOCITY(FEET/SEC.) =   4.20   FLOW DEPTH(FEET) =   0.75
  TRAVEL TIME(MIN.) =   4.36   Tc(MIN.) =  40.26
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1035.00 =  7948.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1034.00 TO NODE   1035.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  40.26
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  0.572
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED              -        1.20      0.60      1.00     -
  USER-DEFINED              -      113.90      0.60      1.00     -
  USER-DEFINED              -       18.60      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  * RAINFALL INTENSITY IS LESS THAN AREA-AVERAGED Fp;
  * IMPERVIOUS AREA USED FOR RUNOFF ESTIMATES.
  SUBAREA AREA(ACRES) =  133.70      SUBAREA RUNOFF(CFS) =    0.00
  EFFECTIVE AREA(ACRES) =    436.70   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  * RAINFALL INTENSITY IS LESS THAN AREA-AVERAGED Fp;
  * IMPERVIOUS AREA USED FOR RUNOFF ESTIMATES.
  TOTAL AREA(ACRES) =    436.70       PEAK FLOW RATE(CFS) =      24.40
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1035.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  40.26
  RAINFALL INTENSITY(INCH/HR) =   0.57
  AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =   436.70
  TOTAL STREAM AREA(ACRES) =   436.70
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     24.40

  ** CONFLUENCE DATA **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1     13.77  63.23    0.454  0.60( 0.60) 1.00   389.5    1000.00
      2     24.40  40.26    0.572  0.60( 0.60) 1.00   436.7    1020.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1     35.44  40.26    0.572  0.60( 0.60) 1.00   684.7    1020.00
      2     33.15  63.23    0.454  0.60( 0.60) 1.00   826.2    1000.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     35.44    Tc(MIN.) =    40.26
  EFFECTIVE AREA(ACRES) =   684.70   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    826.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1035.00 = 10210.00 FEET.
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =    826.20  TC(MIN.) =     40.26
  EFFECTIVE AREA(ACRES) =    684.70  AREA-AVERAGED Fm(INCH/HR)=  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  PEAK FLOW RATE(CFS)   =     35.44

  ** PEAK FLOW RATE TABLE **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1     35.44  40.26    0.572  0.60( 0.60) 1.00   684.7    1020.00
      2     33.15  63.23    0.454  0.60( 0.60) 1.00   826.2    1000.00
============================================================================
============================================================================
  END OF RATIONAL METHOD ANALYSIS
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**************************************************************************

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                          Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU35002E.FLD
  TIME/DATE OF STUDY: 13:11 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1035.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =     826.200 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.840 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.030
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.920
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.740
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.18
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.32
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.46
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.94
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.46
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.67

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.963
          30-MINUTE FACTOR = 0.963
           1-HOUR FACTOR = 0.963
           3-HOUR FACTOR = 0.994
           6-HOUR FACTOR = 0.997
          24-HOUR FACTOR = 0.998

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   9.921


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


==========================================================================
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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.075	107.370
2	3.342	226.564
3	6.452	310.788
4	10.509	405.295
5	16.062	554.891
6	23.361	729.267
7	31.456	808.820
8	37.773	631.275
9	42.919	514.169
10	47.476	455.318
11	51.460	398.094
12	54.436	297.283
13	56.987	254.937
14	59.129	213.965
15	61.202	207.192
16	63.137	193.363
17	64.820	168.142
18	66.379	155.747
19	67.866	148.622
20	69.238	137.068
21	70.505	126.588
22	71.753	124.657
23	72.947	119.320
24	73.971	102.311
25	74.949	97.742
26	75.863	91.355
27	76.761	89.669
28	77.601	84.015
29	78.426	82.396
30	79.194	76.730
31	79.901	70.659
32	80.602	70.000
33	81.272	66.941
34	81.926	65.331
35	82.578	65.149
36	83.153	57.470
37	83.679	52.564
38	84.205	52.563
39	84.724	51.874
40	85.176	45.120
41	85.609	43.335
42	86.041	43.150
43	86.467	42.554
44	86.875	40.774
45	87.253	37.707
46	87.627	37.415
47	88.001	37.372
48	88.375	37.373
49	88.739	36.376
50	89.077	33.792
51	89.414	33.608
52	89.749	33.469
53	90.080	33.128
54	90.412	33.111
55	90.726	31.412
56	91.020	29.386
57	91.314	29.349
58	91.608	29.420
59	91.902	29.384
60	92.196	29.386
61	92.485	28.877

62	92.738	25.282
63	92.980	24.140
64	93.221	24.035
65	93.461	24.036
66	93.702	24.072
67	93.942	24.001
68	94.183	24.068
69	94.412	22.841
70	94.601	18.896
71	94.787	18.569
72	94.972	18.568
73	95.158	18.572
74	95.344	18.569
75	95.530	18.533
76	95.716	18.607
77	95.902	18.569
78	96.087	18.534
79	96.268	18.027
80	96.411	14.299
81	96.547	13.645
82	96.682	13.459
83	96.817	13.495
84	96.952	13.459
85	97.087	13.495
86	97.222	13.495
87	97.357	13.459
88	97.492	13.531
89	97.626	13.386
90	97.761	13.531
91	97.893	13.161
92	98.024	13.103
93	98.145	12.089
94	98.194	4.922
95	98.231	3.619
96	98.267	3.619
97	98.302	3.475
98	98.338	3.619
99	98.374	3.619
100	98.410	3.547
101	98.446	3.619
102	98.481	3.547
103	98.518	3.619
104	98.553	3.548
105	98.589	3.546
106	98.626	3.693
107	98.661	3.546
108	98.697	3.548
109	98.733	3.619
110	98.768	3.547
111	98.804	3.619
112	98.839	3.475
113	98.876	3.693
114	98.911	3.474
115	98.947	3.619
116	98.983	3.620
117	99.019	3.547
118	99.055	3.619
119	99.091	3.619
120	99.128	3.619
121	99.164	3.619
122	99.200	3.620
123	99.236	3.619
124	99.273	3.619
125	99.309	3.619
126	99.345	3.619
127	99.381	3.619
128	99.417	3.619
129	99.454	3.619
130	99.490	3.620
131	99.526	3.619
132	99.562	3.619
133	99.599	3.619
134	99.635	3.619
135	99.671	3.619
136	99.707	3.619
137	99.743	3.619
138	99.780	3.619
139	99.816	3.620
140	99.852	3.619
141	99.888	3.619
142	99.925	3.619
143	99.961	3.619
144	99.997	3.619
145	100.000	0.298

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 130.4180

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 53.0790

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 50.0 100.0 150.0 200.0
14.000	16.2818	33.21	. Q . V . . .
14.083	16.5139	33.70	. Q . V . . .
14.167	16.7498	34.24	. Q . V . . .
14.250	16.9895	34.81	. Q . V . . .
14.333	17.2335	35.42	. Q . V . . .
14.417	17.4821	36.09	. Q . V . . .
14.500	17.7356	36.82	. Q . V . . .
14.583	17.9945	37.58	. Q . V . . .
14.667	18.2584	38.32	. Q . V . . .
14.750	18.5273	39.05	. Q . V . . .
14.833	18.8012	39.78	. Q . V . . .
14.917	19.0804	40.53	. Q . V . . .
15.000	19.3647	41.28	. Q . V . . .
15.083	19.6543	42.06	. Q . V . . .
15.167	19.9495	42.86	. Q . V . . .
15.250	20.2507	43.73	. Q . V . . .
15.333	20.5581	44.63	. Q . V . . .
15.417	20.8711	45.45	. Q. V . . .
15.500	21.1891	46.17	. Q. V . . .
15.583	21.5121	46.90	. Q. V . . .
15.667	21.8400	47.62	. Q. V . . .
15.750	22.1710	48.05	. Q. V . . .
15.833	22.5026	48.16	. Q. V . . .
15.917	22.8363	48.45	. Q. V . . .
16.000	23.1779	49.60	. Q. V . . .
16.083	23.6142	63.36	. . Q V . . .
16.167	24.1523	78.13	. . Q V . . .
16.250	24.7654	89.02	. . QV . . .
16.333	25.4671	101.89	. . VQ . . .
16.417	26.3024	121.29	. . V. Q . . .
16.500	27.2838	142.50	. . V Q . . .
16.583	28.3252	151.22	. . .V Q . . .
16.667	29.2215	130.14	. . . V Q . . .
16.750	30.0221	116.24	. . . VQ . . .
16.833	30.7715	108.82	. . .Q V . . .
16.917	31.4697	101.38	. . Q V . . .
17.000	32.0815	88.83	. . Q . V . . .
17.083	32.6534	83.04	. . Q . V . . .
17.167	33.1866	77.42	. . Q . V . . .
17.250	33.7082	75.73	. . Q . V . . .
17.333	34.2116	73.11	. . Q . V . . .
17.417	34.6883	69.22	. . Q . V . . .
17.500	35.1483	66.78	. . Q . V . . .
17.583	35.5956	64.95	. . Q . V . . .
17.667	36.0275	62.72	. . Q . V . . .
17.750	36.4455	60.69	. . Q . V . . .
17.833	36.8564	59.66	. .Q . V . . .
17.917	37.2574	58.23	. .Q . V . . .
18.000	37.6399	55.54	. .Q . V . . .
18.083	38.0133	54.22	. Q . V . . .
18.167	38.3756	52.60	. Q . V . . .
18.250	38.7301	51.47	. Q . V. . .
18.333	39.0731	49.80	. Q. . V. . .
18.417	39.4067	48.45	. Q. . V. . .
18.500	39.7266	46.45	. Q. . V. . .
18.583	40.0321	44.36	. Q . . V . .
18.667	40.3291	43.11	. Q . . V . .
18.750	40.6166	41.74	. Q . . V . .
18.833	40.8962	40.60	. Q . . V . .
18.917	41.1693	39.66	. Q . . .V . .
19.000	41.4310	38.00	. Q . . .V . .
19.083	41.6842	36.75	. Q . . .V . .
19.167	41.9329	36.11	. Q . . .V . .
19.250	42.1766	35.39	. Q . . .V . .
19.333	42.4108	34.01	. Q . . .V . .
19.417	42.6399	33.26	. Q . . . V . .
19.500	42.8653	32.72	. Q . . . V . .
19.583	43.0867	32.15	. Q . . . V . .
19.667	43.3033	31.45	. Q . . . V . .
19.750	43.5142	30.64	. Q . . . V . .
19.833	43.7219	30.16	. Q . . . V . .
19.917	43.9266	29.72	. Q . . . V . .
20.000	44.1285	29.31	. Q . . . V . .

END OF FLOODSCx ROUTING ANALYSIS

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                          Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

----------------------------------------------------------------------------
  FILE NAME: LU36002E.FLD
  TIME/DATE OF STUDY: 13:11 02/25/2004


*****************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1036.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
============================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =     879.400 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.900 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.030
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.910
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.750
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.18
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.32
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.46
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.94
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.46
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.67

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.961
          30-MINUTE FACTOR = 0.961
           1-HOUR FACTOR = 0.961
           3-HOUR FACTOR = 0.994
           6-HOUR FACTOR = 0.997
          24-HOUR FACTOR = 0.998

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   9.259


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.998	106.153
2	3.055	218.755
3	5.877	300.112
4	9.357	370.072
5	14.141	508.825
6	20.437	669.612
7	28.023	806.760
8	34.659	705.766
9	39.999	567.890
10	44.606	489.969
11	48.750	440.732
12	52.268	374.208
13	54.960	286.238
14	57.334	252.487
15	59.364	215.942
16	61.324	208.469
17	63.176	196.913
18	64.780	170.640
19	66.258	157.116
20	67.684	151.695
21	69.008	140.838
22	70.214	128.264
23	71.385	124.471
24	72.542	123.127
25	73.582	110.536
26	74.516	99.378
27	75.405	94.501
28	76.247	89.590
29	77.074	87.908
30	77.849	82.418
31	78.612	81.220
32	79.331	76.392
33	79.987	69.811
34	80.637	69.163
35	81.269	67.146
36	81.875	64.471
37	82.480	64.411
38	83.061	61.724
39	83.555	52.552
40	84.041	51.686
41	84.527	51.667
42	84.996	49.930
43	85.403	43.268
44	85.804	42.626
45	86.203	42.398
46	86.596	41.838
47	86.976	40.375
48	87.325	37.212
49	87.671	36.784
50	88.017	36.734
51	88.362	36.757
52	88.707	36.630
53	89.026	33.999
54	89.337	33.061
55	89.648	33.014
56	89.956	32.797
57	90.262	32.548
58	90.568	32.505
59	90.853	30.343
60	91.125	28.912
61	91.397	28.914

62	91.668	28.832
63	91.940	28.913
64	92.212	28.912
65	92.483	28.837
66	92.727	25.971
67	92.951	23.863
68	93.174	23.702
69	93.396	23.569
70	93.618	23.656
71	93.841	23.656
72	94.062	23.571
73	94.285	23.694
74	94.492	21.982
75	94.664	18.347
76	94.836	18.304
77	95.008	18.224
78	95.179	18.224
79	95.351	18.307
80	95.523	18.223
81	95.694	18.225
82	95.866	18.264
83	96.037	18.264
84	96.209	18.223
85	96.363	16.427
86	96.490	13.445
87	96.615	13.338
88	96.740	13.296
89	96.864	13.214
90	96.989	13.296
91	97.113	13.172
92	97.239	13.335
93	97.362	13.173
94	97.487	13.253
95	97.612	13.254
96	97.736	13.254
97	97.860	13.124
98	97.981	12.902
99	98.102	12.902
100	98.191	9.390
101	98.225	3.675
102	98.258	3.512
103	98.291	3.511
104	98.324	3.512
105	98.357	3.511
106	98.390	3.512
107	98.424	3.593
108	98.456	3.430
109	98.490	3.593
110	98.522	3.430
111	98.556	3.593
112	98.589	3.511
113	98.622	3.512
114	98.655	3.511
115	98.688	3.512
116	98.721	3.511
117	98.755	3.593
118	98.787	3.430
119	98.821	3.593
120	98.853	3.430
121	98.887	3.593
122	98.919	3.430
123	98.953	3.593
124	98.986	3.511
125	99.019	3.512
126	99.052	3.511
127	99.085	3.512
128	99.118	3.511
129	99.151	3.511
130	99.184	3.511
131	99.217	3.511
132	99.250	3.511
133	99.283	3.511
134	99.316	3.511
135	99.349	3.511
136	99.382	3.511
137	99.415	3.511
138	99.448	3.511
139	99.481	3.511
140	99.514	3.511
141	99.547	3.512
142	99.580	3.511
143	99.613	3.511
144	99.646	3.511
145	99.679	3.511
146	99.712	3.511
147	99.745	3.511
148	99.778	3.511
149	99.811	3.511
150	99.844	3.511

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 140.6499

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 54.5577

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 50.0 100.0 150.0 200.0
14.000	16.4426	33.54	. Q . V . . .
14.083	16.6770	34.04	. Q . V . . .
14.167	16.9152	34.58	. Q . V . . .
14.250	17.1573	35.15	. Q . V . . .
14.333	17.4035	35.75	. Q . V . . .
14.417	17.6543	36.41	. Q . V . . .
14.500	17.9100	37.12	. Q . V . . .
14.583	18.1709	37.89	. Q . V . . .
14.667	18.4371	38.65	. Q . V . . .
14.750	18.7083	39.39	. Q . V . . .
14.833	18.9847	40.13	. Q . V . . .
14.917	19.2663	40.88	. Q . V . . .
15.000	19.5531	41.65	. Q . V . . .
15.083	19.8454	42.44	. Q . V . . .
15.167	20.1433	43.25	. Q . V . . .
15.250	20.4471	44.11	. Q . V . . .
15.333	20.7571	45.01	. Q. V . . .
15.417	21.0727	45.83	. Q. V . . .
15.500	21.3934	46.56	. Q. V . . .
15.583	21.7191	47.29	. Q. V . . .
15.667	22.0500	48.05	. Q. V . . .
15.750	22.3843	48.54	. Q. V . . .
15.833	22.7201	48.76	. Q. V . . .
15.917	23.0579	49.05	. Q. V . . .
16.000	23.4030	50.10	. Q V . . .
16.083	23.8413	63.64	. . Q V . . .
16.167	24.3760	77.65	. . Q V . . .
16.250	24.9819	87.98	. . QV . . .
16.333	25.6543	97.62	. . VQ. . .
16.417	26.4510	115.69	. . V. Q . .
16.500	27.3858	135.73	. . V Q . .
16.583	28.4300	151.62	. . V Q .
16.667	29.3900	139.40	. . .V Q . .
16.750	30.2379	123.11	. . . V Q . .
16.833	31.0208	113.68	. . . Q . .
16.917	31.7605	107.39	. . .Q V . .
17.000	32.4410	98.82	. . Q. V . .
17.083	33.0453	87.74	. . Q . V . .
17.167	33.6165	82.94	. . Q . V . .
17.250	34.1527	77.86	. . Q . V . .
17.333	34.6767	76.09	. . Q . V . .
17.417	35.1844	73.71	. . Q . V . .
17.500	35.6644	69.70	. . Q . V . .
17.583	36.1269	67.15	. . Q . V . .
17.667	36.5784	65.56	. . Q . V . .
17.750	37.0153	63.43	. . Q . V . .
17.833	37.4367	61.19	. . Q . V . .
17.917	37.8499	59.99	. .Q . V . .
18.000	38.2567	59.07	. .Q . V . .
18.083	38.6478	56.79	. .Q . V . .
18.167	39.0239	54.61	. Q . V . .
18.250	39.3897	53.11	. Q . V . .
18.333	39.7448	51.56	. Q . V. .
18.417	40.0910	50.27	. Q . V. .
18.500	40.4243	48.39	. Q. . V. .
18.583	40.7471	46.88	. Q. . V. .
18.667	41.0575	45.07	. Q. . V .
18.750	41.3552	43.23	. Q . . V .
18.833	41.6456	42.17	. Q . . V .
18.917	41.9282	41.04	. Q . . V .
19.000	42.2031	39.92	. Q . . V .
19.083	42.4728	39.16	. Q . . .V .
19.167	42.7355	38.14	. Q . . .V .
19.250	42.9866	36.46	. Q . . .V .
19.333	43.2329	35.77	. Q . . .V .
19.417	43.4751	35.17	. Q . . .V .
19.500	43.7121	34.41	. Q . . . V .
19.583	43.9401	33.11	. Q . . . V .
19.667	44.1643	32.55	. Q . . . V .
19.750	44.3850	32.05	. Q . . . V .
19.833	44.6022	31.53	. Q . . . V .
19.917	44.8151	30.91	. Q . . . V .
20.000	45.0225	30.12	. Q . . . V .

END OF FLOODSCx ROUTING ANALYSIS

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**************************************************************************

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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU37002E.FLD
  TIME/DATE OF STUDY: 13:12 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1037.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
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      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =     976.200 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.970 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.040
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.890
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.060
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.750
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.18
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.32
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.46
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.94
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.46
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.67

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.956
          30-MINUTE FACTOR = 0.956
           1-HOUR FACTOR = 0.956
           3-HOUR FACTOR = 0.993
           6-HOUR FACTOR = 0.997
          24-HOUR FACTOR = 0.998

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   8.591


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.920	108.586
2	2.777	219.284
3	5.295	297.289
4	8.313	356.226
5	12.326	473.772
6	17.665	630.327
7	24.097	759.445
8	31.104	827.227
9	36.650	654.758
10	41.257	543.822
11	45.499	500.807
12	49.404	461.003
13	52.614	379.072
14	55.107	294.227
15	57.359	265.922
16	59.266	225.149
17	61.116	218.440
18	62.894	209.895
19	64.434	181.746
20	65.869	169.418
21	67.216	159.004
22	68.494	150.869
23	69.686	140.761
24	70.792	130.539
25	71.875	127.913
26	72.946	126.414
27	73.889	111.320
28	74.758	102.607
29	75.585	97.663
30	76.368	92.481
31	77.142	91.346
32	77.870	85.887
33	78.580	83.819
34	79.274	81.951
35	79.896	73.493
36	80.501	71.448
37	81.101	70.796
38	81.673	67.492
39	82.233	66.137
40	82.793	66.130
41	83.322	62.479
42	83.775	53.483
43	84.224	52.918
44	84.672	52.941
45	85.114	52.177
46	85.499	45.401
47	85.868	43.670
48	86.238	43.628
49	86.601	42.884
50	86.961	42.498
51	87.295	39.465
52	87.615	37.698
53	87.932	37.438
54	88.248	37.376
55	88.565	37.401
56	88.881	37.330
57	89.175	34.705
58	89.461	33.670
59	89.746	33.654
60	90.030	33.518
61	90.309	33.020

62	90.589	33.068
63	90.863	32.350
64	91.115	29.676
65	91.364	29.386
66	91.613	29.386
67	91.862	29.391
68	92.110	29.383
69	92.359	29.390
70	92.608	29.296
71	92.833	26.662
72	93.039	24.328
73	93.243	24.008
74	93.445	23.919
75	93.648	23.911
76	93.851	24.011
77	94.053	23.864
78	94.257	24.008
79	94.459	23.870
80	94.636	20.854
81	94.792	18.513
82	94.949	18.516
83	95.106	18.516
84	95.263	18.516
85	95.420	18.558
86	95.577	18.471
87	95.734	18.561
88	95.891	18.516
89	96.047	18.513
90	96.204	18.513
91	96.359	18.275
92	96.484	14.738
93	96.599	13.641
94	96.713	13.465
95	96.827	13.429
96	96.941	13.477
97	97.054	13.334
98	97.168	13.477
99	97.282	13.383
100	97.396	13.430
101	97.509	13.382
102	97.624	13.525
103	97.736	13.334
104	97.850	13.430
105	97.961	13.051
106	98.072	13.090
107	98.179	12.708
108	98.239	7.071
109	98.269	3.535
110	98.300	3.631
111	98.329	3.440
112	98.360	3.632
113	98.390	3.535
114	98.420	3.534
115	98.450	3.535
116	98.480	3.535
117	98.509	3.536
118	98.540	3.631
119	98.570	3.535
120	98.600	3.535
121	98.629	3.440
122	98.660	3.631
123	98.690	3.535
124	98.720	3.535
125	98.750	3.535
126	98.780	3.535
127	98.810	3.535
128	98.840	3.536
129	98.870	3.630
130	98.900	3.440
131	98.930	3.631
132	98.959	3.440
133	98.990	3.632
134	99.019	3.440
135	99.050	3.631
136	99.080	3.535
137	99.110	3.535
138	99.140	3.534
139	99.170	3.535
140	99.200	3.535
141	99.230	3.535
142	99.260	3.535
143	99.290	3.535
144	99.320	3.535
145	99.350	3.535
146	99.380	3.535
147	99.409	3.535
148	99.439	3.534
149	99.469	3.535
150	99.499	3.535

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 156.1478

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 60.2960

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 50.0 100.0 150.0 200.0
14.000	17.9744	36.64	. Q .V . . .
14.083	18.2305	37.19	. Q . V . . .
14.167	18.4908	37.79	. Q . V . . .
14.250	18.7553	38.41	. Q . V . . .
14.333	19.0244	39.06	. Q . V . . .
14.417	19.2982	39.76	. Q . V . . .
14.500	19.5773	40.52	. Q . V . . .
14.583	19.8619	41.33	. Q . V . . .
14.667	20.1525	42.19	. Q . V . . .
14.750	20.4487	43.01	. Q . V . . .
14.833	20.7505	43.83	. Q . V . . .
14.917	21.0581	44.66	. Q . V . . .
15.000	21.3715	45.51	. Q. V . . .
15.083	21.6908	46.37	. Q. V . . .
15.167	22.0163	47.25	. Q. V . . .
15.250	22.3481	48.18	. Q. V . . .
15.333	22.6866	49.15	. Q. V . . .
15.417	23.0312	50.04	. Q V . . .
15.500	23.3813	50.83	. Q V . . .
15.583	23.7368	51.62	. Q V . . .
15.667	24.0982	52.47	. Q V . . .
15.750	24.4636	53.07	. Q V . . .
15.833	24.8314	53.40	. Q V . . .
15.917	25.2020	53.82	. Q V . . .
16.000	25.5794	54.79	. Q V . . .
16.083	26.0513	68.53	. . Q V . . .
16.167	26.6181	82.30	. . QV . . .
16.250	27.2533	92.22	. . Q . . .
16.333	27.9432	100.18	. . V Q . . .
16.417	28.7389	115.54	. . V. Q . . .
16.500	29.6710	135.35	. . V. Q . . .
16.583	30.7114	151.06	. . V Q . . .
16.667	31.8021	158.37	. . .V .Q . . .
16.750	32.7529	138.06	. . .V Q . . .
16.833	33.6147	125.13	. . . V Q . . .
16.917	34.4394	119.74	. . . VQ . . .
17.000	35.2278	114.47	. . . QV . . .
17.083	35.9444	104.06	. . . Q V . . .
17.167	36.5871	93.32	. . Q . V . . .
17.250	37.2006	89.07	. . Q . V . . .
17.333	37.7756	83.50	. . Q . V . . .
17.417	38.3389	81.78	. . Q . V . . .
17.500	38.8875	79.66	. . Q . V . . .
17.583	39.4065	75.36	. . Q . V . . .
17.667	39.9086	72.91	. . Q . V . . .
17.750	40.3958	70.74	. . Q . V . . .
17.833	40.8703	68.90	. . Q . V . . .
17.917	41.3308	66.86	. . Q . V . . .
18.000	41.7778	64.90	. . Q . V . . .
18.083	42.2167	63.72	. . Q . V . . .
18.167	42.6474	62.55	. . Q . V . . .
18.250	43.0592	59.79	. .Q . V . . .
18.333	43.4570	57.76	. .Q . V . . .
18.417	43.8430	56.06	. .Q . V. . .
18.500	44.2164	54.21	. Q . V. . .
18.583	44.5793	52.71	. Q . V. . .
18.667	44.9282	50.66	. Q . V. . .
18.750	45.2670	49.19	. Q. . V . . .
18.833	45.5966	47.86	. Q. . V . . .
18.917	45.9124	45.86	. Q. . V . . .
19.000	46.2199	44.65	. Q . . V . . .
19.083	46.5209	43.70	. Q . . V . . .
19.167	46.8141	42.58	. Q . . .V . . .
19.250	47.1014	41.72	. Q . . .V . . .
19.333	47.3840	41.03	. Q . . .V . . .
19.417	47.6590	39.93	. Q . . .V . . .
19.500	47.9226	38.28	. Q . . .V . . .
19.583	48.1819	37.65	. Q . . .V . . .
19.667	48.4374	37.10	. Q . . . V . . .
19.750	48.6885	36.45	. Q . . . V . . .
19.833	48.9305	35.15	. Q . . . V . . .
19.917	49.1679	34.46	. Q . . . V . . .
20.000	49.4019	33.99	. Q . . . V . . .

END OF FLOODSCx ROUTING ANALYSIS

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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU38002E.FLD
  TIME/DATE OF STUDY: 13:12 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1038.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    1141.900 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.030 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.040
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.890
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.060
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.750
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.18
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.32
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.46
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.94
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.46
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.67

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.949
          30-MINUTE FACTOR = 0.949
           1-HOUR FACTOR = 0.949
           3-HOUR FACTOR = 0.992
           6-HOUR FACTOR = 0.996
          24-HOUR FACTOR = 0.998

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   8.091


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.866	119.619
2	2.596	238.823
3	4.889	316.776
4	7.618	376.776
5	11.176	491.443
6	15.757	632.578
7	21.517	795.429
8	28.249	929.751
9	33.973	790.408
10	38.812	668.248
11	42.980	575.617
12	46.807	528.550
13	50.374	492.596
14	53.213	392.047
15	55.472	311.986
16	57.540	285.530
17	59.340	248.591
18	61.082	240.629
19	62.766	232.490
20	64.230	202.197
21	65.604	189.670
22	66.877	175.884
23	68.105	169.581
24	69.263	159.958
25	70.321	146.110
26	71.351	142.146
27	72.367	140.288
28	73.344	134.981
29	74.187	116.360
30	74.998	112.084
31	75.760	105.160
32	76.498	101.894
33	77.223	100.143
34	77.904	94.100
35	78.573	92.335
36	79.229	90.676
37	79.819	81.466
38	80.390	78.859
39	80.957	78.209
40	81.504	75.576
41	82.032	72.883
42	82.559	72.882
43	83.083	72.261
44	83.536	62.595
45	83.958	58.294
46	84.380	58.320
47	84.802	58.296
48	85.209	56.187
49	85.563	48.859
50	85.911	48.104
51	86.259	48.040
52	86.601	47.200
53	86.941	46.896
54	87.258	43.806
55	87.559	41.638
56	87.858	41.197
57	88.156	41.221
58	88.455	41.215
59	88.753	41.166
60	89.042	39.913
61	89.311	37.180
62	89.580	37.133

63	89.848	36.988
64	90.113	36.693
65	90.378	36.491
66	90.641	36.364
67	90.897	35.360
68	91.132	32.387
69	91.366	32.393
70	91.601	32.390
71	91.835	32.391
72	92.070	32.389
73	92.304	32.331
74	92.538	32.329
75	92.761	30.850
76	92.959	27.254
77	93.150	26.459
78	93.342	26.407
79	93.532	26.348
80	93.723	26.353
81	93.914	26.347
82	94.105	26.408
83	94.296	26.347
84	94.486	26.293
85	94.648	22.312
86	94.796	20.414
87	94.944	20.418
88	95.091	20.408
89	95.239	20.355
90	95.387	20.418
91	95.534	20.413
92	95.683	20.477
93	95.830	20.354
94	95.978	20.418
95	96.125	20.354
96	96.273	20.414
97	96.411	19.049
98	96.521	15.250
99	96.630	14.925
100	96.737	14.781
101	96.844	14.840
102	96.951	14.722
103	97.059	14.900
104	97.165	14.722
105	97.272	14.781
106	97.380	14.841
107	97.486	14.722
108	97.594	14.841
109	97.701	14.840
110	97.808	14.722
111	97.913	14.477
112	98.017	14.362
113	98.121	14.360
114	98.213	12.818
115	98.250	5.104
116	98.278	3.797
117	98.307	4.035
118	98.335	3.798
119	98.362	3.797
120	98.390	3.917
121	98.420	4.034
122	98.448	3.917
123	98.476	3.797
124	98.504	3.917
125	98.532	3.915
126	98.561	3.917
127	98.588	3.797
128	98.616	3.917
129	98.645	3.917
130	98.673	3.915
131	98.701	3.798
132	98.730	4.035
133	98.757	3.798
134	98.787	4.034
135	98.814	3.798
136	98.842	3.916
137	98.871	3.917
138	98.899	3.916
139	98.928	3.916
140	98.956	3.917
141	98.983	3.797
142	99.013	4.035
143	99.040	3.797
144	99.069	4.035
145	99.097	3.797
146	99.125	3.917
147	99.153	3.798
148	99.180	3.797
149	99.208	3.798
150	99.235	3.797

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 182.6838

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 70.2283

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 50.0 100.0 150.0 200.0
14.000	20.7393	42.27	. Q .V . . .
14.083	21.0348	42.90	. Q .V . . .
14.167	21.3350	43.59	. Q . V . . .
14.250	21.6402	44.32	. Q . V . . .
14.333	21.9507	45.08	. Q. V . . .
14.417	22.2666	45.88	. Q. V . . .
14.500	22.5886	46.75	. Q. V . . .
14.583	22.9169	47.68	. Q. V . . .
14.667	23.2522	48.68	. Q. V . . .
14.750	23.5942	49.66	. Q. V . . .
14.833	23.9428	50.62	. Q V . . .
14.917	24.2981	51.59	. Q V . . .
15.000	24.6602	52.58	. Q V . . .
15.083	25.0293	53.59	. Q V . . .
15.167	25.4054	54.61	. Q V . . .
15.250	25.7887	55.66	. .Q V . . .
15.333	26.1798	56.77	. .Q V . . .
15.417	26.5776	57.77	. .Q V . . .
15.500	26.9817	58.67	. .Q V . . .
15.583	27.3921	59.59	. .Q V . . .
15.667	27.8091	60.55	. . Q V . . .
15.750	28.2309	61.25	. . Q V . . .
15.833	28.6559	61.70	. . Q V . . .
15.917	29.0844	62.23	. . Q V . . .
16.000	29.5201	63.26	. . Q V . . .
16.083	30.0583	78.14	. . Q V . . .
16.167	30.6975	92.81	. . VQ . . .
16.250	31.4049	102.72	. . V Q . . .
16.333	32.1672	110.68	. . V . Q . . .
16.417	33.0311	125.44	. . V . Q . . .
16.500	34.0198	143.56	. . V. Q . . .
16.583	35.1463	163.55	. . V . Q . . .
16.667	36.3771	178.72	. . V . Q . . .
16.750	37.4953	162.37	. . .V . Q . . .
16.833	38.5155	148.13	. . .V Q. . . .
16.917	39.4610	137.28	. . . V Q . . . .
17.000	40.3669	131.54	. . . V Q . . . .
17.083	41.2378	126.45	. . . V Q . . . .
17.167	42.0219	113.86	. . . QV . . . .
17.250	42.7359	103.68	. . Q V . . . .
17.333	43.4217	99.58	. . Q. V . . . .
17.417	44.0717	94.38	. . Q . V . . . .
17.500	44.7080	92.39	. . Q . V . . . .
17.583	45.3291	90.18	. . Q . V . . . .
17.667	45.9179	85.50	. . Q . V . . . .
17.750	46.4892	82.95	. . Q . V . . . .
17.833	47.0424	80.33	. . Q . V . . . .
17.917	47.5839	78.62	. . Q . V . . . .
18.000	48.1110	76.54	. . Q . V . . . .
18.083	48.6204	73.96	. . Q . V . . . .
18.167	49.1193	72.45	. . Q . V . . . .
18.250	49.6090	71.10	. . Q . V . . . .
18.333	50.0860	69.27	. . Q . V . . . .
18.417	50.5399	65.90	. . Q . V . . . .
18.500	50.9809	64.04	. Q . V. . . .
18.583	51.4061	61.74	. Q . V. . . .
18.667	51.8177	59.76	. .Q . V. . . .
18.750	52.2179	58.10	. .Q . V. . . .
18.833	52.6044	56.12	. .Q . V. . . .
18.917	52.9813	54.72	. Q . V . . . .
19.000	53.3489	53.38	. Q . V . . . .
19.083	53.7021	51.28	. Q . V . . . .
19.167	54.0468	50.04	. Q . V . . . .
19.250	54.3850	49.11	. Q. . V . . . .
19.333	54.7157	48.02	. Q. . .V . . . .
19.417	55.0394	47.00	. Q. . .V . . . .
19.500	55.3582	46.28	. Q. . .V . . . .
19.583	55.6713	45.47	. Q. . .V . . . .
19.667	55.9723	43.70	. Q . . .V . . . .
19.750	56.2657	42.60	. Q . . . V . . . .
19.833	56.5551	42.02	. Q . . . V . . . .
19.917	56.8405	41.43	. Q . . . V . . . .
20.000	57.1202	40.61	. Q . . . V . . . .

END OF FLOODSCx ROUTING ANALYSIS

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**************************************************************************

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                           Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU39002E.FLD
  TIME/DATE OF STUDY: 13:13 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1039.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    1244.400 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.080 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.040
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.890
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.060
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.740
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.18
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.32
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.46
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.94
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.46
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.67

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.944
          30-MINUTE FACTOR = 0.944
           1-HOUR FACTOR = 0.944
           3-HOUR FACTOR = 0.992
           6-HOUR FACTOR = 0.996
          24-HOUR FACTOR = 0.998

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   7.716


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.826	124.321
2	2.468	247.101
3	4.586	318.814
4	7.121	381.445
5	10.373	489.447
6	14.462	615.343
7	19.741	794.441
8	25.825	915.578
9	31.885	911.999
10	36.836	745.203
11	40.944	618.149
12	44.811	582.046
13	48.379	536.860
14	51.516	472.184
15	53.979	370.579
16	56.127	323.319
17	57.959	275.759
18	59.675	258.179
19	61.326	248.421
20	62.923	240.378
21	64.302	207.551
22	65.610	196.871
23	66.824	182.628
24	68.001	177.223
25	69.114	167.511
26	70.133	153.279
27	71.120	148.492
28	72.090	146.033
29	73.047	144.051
30	73.885	126.030
31	74.667	117.689
32	75.420	113.356
33	76.125	106.099
34	76.826	105.540
35	77.503	101.793
36	78.143	96.413
37	78.779	95.761
38	79.392	92.214
39	79.944	83.092
40	80.488	81.769
41	81.027	81.234
42	81.546	77.996
43	82.049	75.756
44	82.552	75.718
45	83.053	75.372
46	83.491	65.916
47	83.894	60.617
48	84.297	60.614
49	84.699	60.575
50	85.098	59.972
51	85.446	52.361
52	85.778	50.022
53	86.110	49.984
54	86.439	49.582
55	86.763	48.737
56	87.082	47.981
57	87.374	43.983
58	87.661	43.075
59	87.945	42.809
60	88.230	42.839
61	88.514	42.803
62	88.799	42.840

63	89.071	40.972
64	89.328	38.601
65	89.584	38.564
66	89.840	38.491
67	90.093	38.121
68	90.344	37.862
69	90.596	37.871
70	90.844	37.259
71	91.070	34.080
72	91.293	33.591
73	91.517	33.674
74	91.741	33.659
75	91.964	33.659
76	92.188	33.607
77	92.411	33.664
78	92.634	33.534
79	92.834	30.070
80	93.020	28.025
81	93.202	27.401
82	93.384	27.381
83	93.567	27.461
84	93.749	27.378
85	93.931	27.390
86	94.113	27.455
87	94.295	27.378
88	94.477	27.327
89	94.633	23.581
90	94.774	21.220
91	94.915	21.218
92	95.056	21.141
93	95.197	21.217
94	95.338	21.218
95	95.479	21.215
96	95.619	21.146
97	95.761	21.280
98	95.901	21.151
99	96.042	21.214
100	96.183	21.214
101	96.324	21.214
102	96.445	18.162
103	96.549	15.722
104	96.652	15.450
105	96.754	15.419
106	96.856	15.349
107	96.958	15.347
108	97.061	15.418
109	97.163	15.347
110	97.265	15.349
111	97.367	15.416
112	97.469	15.348
113	97.571	15.281
114	97.673	15.416
115	97.775	15.416
116	97.877	15.347
117	97.976	14.782
118	98.075	14.918
119	98.173	14.782
120	98.234	9.221
121	98.261	4.069
122	98.288	4.068
123	98.315	4.068
124	98.342	4.069
125	98.369	4.068
126	98.396	3.933
127	98.424	4.203
128	98.450	3.934
129	98.478	4.203
130	98.504	3.934
131	98.531	4.068
132	98.559	4.205
133	98.584	3.797
134	98.612	4.203
135	98.639	4.068
136	98.666	4.069
137	98.693	4.068
138	98.719	3.933
139	98.746	4.069
140	98.773	4.068
141	98.800	4.068
142	98.828	4.205
143	98.854	3.933
144	98.881	4.068
145	98.909	4.205
146	98.936	4.069
147	98.962	3.797
148	98.989	4.068
149	99.016	4.068
150	99.044	4.205

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 196.5177

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 78.8663

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 50.0 100.0 150.0 200.0
14.000	23.2425	47.36	. Q.V . . .
14.083	23.5737	48.08	. Q.V . . .
14.167	23.9101	48.85	. Q. V . . .
14.250	24.2520	49.66	. Q. V . . .
14.333	24.5999	50.50	. Q V . . .
14.417	24.9540	51.41	. Q V . . .
14.500	25.3146	52.37	. Q V . . .
14.583	25.6825	53.41	. Q V . . .
14.667	26.0580	54.52	. Q V . . .
14.750	26.4412	55.65	. .Q V . . .
14.833	26.8320	56.74	. .Q V . . .
14.917	27.2303	57.83	. .Q V . . .
15.000	27.6362	58.94	. .Q V . . .
15.083	28.0499	60.07	. . Q V . . .
15.167	28.4716	61.24	. . Q V . . .
15.250	28.9015	62.42	. . Q V . . .
15.333	29.3399	63.65	. . Q V . . .
15.417	29.7858	64.75	. . Q V . . .
15.500	30.2386	65.74	. . Q V . . .
15.583	30.6984	66.76	. . Q V . . .
15.667	31.1656	67.84	. . Q V . . .
15.750	31.6384	68.65	. . Q V . . .
15.833	32.1150	69.21	. . Q V . . .
15.917	32.5960	69.84	. . Q V . . .
16.000	33.0851	71.03	. . Q V . . .
16.083	33.6793	86.28	. . Q . . .
16.167	34.3767	101.26	. . V Q . . .
16.250	35.1377	110.50	. . V . Q . . .
16.333	35.9557	118.77	. . V . Q . . .
16.417	36.8683	132.51	. . V . Q . . .
16.500	37.8933	148.83	. . V. Q. . .
16.583	39.0698	170.83	. . V. . Q .
16.667	40.3441	185.03	. . V . Q .
16.750	41.6121	184.11	. . .V . Q .
16.833	42.7468	164.76	. . .V . Q . .
16.917	43.7818	150.28	. . . V Q . .
17.000	44.7861	145.82	. . . V Q. . .
17.083	45.7502	139.99	. . . V Q . .
17.167	46.6560	131.52	. . . V Q . . .
17.250	47.4743	118.82	. . . QV . . .
17.333	48.2474	112.25	. . . Q V . . .
17.417	48.9758	105.76	. . .Q V . . .
17.500	49.6829	102.67	. . Q V . . .
17.583	50.3735	100.29	. . Q V . . .
17.667	51.0483	97.98	. . Q. V . . .
17.750	51.6884	92.95	. . Q . V . . .
17.833	52.3121	90.55	. . Q . V . . .
17.917	52.9171	87.85	. . Q . V . . .
18.000	53.5105	86.17	. . Q . V . . .
18.083	54.0881	83.87	. . Q . V . . .
18.167	54.6463	81.05	. . Q . V . . .
18.250	55.1924	79.30	. . Q . V . . .
18.333	55.7279	77.75	. . Q . V . . .
18.417	56.2522	76.12	. . Q . V . . .
18.500	56.7521	72.60	. . Q . V . . .
18.583	57.2345	70.03	. . Q . V. . .
18.667	57.7014	67.80	. . Q . V. . .
18.750	58.1512	65.30	. . Q . V. . .
18.833	58.5901	63.74	. . Q . V. . .
18.917	59.0170	61.98	. . Q . V. . .
19.000	59.4310	60.11	. . Q . V . . .
19.083	59.8360	58.81	. .Q . V . . .
19.167	60.2304	57.27	. .Q . V . . .
19.250	60.6111	55.28	. .Q . V . . .
19.333	60.9845	54.22	. Q . V . . .
19.417	61.3516	53.30	. Q . .V . . .
19.500	61.7106	52.13	. Q . .V . . .
19.583	62.0627	51.12	. Q . .V . . .
19.667	62.4095	50.36	. Q . .V . . .
19.750	62.7509	49.57	. Q. . .V . . .
19.833	63.0801	47.80	. Q. . .V . . .
19.917	63.4008	46.56	. Q. . . V . . .
20.000	63.7172	45.94	. Q. . . V . . .

END OF FLOODSCx ROUTING ANALYSIS

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                          Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU40002E.FLD
  TIME/DATE OF STUDY: 13:14 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1040.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    1359.400 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.150 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.040
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.890
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.060
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.730
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.18
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.32
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.46
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.94
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.46
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.67

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.939
          30-MINUTE FACTOR = 0.939
           1-HOUR FACTOR = 0.939
           3-HOUR FACTOR = 0.991
           6-HOUR FACTOR = 0.995
          24-HOUR FACTOR = 0.997

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   7.246


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.776	127.543
2	2.318	253.535
3	4.209	310.887
4	6.554	385.458
5	9.362	461.677
6	12.987	596.044
7	17.538	748.149
8	22.843	872.147
9	29.033	1017.602
10	34.006	817.579
11	38.413	724.522
12	42.156	615.362
13	45.674	578.435
14	48.996	546.109
15	51.836	466.883
16	54.102	372.581
17	56.124	332.379
18	57.846	283.124
19	59.464	265.949
20	61.025	256.742
21	62.543	249.507
22	63.886	220.847
23	65.142	206.367
24	66.300	190.470
25	67.438	187.091
26	68.505	175.334
27	69.521	167.036
28	70.457	154.021
29	71.377	151.225
30	72.288	149.672
31	73.178	146.410
32	73.950	126.840
33	74.683	120.621
34	75.392	116.494
35	76.054	108.856
36	76.715	108.565
37	77.357	105.685
38	77.962	99.454
39	78.561	98.438
40	79.154	97.398
41	79.689	88.060
42	80.203	84.395
43	80.711	83.565
44	81.214	82.702
45	81.692	78.621
46	82.165	77.716
47	82.637	77.636
48	83.106	77.049
49	83.510	66.466
50	83.888	62.203
51	84.266	62.128
52	84.645	62.240
53	85.022	62.008
54	85.360	55.553
55	85.672	51.336
56	85.984	51.316
57	86.295	51.156
58	86.601	50.281
59	86.905	49.978
60	87.195	47.578
61	87.465	44.478
62	87.733	44.096

63	88.000	43.875
64	88.268	44.001
65	88.535	43.874
66	88.802	43.914
67	89.059	42.258
68	89.299	39.509
69	89.540	39.528
70	89.781	39.580
71	90.020	39.294
72	90.256	38.870
73	90.492	38.865
74	90.728	38.781
75	90.951	36.574
76	91.161	34.527
77	91.370	34.449
78	91.580	34.522
79	91.790	34.528
80	92.000	34.522
81	92.210	34.527
82	92.420	34.448
83	92.630	34.522
84	92.819	31.054
85	92.994	28.800
86	93.165	28.171
87	93.336	28.125
88	93.507	28.131
89	93.678	28.045
90	93.850	28.210
91	94.020	28.045
92	94.192	28.204
93	94.362	28.051
94	94.530	27.498
95	94.669	22.841
96	94.801	21.736
97	94.933	21.741
98	95.065	21.741
99	95.197	21.737
100	95.330	21.736
101	95.462	21.820
102	95.595	21.736
103	95.727	21.742
104	95.859	21.734
105	95.992	21.820
106	96.123	21.657
107	96.256	21.815
108	96.384	21.027
109	96.486	16.687
110	96.583	16.057
111	96.680	15.970
112	96.776	15.733
113	96.872	15.734
114	96.967	15.733
115	97.064	15.892
116	97.159	15.655
117	97.256	15.812
118	97.352	15.812
119	97.447	15.655
120	97.543	15.812
121	97.639	15.813
122	97.735	15.655
123	97.832	15.970
124	97.925	15.325
125	98.017	15.144
126	98.111	15.460
127	98.199	14.512
128	98.242	6.941
129	98.266	4.102
130	98.291	4.100
131	98.317	4.261
132	98.342	4.102
133	98.367	4.100
134	98.393	4.260
135	98.418	4.102
136	98.444	4.260
137	98.469	4.102
138	98.495	4.258
139	98.520	4.103
140	98.546	4.258
141	98.571	4.102
142	98.596	4.102
143	98.620	3.943
144	98.646	4.260
145	98.671	4.260
146	98.696	4.102
147	98.721	4.102
148	98.747	4.258
149	98.771	3.943
150	98.798	4.418

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 211.8796

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 88.6361

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 75.0 150.0 225.0 300.0
14.000	25.9619	52.90	. Q .V . . .
14.083	26.3317	53.71	. Q .V . . .
14.167	26.7076	54.57	. Q . V . . .
14.250	27.0896	55.47	. Q . V . . .
14.333	27.4780	56.40	. Q . V . . .
14.417	27.8733	57.40	. Q . V . . .
14.500	28.2760	58.46	. Q . V . . .
14.583	28.6865	59.62	. Q . V . . .
14.667	29.1054	60.82	. Q . V . . .
14.750	29.5332	62.12	. Q . V . . .
14.833	29.9696	63.36	. Q . V . . .
14.917	30.4145	64.60	. Q . V . . .
15.000	30.8678	65.83	. Q . V . . .
15.083	31.3299	67.10	. Q . V . . .
15.167	31.8010	68.40	. Q. V . . .
15.250	32.2813	69.74	. Q. V . . .
15.333	32.7710	71.10	. Q. V . . .
15.417	33.2691	72.33	. Q. V . . .
15.500	33.7747	73.41	. Q. V . . .
15.583	34.2881	74.55	. Q. V . . .
15.667	34.8096	75.72	. Q V . . .
15.750	35.3376	76.67	. Q V . . .
15.833	35.8702	77.33	. Q V . . .
15.917	36.4085	78.16	. Q V . . .
16.000	36.9563	79.53	. Q V . . .
16.083	37.6104	94.98	. . Q V . . .
16.167	38.3690	110.15	. . Q V . . .
16.250	39.1800	117.76	. . Q V . . .
16.333	40.0572	127.36	. . Q V . . .
16.417	41.0028	137.30	. . Q . . .
16.500	42.0658	154.34	. . V Q . . .
16.583	43.2596	173.34	. . V. Q . . .
16.667	44.5587	188.64	. . V Q . . .
16.750	45.9673	204.52	. . V Q . . .
16.833	47.2188	181.72	. . .V Q . . .
16.917	48.3963	170.98	. . .VQ . . .
17.000	49.4877	158.47	. . .QV . . .
17.083	50.5483	154.01	. . Q V . . .
17.167	51.5767	149.32	. . Q. V . . .
17.250	52.5352	139.17	. . Q . V . . .
17.333	53.4121	127.34	. . Q . V . . .
17.417	54.2487	121.47	. . Q . V . . .
17.500	55.0388	114.73	. . Q . V . . .
17.583	55.8072	111.56	. . Q . V . . .
17.667	56.5588	109.14	. . Q . V . . .
17.750	57.2945	106.82	. . Q . V . . .
17.833	57.9984	102.21	. . Q . V . . .
17.917	58.6823	99.29	. . Q . V . . .
18.000	59.3459	96.36	. . Q . V . . .
18.083	59.9982	94.71	. . Q . V . . .
18.167	60.6316	91.98	. . Q . V . . .
18.250	61.2490	89.64	. .Q . V . . .
18.333	61.8468	86.80	. .Q . V . . .
18.417	62.4328	85.09	. .Q . V . . .
18.500	63.0068	83.35	. .Q . V . . .
18.583	63.5662	81.23	. Q . V . . .
18.667	64.0979	77.20	. Q . V . . .
18.750	64.6113	74.55	. Q. . V. . .
18.833	65.1099	72.40	. Q. . V. . .
18.917	65.5921	70.01	. Q. . V. . .
19.000	66.0642	68.55	. Q. . V. . .
19.083	66.5248	66.87	. Q . . V . .
19.167	66.9717	64.90	. Q . . V . .
19.250	67.4096	63.59	. Q . . V . .
19.333	67.8392	62.37	. Q . . V . .
19.417	68.2548	60.34	. Q . . V . .
19.500	68.6613	59.03	. Q . . V . .
19.583	69.0612	58.06	. Q . . .V . .
19.667	69.4544	57.10	. Q . . .V . .
19.750	69.8390	55.84	. Q . . .V . .
19.833	70.2177	54.99	. Q . . .V . .
19.917	70.5912	54.23	. Q . . .V . .
20.000	70.9590	53.41	. Q . . . V . .

END OF FLOODSCx ROUTING ANALYSIS

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**************************************************************************

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                           Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU41002E.FLD
  TIME/DATE OF STUDY: 13:14 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1041.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    1577.500 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.200 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.040
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.890
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.060
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.710
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.18
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.32
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.46
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.94
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.46
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.67

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.930
          30-MINUTE FACTOR = 0.930
           1-HOUR FACTOR = 0.930
           3-HOUR FACTOR = 0.989
           6-HOUR FACTOR = 0.995
          24-HOUR FACTOR = 0.997

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   6.944


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


==========================================================================
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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.743	141.839
2	2.222	282.153
3	3.973	333.888
4	6.211	427.034
5	8.780	490.051
6	12.066	626.938
7	16.169	782.726
8	21.140	948.462
9	26.870	1093.050
10	32.146	1006.709
11	36.626	854.545
12	40.332	707.046
13	43.904	681.475
14	47.132	615.888
15	50.212	587.518
16	52.705	475.732
17	54.709	382.300
18	56.654	371.058
19	58.220	298.796
20	59.759	293.486
21	61.246	283.799
22	62.698	277.010
23	63.965	241.698
24	65.167	229.334
25	66.277	211.660
26	67.369	208.354
27	68.395	195.725
28	69.380	187.962
29	70.282	172.141
30	71.168	169.010
31	72.041	166.601
32	72.908	165.354
33	73.688	148.704
34	74.395	135.002
35	75.088	132.184
36	75.738	124.018
37	76.372	120.914
38	77.000	119.759
39	77.600	114.492
40	78.175	109.742
41	78.748	109.245
42	79.306	106.533
43	79.807	95.644
44	80.298	93.665
45	80.785	92.882
46	81.265	91.607
47	81.722	87.058
48	82.175	86.396
49	82.628	86.437
50	83.078	85.901
51	83.471	74.949
52	83.833	69.167
53	84.196	69.158
54	84.558	69.108
55	84.921	69.210
56	85.261	64.940
57	85.562	57.313
58	85.861	57.084
59	86.160	57.039
60	86.456	56.428
61	86.747	55.607
62	87.037	55.223

63	87.302	50.686
64	87.561	49.323
65	87.817	48.874
66	88.073	48.885
67	88.329	48.840
68	88.585	48.837
69	88.841	48.885
70	89.084	46.262
71	89.315	44.015
72	89.545	44.011
73	89.776	43.973
74	90.005	43.631
75	90.231	43.277
76	90.458	43.171
77	90.684	43.168
78	90.902	41.563
79	91.104	38.484
80	91.305	38.400
81	91.506	38.401
82	91.707	38.394
83	91.908	38.299
84	92.109	38.404
85	92.311	38.394
86	92.512	38.394
87	92.709	37.542
88	92.881	32.853
89	93.048	31.786
90	93.212	31.316
91	93.375	31.212
92	93.539	31.314
93	93.703	31.220
94	93.867	31.310
95	94.031	31.313
96	94.195	31.221
97	94.359	31.308
98	94.520	30.742
99	94.655	25.673
100	94.781	24.153
101	94.908	24.248
102	95.035	24.146
103	95.162	24.153
104	95.289	24.239
105	95.416	24.248
106	95.542	24.152
107	95.669	24.147
108	95.796	24.246
109	95.923	24.147
110	96.050	24.240
111	96.176	24.144
112	96.303	24.242
113	96.419	22.045
114	96.512	17.840
115	96.606	17.842
116	96.698	17.514
117	96.790	17.565
118	96.881	17.376
119	96.974	17.757
120	97.066	17.474
121	97.157	17.471
122	97.250	17.661
123	97.341	17.474
124	97.433	17.471
125	97.525	17.568
126	97.617	17.565
127	97.709	17.570
128	97.800	17.375
129	97.892	17.615
130	97.981	16.810
131	98.070	17.001
132	98.159	17.001
133	98.227	12.989
134	98.253	4.966
135	98.277	4.585
136	98.300	4.394
137	98.325	4.774
138	98.349	4.585
139	98.373	4.585
140	98.397	4.583
141	98.422	4.776
142	98.446	4.585
143	98.470	4.583
144	98.494	4.585
145	98.519	4.776
146	98.543	4.583
147	98.567	4.585
148	98.591	4.585
149	98.615	4.583
150	98.640	4.777

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 239.3715

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 108.9512

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 75.0 150.0 225.0 300.0
14.000	32.0088	65.25	. Q .V . . .
14.083	32.4650	66.24	. Q .V . . .
14.167	32.9287	67.32	. Q . V . . .
14.250	33.4000	68.44	. Q. V . . .
14.333	33.8794	69.61	. Q. V . . .
14.417	34.3672	70.83	. Q. V . . .
14.500	34.8641	72.14	. Q. V . . .
14.583	35.3707	73.56	. Q. V . . .
14.667	35.8878	75.08	. Q V . . .
14.750	36.4160	76.70	. Q V . . .
14.833	36.9552	78.30	. Q V . . .
14.917	37.5053	79.86	. Q V . . .
15.000	38.0659	81.40	. Q V . . .
15.083	38.6373	82.98	. .Q V . . .
15.167	39.2199	84.59	. .Q V . . .
15.250	39.8139	86.25	. .Q V . . .
15.333	40.4196	87.94	. .Q V . . .
15.417	41.0355	89.43	. .Q V . . .
15.500	41.6606	90.77	. . Q V . . .
15.583	42.2951	92.13	. . Q V . . .
15.667	42.9392	93.52	. . Q V . . .
15.750	43.5912	94.67	. . Q V . . .
15.833	44.2490	95.51	. . Q V . . .
15.917	44.9140	96.56	. . Q V . . .
16.000	45.5900	98.16	. . Q V . . .
16.083	46.3829	115.13	. . Q V . . .
16.167	47.2893	131.61	. . Q . . .
16.250	48.2443	138.67	. . VQ . . .
16.333	49.2790	150.24	. . V Q . . .
16.417	50.3722	158.74	. . V .Q . . .
16.500	51.5839	175.94	. . V . Q . . .
16.583	52.9294	195.37	. . V. Q . . .
16.667	54.4138	215.53	. . V. Q . . .
16.750	56.0092	231.65	. . V Q . . .
16.833	57.5355	221.62	. . .V Q. . .
16.917	58.9432	204.40	. . .V Q . . .
17.000	60.2386	188.09	. . . V Q . . .
17.083	61.5126	184.99	. . . V Q . . .
17.167	62.7314	176.97	. . . Q . . .
17.250	63.9191	172.45	. . . QV . . .
17.333	65.0111	158.56	. . .Q V . . .
17.417	66.0230	146.93	. . Q. V . . .
17.500	67.0144	143.94	. . Q. V . . .
17.583	67.9411	134.56	. . Q . V . . .
17.667	68.8531	132.43	. . Q . V . . .
17.750	69.7457	129.60	. . Q . V . . .
17.833	70.6210	127.10	. . Q . V . . .
17.917	71.4582	121.57	. . Q . V . . .
18.000	72.2757	118.70	. . Q . V . . .
18.083	73.0691	115.19	. . Q . V . . .
18.167	73.8484	113.17	. . Q . V . . .
18.250	74.6063	110.04	. . Q . V . . .
18.333	75.3460	107.40	. . Q . V . . .
18.417	76.0619	103.95	. . Q . V . . .
18.500	76.7630	101.80	. . Q . V . . .
18.583	77.4485	99.55	. . Q . V . . .
18.667	78.1179	97.19	. . Q . V . . .
18.750	78.7583	92.99	. . Q . V . . .
18.833	79.3732	89.29	. .Q . V. . .
18.917	79.9724	87.01	. .Q . V. . .
19.000	80.5536	84.39	. .Q . V. . .
19.083	81.1209	82.37	. Q . V. . .
19.167	81.6763	80.64	. Q . V. . .
19.250	82.2172	78.55	. Q . V . .
19.333	82.7453	76.67	. Q . V . .
19.417	83.2644	75.37	. Q . V . .
19.500	83.7728	73.82	. Q. . V . .
19.583	84.2656	71.56	. Q. . V . .
19.667	84.7498	70.31	. Q. . .V .
19.750	85.2264	69.20	. Q. . .V .
19.833	85.6951	68.06	. Q. . .V .
19.917	86.1541	66.65	. Q . . .V .
20.000	86.6067	65.71	. Q . . .V .

END OF FLOODSCx ROUTING ANALYSIS

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                           Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU42002E.FLD
  TIME/DATE OF STUDY: 13:15 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1042.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    1771.900 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.230 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.040
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.890
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.060
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.710
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.18
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.32
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.46
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.94
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.46
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.67

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.921
          30-MINUTE FACTOR = 0.921
           1-HOUR FACTOR = 0.921
           3-HOUR FACTOR = 0.988
           6-HOUR FACTOR = 0.994
          24-HOUR FACTOR = 0.996

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   6.775


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.725	155.433
2	2.169	309.322
3	3.843	358.697
4	6.019	466.250
5	8.468	524.961
6	11.578	666.476
7	15.443	828.060
8	20.233	1026.549
9	25.561	1141.692
10	31.086	1183.882
11	35.488	943.379
12	39.354	828.388
13	42.857	750.794
14	46.083	691.128
15	49.180	663.653
16	51.818	565.404
17	53.967	460.420
18	55.835	400.304
19	57.521	361.308
20	59.038	325.010
21	60.514	316.415
22	61.933	304.053
23	63.299	292.747
24	64.483	253.699
25	65.627	245.161
26	66.687	227.195
27	67.741	225.766
28	68.727	211.353
29	69.660	199.838
30	70.533	187.161
31	71.392	184.057
32	72.243	182.415
33	73.083	179.850
34	73.817	157.418
35	74.506	147.675
36	75.179	144.164
37	75.807	134.586
38	76.426	132.639
39	77.037	130.998
40	77.621	124.963
41	78.182	120.238
42	78.741	119.750
43	79.287	117.021
44	79.777	105.088
45	80.256	102.719
46	80.732	101.823
47	81.202	100.857
48	81.650	95.898
49	82.092	94.693
50	82.533	94.682
51	82.975	94.548
52	83.377	86.259
53	83.731	75.892
54	84.085	75.748
55	84.439	75.805
56	84.792	75.748
57	85.139	74.437
58	85.441	64.644
59	85.733	62.504
60	86.025	62.551
61	86.316	62.314
62	86.601	61.193

63	86.886	60.982
64	87.159	58.613
65	87.413	54.333
66	87.664	53.795
67	87.913	53.497
68	88.163	53.558
69	88.413	53.549
70	88.663	53.497
71	88.912	53.335
72	89.143	49.495
73	89.368	48.218
74	89.593	48.164
75	89.818	48.221
76	90.040	47.713
77	90.261	47.409
78	90.482	47.309
79	90.703	47.401
80	90.915	45.321
81	91.111	42.005
82	91.307	42.022
83	91.504	42.131
84	91.700	42.023
85	91.896	42.004
86	92.092	42.135
87	92.288	42.012
88	92.485	42.128
89	92.679	41.582
90	92.850	36.623
91	93.014	35.067
92	93.173	34.253
93	93.333	34.243
94	93.494	34.349
95	93.653	34.245
96	93.813	34.119
97	93.973	34.356
98	94.133	34.245
99	94.293	34.339
100	94.453	34.253
101	94.597	30.932
102	94.720	26.428
103	94.845	26.659
104	94.968	26.435
105	95.092	26.541
106	95.215	26.425
107	95.340	26.664
108	95.463	26.320
109	95.587	26.649
110	95.710	26.431
111	95.834	26.547
112	95.958	26.539
113	96.081	26.430
114	96.205	26.539
115	96.329	26.543
116	96.436	22.800
117	96.527	19.611
118	96.618	19.393
119	96.708	19.449
120	96.797	19.096
121	96.888	19.316
122	96.977	19.207
123	97.067	19.205
124	97.156	19.205
125	97.246	19.207
126	97.336	19.316
127	97.425	19.097
128	97.514	19.096
129	97.606	19.534
130	97.694	18.877
131	97.784	19.316
132	97.874	19.249
133	97.961	18.693
134	98.047	18.473
135	98.133	18.474
136	98.212	16.934
137	98.244	6.816
138	98.268	5.060
139	98.291	5.057
140	98.315	5.058
141	98.339	5.058
142	98.362	5.058
143	98.386	5.058
144	98.410	5.277
145	98.433	4.839
146	98.457	5.058
147	98.480	5.057
148	98.505	5.277
149	98.527	4.839
150	98.552	5.277

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 268.9244

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 122.0626

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 75.0 150.0 225.0 300.0
14.000	35.7218	72.85	. Q.V . . .
14.083	36.2312	73.97	. Q.V . . .
14.167	36.7489	75.18	. Q V . . .
14.250	37.2753	76.43	. Q V . . .
14.333	37.8109	77.76	. Q V . . .
14.417	38.3558	79.13	. Q V . . .
14.500	38.9110	80.60	. Q V . . .
14.583	39.4770	82.19	. Q V . . .
14.667	40.0549	83.92	. .Q V . . .
14.750	40.6454	85.74	. .Q V . . .
14.833	41.2487	87.60	. .Q V . . .
14.917	41.8642	89.37	. .Q V . . .
15.000	42.4918	91.13	. . QV . . .
15.083	43.1316	92.90	. . Q V . . .
15.167	43.7838	94.70	. . Q V . . .
15.250	44.4489	96.57	. . Q V . . .
15.333	45.1271	98.47	. . QV . . .
15.417	45.8166	100.12	. . Q V . . .
15.500	46.5162	101.58	. . Q V . . .
15.583	47.2262	103.09	. . Q V . . .
15.667	47.9466	104.60	. . Q V . . .
15.750	48.6755	105.84	. . QV . . .
15.833	49.4109	106.77	. . Q V . . .
15.917	50.1542	107.93	. . Q V . . .
16.000	50.9093	109.64	. . Q V . . .
16.083	51.7909	128.01	. . VQ . . .
16.167	52.7939	145.64	. . V Q. . .
16.250	53.8441	152.48	. . V Q . .
16.333	54.9835	165.44	. . V . Q . .
16.417	56.1787	173.55	. . V . Q . .
16.500	57.4943	191.03	. . V . Q . .
16.583	58.9479	211.06	. . V. Q . .
16.667	60.5641	234.68	. . V. .Q .
16.750	62.2724	248.04	. . V . Q .
16.833	64.0078	251.97	. . V . Q .
16.917	65.5606	225.48	. . .V Q .
17.000	67.0267	212.87	. . .V Q . .
17.083	68.4325	204.13	. . . V Q . .
17.167	69.7906	197.20	. . . V Q . .
17.250	71.1185	192.81	. . . V Q . .
17.333	72.3616	180.49	. . . VQ . .
17.417	73.5151	167.50	. . . Q V . .
17.500	74.6121	159.28	. . .Q V . .
17.583	75.6680	153.32	. . Q V . .
17.667	76.6852	147.69	. . Q. V . .
17.750	77.6832	144.91	. . Q. V . .
17.833	78.6587	141.64	. . Q . V . .
17.917	79.6127	138.53	. . Q . V . .
18.000	80.5258	132.58	. . Q . V . .
18.083	81.4201	129.86	. . Q . V . .
18.167	82.2883	126.06	. . Q . V . .
18.250	83.1425	124.02	. . Q . V . .
18.333	83.9721	120.46	. . Q . V . .
18.417	84.7796	117.25	. . Q . V . .
18.500	85.5639	113.87	. . Q . V . .
18.583	86.3312	111.42	. . Q . V . .
18.667	87.0809	108.86	. . Q . V . .
18.750	87.8110	106.01	. . Q . V . .
18.833	88.5067	101.03	. . Q . V. .
18.917	89.1801	97.77	. . Q . V. .
19.000	89.8369	95.37	. . Q . V. .
19.083	90.4739	92.49	. . Q . V. .
19.167	91.0973	90.51	. . Q . V. .
19.250	91.7074	88.59	. .Q . V .
19.333	92.3023	86.38	. .Q . V .
19.417	92.8841	84.48	. .Q . V .
19.500	93.4564	83.09	. .Q . V .
19.583	94.0176	81.49	. Q . V .
19.667	94.5618	79.02	. Q . V .
19.750	95.0965	77.64	. Q . .V .
19.833	95.6229	76.44	. Q . .V .
19.917	96.1413	75.26	. Q . .V .
20.000	96.6491	73.73	. Q. . .V .

END OF FLOODSCx ROUTING ANALYSIS

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             F L O O D    R O U T I N G    A N A L Y S I S
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                           Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU43002E.FLD
  TIME/DATE OF STUDY: 13:16 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1043.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
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      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    1927.800 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.290 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.040
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.890
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.060
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.710
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.18
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.32
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.46
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.94
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.46
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.67

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.914
          30-MINUTE FACTOR = 0.914
           1-HOUR FACTOR = 0.914
           3-HOUR FACTOR = 0.987
           6-HOUR FACTOR = 0.994
          24-HOUR FACTOR = 0.996

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   6.460


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.692	161.243
2	2.069	321.145
3	3.607	358.573
4	5.660	478.664
5	7.881	517.888
6	10.742	666.928
7	14.176	800.629
8	18.501	1008.249
9	23.260	1109.538
10	28.862	1306.175
11	33.369	1050.658
12	37.440	949.304
13	40.799	783.099
14	44.100	769.440
15	47.095	698.451
16	49.987	674.046
17	52.358	552.892
18	54.303	453.456
19	56.118	423.120
20	57.657	358.894
21	59.107	338.125
22	60.515	328.045
23	61.866	315.010
24	63.185	307.625
25	64.318	264.141
26	65.423	257.615
27	66.439	236.779
28	67.458	237.587
29	68.407	221.204
30	69.326	214.443
31	70.167	196.057
32	70.995	193.084
33	71.808	189.457
34	72.617	188.680
35	73.390	180.114
36	74.059	155.932
37	74.712	152.228
38	75.345	147.693
39	75.936	137.746
40	76.527	137.728
41	77.108	135.547
42	77.660	128.719
43	78.195	124.693
44	78.728	124.249
45	79.251	121.963
46	79.721	109.667
47	80.179	106.710
48	80.632	105.670
49	81.084	105.252
50	81.517	100.903
51	81.938	98.187
52	82.359	98.254
53	82.780	98.187
54	83.192	95.924
55	83.543	81.808
56	83.880	78.544
57	84.217	78.667
58	84.554	78.606
59	84.891	78.542
60	85.214	75.385
61	85.496	65.564
62	85.774	64.892

63	86.052	64.887
64	86.329	64.602
65	86.601	63.430
66	86.872	63.199
67	87.135	61.308
68	87.378	56.488
69	87.618	55.956
70	87.856	55.481
71	88.094	55.611
72	88.332	55.472
73	88.570	55.552
74	88.809	55.536
75	89.038	53.464
76	89.253	50.152
77	89.467	49.961
78	89.682	50.027
79	89.896	49.951
80	90.107	49.175
81	90.318	49.253
82	90.528	48.994
83	90.739	49.116
84	90.937	46.230
85	91.124	43.599
86	91.312	43.718
87	91.499	43.593
88	91.686	43.604
89	91.873	43.602
90	92.061	43.716
91	92.248	43.599
92	92.435	43.601
93	92.622	43.716
94	92.792	39.712
95	92.949	36.607
96	93.103	35.769
97	93.255	35.584
98	93.408	35.598
99	93.560	35.450
100	93.713	35.600
101	93.865	35.457
102	94.018	35.593
103	94.170	35.591
104	94.323	35.582
105	94.475	35.459
106	94.609	31.208
107	94.726	27.426
108	94.845	27.688
109	94.962	27.309
110	95.081	27.554
111	95.199	27.560
112	95.316	27.428
113	95.435	27.569
114	95.552	27.430
115	95.670	27.551
116	95.789	27.571
117	95.907	27.553
118	96.025	27.428
119	96.142	27.426
120	96.260	27.554
121	96.376	26.923
122	96.468	21.407
123	96.555	20.274
124	96.641	20.137
125	96.727	19.966
126	96.812	19.965
127	96.898	19.966
128	96.983	19.840
129	97.069	19.965
130	97.154	19.966
131	97.239	19.840
132	97.325	19.965
133	97.411	20.091
134	97.496	19.716
135	97.581	19.965
136	97.667	19.966
137	97.753	19.965
138	97.838	19.966
139	97.921	19.330
140	98.005	19.573
141	98.087	19.072
142	98.170	19.322
143	98.229	13.801
144	98.252	5.270
145	98.274	5.270
146	98.297	5.270
147	98.318	5.018
148	98.341	5.270
149	98.365	5.519
150	98.386	5.020

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 292.6331

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 132.4000

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 75.0 150.0 225.0 300.0
14.000	38.3686	78.31	. QV . . .
14.083	38.9161	79.50	. QV . . .
14.167	39.4726	80.81	. QV . . .
14.250	40.0383	82.14	. Q V . . .
14.333	40.6139	83.58	. .QV . . .
14.417	41.1996	85.04	. .QV . . .
14.500	41.7963	86.63	. .QV . . .
14.583	42.4044	88.29	. .QV . . .
14.667	43.0251	90.13	. . Q . . .
14.750	43.6589	92.04	. . QV . . .
14.833	44.3072	94.12	. . QV . . .
14.917	44.9688	96.08	. . QV . . .
15.000	45.6439	98.02	. . Q . . .
15.083	46.3320	99.91	. . Q . . .
15.167	47.0336	101.88	. . QV . . .
15.250	47.7489	103.85	. . QV . . .
15.333	48.4784	105.93	. . Q . . .
15.417	49.2202	107.70	. . Q . . .
15.500	49.9726	109.26	. . QV . . .
15.583	50.7363	110.88	. . QV . . .
15.667	51.5110	112.48	. . QV . . .
15.750	52.2948	113.82	. . Q . . .
15.833	53.0857	114.83	. . QV . . .
15.917	53.8855	116.13	. . QV . . .
16.000	54.6982	118.00	. . QV . . .
16.083	55.6415	136.97	. . V Q . . .
16.167	56.7082	154.88	. . V Q . . .
16.250	57.8125	160.34	. . V .Q . . .
16.333	59.0137	174.41	. . V . Q . . .
16.417	60.2570	180.54	. . V . Q . . .
16.500	61.6233	198.39	. . V . Q . . .
16.583	63.1053	215.18	. . V. Q . . .
16.667	64.7562	239.71	. . V. .Q . . .
16.750	66.4941	252.35	. . V . Q . . .
16.833	68.3744	273.02	. . V . Q . . .
16.917	70.0635	245.25	. . .V . Q . . .
17.000	71.6752	234.02	. . .V .Q . . .
17.083	73.1626	215.97	. . . V Q . . .
17.167	74.6386	214.32	. . . V Q . . .
17.250	76.0555	205.74	. . . V Q . . .
17.333	77.4434	201.53	. . . V Q . . .
17.417	78.7296	186.75	. . . VQ . . .
17.500	79.9312	174.47	. . . QV . . .
17.583	81.0971	169.30	. . . Q V . . .
17.667	82.2031	160.59	. . . .Q V . . .
17.750	83.2814	156.56	. . . Q V . . .
17.833	84.3380	153.42	. . . Q V . . .
17.917	85.3720	150.15	. . . Q V . . .
18.000	86.3869	147.36	. . . Q. V . . .
18.083	87.3565	140.79	. . . Q . V . . .
18.167	88.3070	138.01	. . . Q . V . . .
18.250	89.2285	133.79	. . . Q . V . . .
18.333	90.1362	131.80	. . . Q . V . . .
18.417	91.0175	127.96	. . . Q . V . . .
18.500	91.8786	125.04	. . . Q . V . . .
18.583	92.7107	120.81	. . . Q . V . . .
18.667	93.5242	118.12	. . . Q . V . . .
18.750	94.3178	115.23	. . . Q . V . . .
18.833	95.0917	112.38	. . . Q . V . . .
18.917	95.8422	108.97	. . . Q . V . . .
19.000	96.5594	104.13	. . . Q . V. . .
19.083	97.2599	101.71	. . . Q . V. . .
19.167	97.9435	99.26	. . . Q . V. . .
19.250	98.6076	96.42	. . . Q . V. . .
19.333	99.2593	94.63	. . . Q . V. . .
19.417	99.8982	92.77	. . . Q . V . .
19.500	100.5222	90.61	. . . Q . V . .
19.583	101.1339	88.82	. . .Q . V . .
19.667	101.7364	87.47	. . .Q . V . .
19.750	102.3282	85.94	. . .Q . V . .
19.833	102.9027	83.41	. . .Q . .V . .
19.917	103.4671	81.95	. . Q . .V . .
20.000	104.0231	80.73	. . Q . .V . .

END OF FLOODSCx ROUTING ANALYSIS

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**************************************************************************

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                           Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU44002E.FLD
  TIME/DATE OF STUDY: 13:16 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1044.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    2017.400 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.370 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.040
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.890
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.060
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.710
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.18
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.32
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.46
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.94
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.46
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.66

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.910
          30-MINUTE FACTOR = 0.910
           1-HOUR FACTOR = 0.910
           3-HOUR FACTOR = 0.986
           6-HOUR FACTOR = 0.993
          24-HOUR FACTOR = 0.996

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   6.083


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


==========================================================================
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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.651	158.884
2	1.950	316.775
3	3.337	338.378
4	5.231	462.175
5	7.231	488.101
6	9.745	613.297
7	12.800	745.239
8	16.481	898.125
9	20.881	1073.620
10	25.736	1184.505
11	30.766	1227.200
12	34.704	960.748
13	38.403	902.592
14	41.525	761.591
15	44.567	742.149
16	47.378	685.984
17	50.088	661.087
18	52.312	542.631
19	54.172	453.685
20	55.855	410.634
21	57.380	372.113
22	58.742	332.220
23	60.074	325.109
24	61.367	315.323
25	62.646	312.202
26	63.766	273.160
27	64.826	258.580
28	65.833	245.809
29	66.781	231.312
30	67.726	230.607
31	68.612	216.120
32	69.466	208.343
33	70.253	191.875
34	71.031	189.920
35	71.796	186.637
36	72.559	186.086
37	73.296	179.958
38	73.933	155.445
39	74.551	150.771
40	75.155	147.372
41	75.722	138.253
42	76.277	135.343
43	76.829	134.670
44	77.368	131.477
45	77.875	123.741
46	78.378	122.811
47	78.879	122.172
48	79.363	118.023
49	79.798	106.272
50	80.229	105.086
51	80.655	104.029
52	81.080	103.705
53	81.489	99.586
54	81.886	96.853
55	82.282	96.782
56	82.679	96.714
57	83.074	96.421
58	83.422	84.920
59	83.739	77.476
60	84.057	77.450
61	84.374	77.455
62	84.692	77.453

63	85.009	77.377
64	85.299	70.644
65	85.561	63.936
66	85.823	63.982
67	86.085	63.856
68	86.345	63.636
69	86.601	62.436
70	86.857	62.313
71	87.106	60.922
72	87.335	55.891
73	87.562	55.195
74	87.786	54.837
75	88.010	54.657
76	88.235	54.735
77	88.459	54.664
78	88.683	54.718
79	88.907	54.664
80	89.115	50.690
81	89.317	49.355
82	89.519	49.225
83	89.721	49.234
84	89.922	49.167
85	90.121	48.438
86	90.319	48.350
87	90.517	48.315
88	90.716	48.488
89	90.906	46.368
90	91.082	42.893
91	91.258	43.040
92	91.434	43.027
93	91.610	42.902
94	91.787	43.021
95	91.963	43.047
96	92.139	42.887
97	92.315	43.027
98	92.492	43.047
99	92.667	42.749
100	92.822	37.872
101	92.969	35.886
102	93.113	35.218
103	93.257	34.963
104	93.401	35.104
105	93.544	34.974
106	93.687	34.957
107	93.831	35.112
108	93.975	35.093
109	94.118	34.967
110	94.262	34.965
111	94.405	34.965
112	94.544	33.989
113	94.659	27.992
114	94.770	27.015
115	94.881	27.156
116	94.992	27.017
117	95.103	27.156
118	95.214	27.156
119	95.325	27.017
120	95.436	27.017
121	95.547	27.154
122	95.658	27.156
123	95.769	27.017
124	95.881	27.156
125	95.991	27.018
126	96.103	27.152
127	96.213	27.020
128	96.325	27.154
129	96.423	24.087
130	96.504	19.766
131	96.586	20.044
132	96.669	20.046
133	96.749	19.500
134	96.829	19.744
135	96.910	19.603
136	96.990	19.606
137	97.071	19.740
138	97.151	19.604
139	97.232	19.604
140	97.313	19.882
141	97.393	19.325
142	97.473	19.604
143	97.554	19.884
144	97.635	19.603
145	97.715	19.604
146	97.795	19.604
147	97.875	19.452
148	97.954	19.241
149	98.031	18.687
150	98.109	19.241

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 305.0738

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 137.5804

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 75.0 150.0 225.0 300.0
14.000	39.1890	80.44	. QV . . .
14.083	39.7518	81.72	. QV . . .
14.167	40.3238	83.06	. .Q . . .
14.250	40.9054	84.44	. .Q . . .
14.333	41.4970	85.90	. .QV . . .
14.417	42.0989	87.40	. .QV . . .
14.500	42.7118	88.99	. .QV . . .
14.583	43.3364	90.69	. . Q . . .
14.667	43.9735	92.51	. . Q . . .
14.750	44.6240	94.46	. . Q . . .
14.833	45.2887	96.50	. . QV . . .
14.917	45.9679	98.62	. . Q . . .
15.000	46.6609	100.63	. . Q . . .
15.083	47.3680	102.67	. . Q . . .
15.167	48.0888	104.65	. . Q . . .
15.250	48.8237	106.71	. . Q . . .
15.333	49.5731	108.81	. . Q . . .
15.417	50.3354	110.68	. . Q . . .
15.500	51.1087	112.29	. . Q . . .
15.583	51.8938	113.99	. . Q . . .
15.667	52.6902	115.64	. . Q . . .
15.750	53.4963	117.05	. . Q . . .
15.833	54.3099	118.14	. . Q . . .
15.917	55.1336	119.59	. . QV . . .
16.000	55.9711	121.61	. . Q . . .
16.083	56.9371	140.27	. . V Q . . .
16.167	58.0254	158.01	. . V .Q . . .
16.250	59.1374	161.46	. . V .Q . . .
16.333	60.3484	175.84	. . V . Q . . .
16.417	61.5896	180.22	. . V . Q . . .
16.500	62.9366	195.59	. . V . Q . . .
16.583	64.3936	211.56	. . V . Q . . .
16.667	65.9806	230.43	. . V. Q . . .
16.750	67.7088	250.93	. . V. . Q . . .
16.833	69.5242	263.60	. . V . . Q . . .
16.917	71.3667	267.53	. . V . . Q . . .
17.000	73.0129	239.02	. . .V .Q . . .
17.083	74.6130	232.34	. . .V Q . . .
17.167	76.1079	217.06	. . . V Q . . .
17.250	77.5867	214.72	. . . V Q . . .
17.333	79.0165	207.61	. . . V Q . . .
17.417	80.4164	203.27	. . . V Q . . .
17.500	81.7169	188.83	. . . V Q . . .
17.583	82.9405	177.67	. . . QV . . .
17.667	84.1195	171.19	. . . Q V . . .
17.750	85.2569	165.15	. . . Q V . . .
17.833	86.3521	159.01	. . .Q V . . .
17.917	87.4285	156.30	. . Q V . . .
18.000	88.4850	153.41	. . Q V . . .
18.083	89.5248	150.98	. . Q V . . .
18.167	90.5212	144.68	. . Q. V . . .
18.250	91.4926	141.05	. . Q . V . . .
18.333	92.4396	137.51	. . Q . V . . .
18.417	93.3618	133.90	. . Q . V . . .
18.500	94.2684	131.64	. . Q . V . . .
18.583	95.1487	127.82	. . Q . V . . .
18.667	96.0065	124.56	. . Q . V . . .
18.750	96.8347	120.26	. . Q . V . . .
18.833	97.6439	117.48	. . Q . V . . .
18.917	98.4325	114.51	. . Q . V . . .
19.000	99.2046	112.11	. . Q . V . . .
19.083	99.9563	109.15	. . Q . V. . .
19.167	100.6764	104.55	. . Q . V. . .
19.250	101.3797	102.11	. . Q . V. . .
19.333	102.0676	99.89	. . Q . V. . .
19.417	102.7370	97.19	. . Q . V. . .
19.500	103.3932	95.29	. . Q . V . .
19.583	104.0387	93.73	. . Q . V . .
19.667	104.6722	91.98	. . Q . V . .
19.750	105.2912	89.88	. .Q . V . .
19.833	105.9011	88.56	. .Q . V . .
19.917	106.5021	87.26	. .Q . V . .
20.000	107.0915	85.59	. .Q . .V .

END OF FLOODSCx ROUTING ANALYSIS

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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU45002E.FLD
  TIME/DATE OF STUDY: 13:16 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1045.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    2335.400 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.480 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.040
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.890
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.060
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.710
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.18
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.32
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.46
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.93
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.44
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.64

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.896
          30-MINUTE FACTOR = 0.896
           1-HOUR FACTOR = 0.896
           3-HOUR FACTOR = 0.984
           6-HOUR FACTOR = 0.992
          24-HOUR FACTOR = 0.995

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   5.631


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.603	170.258
2	1.806	339.882
3	3.032	346.291
4	4.722	477.216
5	6.547	515.584
6	8.666	598.401
7	11.245	728.378
8	14.308	865.112
9	18.060	1059.666
10	22.147	1154.460
11	26.983	1365.831
12	31.357	1235.242
13	34.988	1025.719
14	38.400	963.492
15	41.273	811.630
16	44.135	808.109
17	46.745	737.145
18	49.319	727.102
19	51.526	623.453
20	53.400	529.048
21	54.919	429.171
22	56.555	461.972
23	57.815	355.881
24	59.084	358.616
25	60.312	346.800
26	61.496	334.445
27	62.687	336.121
28	63.719	291.648
29	64.702	277.722
30	65.647	266.854
31	66.523	247.327
32	67.416	252.356
33	68.245	233.870
34	69.060	230.217
35	69.810	211.985
36	70.537	205.165
37	71.251	201.737
38	71.959	200.002
39	72.664	199.022
40	73.341	191.430
41	73.927	165.465
42	74.500	161.696
43	75.061	158.500
44	75.594	150.568
45	76.105	144.367
46	76.620	145.293
47	77.126	143.009
48	77.607	135.944
49	78.074	131.772
50	78.539	131.339
51	79.002	130.697
52	79.440	123.765
53	79.840	113.051
54	80.239	112.624
55	80.633	111.428
56	81.028	111.320
57	81.409	107.819
58	81.777	103.783
59	82.144	103.690
60	82.511	103.699
61	82.878	103.686
62	83.232	100.042

63	83.534	85.236
64	83.828	83.049
65	84.122	83.045
66	84.416	82.872
67	84.710	83.043
68	85.004	83.047
69	85.274	76.335
70	85.517	68.586
71	85.759	68.545
72	86.002	68.448
73	86.244	68.511
74	86.483	67.302
75	86.719	66.821
76	86.955	66.724
77	87.179	63.251
78	87.389	59.223
79	87.599	59.148
80	87.806	58.682
81	88.014	58.669
82	88.221	58.594
83	88.429	58.601
84	88.637	58.753
85	88.844	58.596
86	89.043	56.144
87	89.230	52.761
88	89.417	52.823
89	89.604	52.843
90	89.791	52.744
91	89.976	52.373
92	90.161	52.091
93	90.344	51.707
94	90.527	51.862
95	90.711	51.905
96	90.888	49.942
97	91.051	46.137
98	91.215	46.124
99	91.377	45.958
100	91.541	46.120
101	91.704	46.133
102	91.867	45.950
103	92.030	46.137
104	92.193	46.124
105	92.357	46.120
106	92.519	45.950
107	92.681	45.624
108	92.823	40.185
109	92.960	38.638
110	93.094	37.809
111	93.227	37.453
112	93.359	37.438
113	93.492	37.647
114	93.625	37.440
115	93.758	37.623
116	93.891	37.464
117	94.023	37.449
118	94.157	37.636
119	94.290	37.615
120	94.422	37.285
121	94.551	36.404
122	94.656	29.605
123	94.759	29.088
124	94.861	28.907
125	94.964	29.079
126	95.067	29.082
127	95.169	28.916
128	95.272	29.069
129	95.375	29.092
130	95.478	29.088
131	95.580	28.894
132	95.683	29.092
133	95.786	29.092
134	95.889	28.892
135	95.992	29.066
136	96.095	29.069
137	96.197	29.069
138	96.300	28.892
139	96.398	27.674
140	96.474	21.570
141	96.550	21.395
142	96.626	21.393
143	96.701	21.160
144	96.776	21.247
145	96.850	20.900
146	96.924	20.900
147	96.999	21.247
148	97.074	21.074
149	97.148	20.898
150	97.222	21.074

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 350.5300

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 156.2987

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 75.0 150.0 225.0 300.0
14.000	44.2129	89.55	.Q . . . .
14.083	44.8392	90.94	.VQ . . . .
14.167	45.4760	92.46	.VQ . . . .
14.250	46.1234	94.01	.VQ . . . .
14.333	46.7820	95.63	.VQ . . . .
14.417	47.4520	97.28	. Q . . . .
14.500	48.1340	99.02	. VQ . . . .
14.583	48.8286	100.85	. VQ . . . .
14.667	49.5367	102.83	. VQ . . . .
14.750	50.2594	104.94	. VQ . . . .
14.833	50.9974	107.15	. VQ . . . .
14.917	51.7517	109.53	. VQ . . . .
15.000	52.5222	111.87	. VQ . . . .
15.083	53.3083	114.14	. V Q . . . .
15.167	54.1103	116.45	. V Q . . . .
15.250	54.9281	118.74	. VQ . . . .
15.333	55.7623	121.12	. V Q . . . .
15.417	56.6107	123.19	. V Q . . . .
15.500	57.4720	125.06	. V Q . . . .
15.583	58.3469	127.03	. V Q . . . .
15.667	59.2347	128.91	. V Q . . . .
15.750	60.1333	130.48	. V Q . . . .
15.833	61.0414	131.85	. V Q . . . .
15.917	61.9614	133.58	. V Q . . . .
16.000	62.8979	135.97	. V Q . . . .
16.083	63.9700	155.68	. V Q . . . .
16.167	65.1725	174.60	. V . Q . . . .
16.250	66.3882	176.53	. V . Q . . . .
16.333	67.7049	191.18	. V . Q . . . .
16.417	69.0595	196.69	. V . Q . . . .
16.500	70.4879	207.41	. V . Q . . . .
16.583	72.0225	222.81	. V . Q. . . .
16.667	73.6712	239.40	. V . .Q . . .
16.750	75.4757	262.01	. V. . Q . . .
16.833	77.3614	273.81	. V. . Q . . .
16.917	79.3997	295.95	. V . Q. . . .
17.000	81.3406	281.83	. V . Q . . .
17.083	83.1314	260.02	. .V . Q . . .
17.167	84.8713	252.64	. .V . Q . . .
17.250	86.5018	236.74	. . V .Q . . .
17.333	88.1258	235.81	. . V .Q . . .
17.417	89.6919	227.39	. . V Q . . .
17.500	91.2385	224.57	. . V Q. . . .
17.583	92.6962	211.66	. . V Q . . . .
17.667	94.0729	199.89	. . V Q . . . .
17.750	95.3651	187.62	. . VQ . . . .
17.833	96.6646	188.69	. . VQ . . . .
17.917	97.8731	175.48	. . Q V . . . .
18.000	99.0697	173.74	. . Q V . . . .
18.083	100.2421	170.24	. . Q V . . . .
18.167	101.3903	166.71	. . Q V . . . .
18.250	102.5230	164.47	. .Q V . . . .
18.333	103.6073	157.44	. . Q V . . . .
18.417	104.6655	153.66	. . Q V . . . .
18.500	105.6992	150.09	. . Q V . . . .
18.583	106.7026	145.70	. . Q. V . . . .
18.667	107.6920	143.66	. . Q. V . . . .
18.750	108.6501	139.10	. . Q . V . . . .
18.833	109.5863	135.95	. . Q . V . . . .
18.917	110.4894	131.13	. . Q . V . . . .
19.000	111.3692	127.75	. . Q . V . . . .
19.083	112.2303	125.03	. . Q . V . . . .
19.167	113.0745	122.58	. . Q . V . . . .
19.250	113.9030	120.29	. . Q . V. . . .
19.333	114.7110	117.32	. . Q . V. . . .
19.417	115.4870	112.67	. . Q . V. . . .
19.500	116.2470	110.36	. . Q . V. . . .
19.583	116.9925	108.24	. . Q . V. . . .
19.667	117.7212	105.80	. . Q . V . . .
19.750	118.4354	103.71	. . Q . V . . .
19.833	119.1401	102.32	. . Q . V . . .
19.917	119.8337	100.72	. . Q . V . . .
20.000	120.5132	98.66	. . Q . V . . .

END OF FLOODSCx ROUTING ANALYSIS

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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU46002E.FLD
  TIME/DATE OF STUDY: 13:17 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1046.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    2446.000 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.570 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.040
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.890
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.060
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.710
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.18
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.32
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.46
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.93
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.43
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.61

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.891
          30-MINUTE FACTOR = 0.891
           1-HOUR FACTOR = 0.891
           3-HOUR FACTOR = 0.984
           6-HOUR FACTOR = 0.992
          24-HOUR FACTOR = 0.995

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   5.308


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.568	168.099
2	1.704	335.838
3	2.833	334.091
4	4.359	451.406
5	6.075	507.513
6	7.909	542.495
7	10.228	686.043
8	12.930	799.395
9	16.134	947.679
10	19.974	1136.028
11	23.888	1157.787
12	28.633	1403.677
13	32.416	1118.992
14	35.829	1009.735
15	38.882	903.019
16	41.609	806.554
17	44.279	790.101
18	46.736	726.789
19	49.171	720.292
20	51.289	626.349
21	53.088	532.336
22	54.581	441.475
23	56.107	451.552
24	57.385	378.078
25	58.578	352.741
26	59.744	345.052
27	60.894	340.193
28	61.994	325.321
29	63.092	324.761
30	64.023	275.457
31	64.946	273.041
32	65.822	259.164
33	66.643	242.754
34	67.487	249.689
35	68.263	229.572
36	69.032	227.615
37	69.743	210.307
38	70.428	202.559
39	71.104	200.018
40	71.772	197.547
41	72.438	197.000
42	73.096	194.545
43	73.676	171.784
44	74.219	160.362
45	74.753	158.047
46	75.276	154.826
47	75.764	144.352
48	76.249	143.303
49	76.731	142.691
50	77.207	140.809
51	77.657	133.018
52	78.096	130.113
53	78.535	129.621
54	78.971	129.100
55	79.389	123.706
56	79.768	112.092
57	80.144	111.284
58	80.517	110.156
59	80.889	110.011
60	81.256	108.547
61	81.605	103.293
62	81.951	102.528

63	82.297	102.320
64	82.643	102.340
65	82.989	102.304
66	83.311	95.247
67	83.590	82.387
68	83.867	82.062
69	84.144	81.879
70	84.421	81.877
71	84.698	82.062
72	84.975	81.879
73	85.235	77.099
74	85.466	68.133
75	85.694	67.517
76	85.923	67.704
77	86.151	67.519
78	86.378	67.217
79	86.601	65.973
80	86.824	65.908
81	87.045	65.422
82	87.249	60.107
83	87.447	58.643
84	87.643	58.110
85	87.839	57.932
86	88.035	57.929
87	88.230	57.826
88	88.426	57.932
89	88.622	57.936
90	88.818	57.918
91	89.008	56.194
92	89.184	52.208
93	89.361	52.312
94	89.537	52.014
95	89.713	52.111
96	89.890	52.188
97	90.063	51.371
98	90.236	50.999
99	90.409	51.373
100	90.582	51.172
101	90.756	51.362
102	90.918	48.069
103	91.072	45.573
104	91.226	45.356
105	91.380	45.555
106	91.533	45.352
107	91.687	45.553
108	91.841	45.566
109	91.995	45.560
110	92.148	45.343
111	92.302	45.372
112	92.456	45.754
113	92.609	45.142
114	92.755	43.050
115	92.884	38.195
116	93.011	37.721
117	93.136	37.044
118	93.262	37.211
119	93.387	36.837
120	93.513	37.211
121	93.637	36.825
122	93.763	37.250
123	93.888	37.017
124	94.013	37.017
125	94.139	37.238
126	94.264	36.823
127	94.390	37.238
128	94.513	36.616
129	94.618	30.845
130	94.715	28.881
131	94.812	28.504
132	94.909	28.701
133	95.006	28.698
134	95.103	28.687
135	95.199	28.518
136	95.297	28.870
137	95.394	28.710
138	95.490	28.507
139	95.587	28.685
140	95.683	28.504
141	95.781	28.895
142	95.877	28.493
143	95.974	28.687
144	96.071	28.687
145	96.168	28.685
146	96.265	28.493
147	96.361	28.493
148	96.440	23.453
149	96.511	20.937
150	96.582	21.129

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 362.8538

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 160.7623

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                    2 4 - H O U R    S T O R M
                  R U N O F F    H Y D R O G R A P H

================================================================================
             HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
       (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      100.0     200.0     300.0     400.0
--------------------------------------------------------------------------------
  14.000     44.6747     90.36  .        Q.V       .         .         .
  14.083     45.3067     91.77  .        Q.V       .         .         .
  14.167     45.9496     93.34  .        Q.V       .         .         .
  14.250     46.6033     94.92  .        Q.V       .         .         .
  14.333     47.2687     96.61  .        Q.V       .         .         .
  14.417     47.9462     98.38  .        Q.V       .         .         .
  14.500     48.6360    100.15  .         Q V      .         .         .
  14.583     49.3389    102.07  .         Q V      .         .         .
  14.667     50.0558    104.09  .         Q V      .         .         .
  14.750     50.7875    106.25  .         Q V      .         .         .
  14.833     51.5355    108.60  .         Q V      .         .         .
  14.917     52.2999    110.99  .         .Q V     .         .         .
  15.000     53.0824    113.62  .         .Q V     .         .         .
  15.083     53.8818    116.08  .         .Q V     .         .         .
  15.167     54.6981    118.52  .         .Q V     .         .         .
  15.250     55.5311    120.96  .         . QV     .         .         .
  15.333     56.3811    123.42  .         . Q V    .         .         .
  15.417     57.2464    125.64  .         . Q V    .         .         .
  15.500     58.1252    127.60  .         . Q V    .         .         .
  15.583     59.0186    129.72  .         . Q V    .         .         .
  15.667     59.9260    131.75  .         .  QV    .         .         .
  15.750     60.8449    133.43  .         .  Q V   .         .         .
  15.833     61.7740    134.91  .         .  Q V   .         .         .
  15.917     62.7161    136.78  .         .  Q V   .         .         .
  16.000     63.6755    139.31  .         .  Q V   .         .         .
  16.083     64.7690    158.78  .         .   QV   .         .         .
  16.167     65.9907    177.39  .         .    VQ  .         .         .
  16.250     67.2222    178.81  .         .    VQ  .         .         .
  16.333     68.5423    191.67  .         .     V Q.         .         .
  16.417     69.9112    198.76  .         .     V Q.         .         .
  16.500     71.3189    204.40  .         .     V  Q         .         .
  16.583     72.8426    221.25  .         .      V . Q       .         .
  16.667     74.4601    234.85  .         .      V .  Q      .         .
  16.750     76.1993    252.53  .         .      V .    Q    .         .
  16.833     78.0855    273.88  .         .       V.      Q  .         .
  16.917     79.9995    277.91  .         .       V.      Q  .         .
  17.000     82.0845    302.74  .         .        V         Q         .
  17.083     83.9642    272.94  .         .        V      Q  .         .
  17.167     85.7651    261.48  .         .         .V    Q   .         .
  17.250     87.4840    249.59  .         .         .V  Q     .         .
  17.333     89.1335    239.51  .         .         . VQ      .         .
  17.417     90.7658    237.01  .         .         . VQ      .         .
  17.500     92.3463    229.49  .         .         . Q       .         .
  17.583     93.9093    226.93  .         .         . QV      .         .
  17.667     95.3903    215.04  .         .         .Q V      .         .
  17.750     96.7899    203.23  .         .         Q   V     .         .
  17.833     98.1110    191.82  .         .        Q.   V     .         .
  17.917     99.4232    190.52  .         .        Q.   V     .         .
  18.000    100.6666    180.55  .         .       Q .    V    .         .
  18.083    101.8765    175.67  .         .      Q  .    V    .         .
  18.167    103.0639    172.41  .         .      Q  .    V    .         .
  18.250    104.2320    169.61  .         .     Q   .    V    .         .
  18.333    105.3728    165.64  .         .     Q   .     V   .         .
  18.417    106.4954    163.00  .         .     Q   .     V   .         .
  18.500    107.5665    155.52  .         .    Q    .     V   .         .
  18.583    108.6186    152.76  .         .    Q    .      V  .         .
  18.667    109.6430    148.75  .         .    Q    .      V  .         .
  18.750    110.6385    144.54  .         .    Q    .      V  .         .
  18.833    111.6196    142.45  .         .    Q    .      V  .         .
  18.917    112.5676    137.65  .         .   Q     .      V  .         .
  19.000    113.4939    134.50  .         .   Q     .      V  .         .
  19.083    114.3902    130.13  .         .   Q     .      V  .         .
  19.167    115.2645    126.96  .         . Q       .      V  .         .
  19.250    116.1220    124.51  .         . Q       .      V  .         .
  19.333    116.9639    122.23  .         . Q       .      V.         .
  19.417    117.7911    120.11  .         . Q       .      V.         .
  19.500    118.6025    117.82  .         .Q        .      V.         .
  19.583    119.3845    113.54  .         .Q        .      V.         .
  19.667    120.1463    110.62  .         .Q        .      V.         .
  19.750    120.8953    108.74  .         Q         .       V         .
  19.833    121.6313    106.88  .         Q         .       V         .
  19.917    122.3499    104.34  .         Q         .       V         .
  20.000    123.0585    102.89  .         Q         .       V         .
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  END OF FLOODSCx ROUTING ANALYSIS
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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU47002E.FLD
  TIME/DATE OF STUDY: 13:17 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1047.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    4301.800 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.580 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.040
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.890
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.060
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.720
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.18
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.32
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.46
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.93
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.44
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.63

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.808
          30-MINUTE FACTOR = 0.808
           1-HOUR FACTOR = 0.808
           3-HOUR FACTOR = 0.971
           6-HOUR FACTOR = 0.986
          24-HOUR FACTOR = 0.991

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   5.274


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.565	293.766
2	1.693	586.947
3	2.813	582.893
4	4.321	784.406
5	6.025	886.654
6	7.834	940.795
7	10.122	1190.295
8	12.798	1392.178
9	15.947	1638.326
10	19.738	1972.328
11	23.594	2006.164
12	28.320	2458.500
13	32.139	1987.128
14	35.529	1763.779
15	38.641	1618.745
16	41.330	1399.136
17	44.017	1398.000
18	46.465	1273.422
19	48.893	1262.967
20	51.050	1122.104
21	52.869	946.303
22	54.399	796.336
23	55.877	768.736
24	57.218	697.751
25	58.392	610.532
26	59.558	606.997
27	60.705	596.529
28	61.799	569.016
29	62.910	577.913
30	63.850	489.029
31	64.770	479.053
32	65.654	459.513
33	66.473	426.417
34	67.312	436.328
35	68.094	406.794
36	68.861	399.145
37	69.585	376.803
38	70.265	353.496
39	70.941	351.936
40	71.605	345.383
41	72.268	344.672
42	72.924	341.644
43	73.530	315.197
44	74.069	280.316
45	74.604	278.156
46	75.128	272.667
47	75.623	257.628
48	76.102	249.070
49	76.584	251.051
50	77.059	246.820
51	77.516	237.861
52	77.953	227.264
53	78.389	227.065
54	78.824	225.922
55	79.251	222.266
56	79.635	200.106
57	80.010	194.931
58	80.381	193.176
59	80.751	192.386
60	81.119	191.271
61	81.472	183.813
62	81.816	179.026

63	82.160	179.018
64	82.504	178.847
65	82.848	178.844
66	83.185	175.327
67	83.473	150.031
68	83.748	143.041
69	84.024	143.232
70	84.299	143.216
71	84.574	143.236
72	84.849	143.216
73	85.121	141.351
74	85.359	123.835
75	85.586	118.198
76	85.814	118.182
77	86.040	118.004
78	86.267	118.055
79	86.491	116.190
80	86.712	115.039
81	86.934	115.352
82	87.146	110.415
83	87.343	102.675
84	87.540	102.290
85	87.734	101.230
86	87.929	101.071
87	88.123	101.258
88	88.318	101.111
89	88.512	101.393
90	88.706	100.920
91	88.901	101.286
92	89.083	94.383
93	89.258	91.129
94	89.433	90.994
95	89.608	91.109
96	89.783	91.005
97	89.958	91.065
98	90.129	89.247
99	90.301	89.148
100	90.474	90.220
101	90.645	89.148
102	90.816	88.826
103	90.973	81.606
104	91.126	79.535
105	91.278	79.221
106	91.431	79.550
107	91.584	79.566
108	91.737	79.515
109	91.890	79.582
110	92.042	79.205
111	92.196	79.876
112	92.348	79.229
113	92.501	79.542
114	92.653	79.209
115	92.791	71.644
116	92.919	66.817
117	93.044	65.206
118	93.169	64.856
119	93.294	64.833
120	93.418	64.491
121	93.543	65.178
122	93.667	64.507
123	93.792	64.813
124	93.916	64.853
125	94.040	64.491
126	94.165	64.833
127	94.289	64.829
128	94.414	64.833
129	94.536	63.463
130	94.636	52.143
131	94.733	50.107
132	94.829	50.063
133	94.925	50.111
134	95.021	50.063
135	95.118	50.135
136	95.214	50.059
137	95.310	50.087
138	95.406	50.087
139	95.502	49.742
140	95.598	50.111
141	95.695	50.405
142	95.792	50.111
143	95.888	50.087
144	95.984	50.083
145	96.080	50.091
146	96.177	50.083
147	96.273	50.087
148	96.369	50.087
149	96.445	39.454
150	96.516	36.715

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 653.3447

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 271.3764

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 125.0 250.0 375.0 500.0
14.000	76.4864	156.34	. .VQ . . .
14.083	77.5805	158.86	. .VQ . . .
14.167	78.6946	161.76	. .VQ . . .
14.250	79.8288	164.68	. .V Q . . .
14.333	80.9847	167.84	. .V Q . . .
14.417	82.1635	171.17	. . VQ . . .
14.500	83.3653	174.50	. . VQ . . .
14.583	84.5922	178.14	. . V Q . . .
14.667	85.8459	182.04	. . V Q . . .
14.750	87.1284	186.21	. . V Q . . .
14.833	88.4426	190.82	. . V Q . . .
14.917	89.7888	195.47	. . V Q . . .
15.000	91.1708	200.67	. . V Q . . .
15.083	92.5853	205.37	. . V Q . . .
15.167	94.0307	209.88	. . V Q . . .
15.250	95.5066	214.30	. . V Q . . .
15.333	97.0120	218.58	. . V Q . . .
15.417	98.5427	222.25	. . V Q . . .
15.500	100.0940	225.25	. . V Q . . .
15.583	101.6674	228.46	. . V Q . . .
15.667	103.2604	231.30	. . V Q . . .
15.750	104.8679	233.41	. . V Q . . .
15.833	106.4870	235.11	. . V Q . . .
15.917	108.1205	237.18	. . V Q . . .
16.000	109.7741	240.10	. . V Q. . . .
16.083	111.6224	268.38	. . V .Q . . .
16.167	113.6548	295.11	. . V . Q . . .
16.250	115.6921	295.82	. . V . Q . . .
16.333	117.8492	313.20	. . V . Q . . .
16.417	120.0744	323.10	. . V . Q . . .
16.500	122.3490	330.27	. . V . Q . . .
16.583	124.7936	354.96	. . V . Q . . .
16.667	127.3800	375.53	. . V . Q . . .
16.750	130.1407	400.86	. . V. . Q . . .
16.833	133.1270	433.61	. . V. . Q . . .
16.917	136.1549	439.65	. . V . Q . . .
17.000	139.4589	479.75	. . V . Q . . .
17.083	142.4732	437.68	. . .V . Q . . .
17.167	145.3554	418.49	. . .V . Q . . .
17.250	148.1457	405.15	. . .V . Q . . .
17.333	150.8090	386.71	. . . V Q . . .
17.417	153.4711	386.54	. . . V Q . . .
17.500	156.0528	374.87	. . . V Q. . . .
17.583	158.6149	372.01	. . . V Q. . . .
17.667	161.0697	356.45	. . . V Q . . . .
17.750	163.3965	337.85	. . . V Q . . . .
17.833	165.6099	321.38	. . . VQ . . . .
17.917	167.7831	315.54	. . . VQ . . . .
18.000	169.8846	305.15	. . . QV . . . .
18.083	171.9066	293.59	. . . Q V . . . .
18.167	173.8981	289.17	. . . Q V . . . .
18.250	175.8559	284.28	. . . Q V . . . .
18.333	177.7692	277.81	. . . Q V . . . .
18.417	179.6571	274.12	. . .Q V . . . .
18.500	181.4622	262.10	. . Q V . . . .
18.583	183.2313	256.87	. . Q V . . . .
18.667	184.9573	250.61	. . Q V . . . .
18.750	186.6329	243.30	. . Q. V . . . .
18.833	188.2814	239.36	. . Q. V . . . .
18.917	189.8792	232.00	. . Q . V . . . .
19.000	191.4369	226.18	. . Q . V . . . .
19.083	192.9497	219.66	. . Q . V . . . .
19.167	194.4200	213.48	. . Q . V . . . .
19.250	195.8627	209.47	. . Q . V . . . .
19.333	197.2774	205.41	. . Q . V. . . .
19.417	198.6671	201.79	. . Q . V. . . .
19.500	200.0312	198.06	. . Q . V. . . .
19.583	201.3556	192.31	. . Q . V. . . .
19.667	202.6378	186.17	. . Q . V. . . .
19.750	203.8992	183.17	. . Q . V . . . .
19.833	205.1392	180.04	. . Q . V . . . .
19.917	206.3526	176.19	. . Q . V . . . .
20.000	207.5446	173.08	. . Q . V . . . .

END OF FLOODSCx ROUTING ANALYSIS

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                           Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU48002E.FLD
  TIME/DATE OF STUDY: 13:18 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1048.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    7126.900 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.610 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.880
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.060
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.680
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.18
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.32
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.46
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.93
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.44
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.64

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.731
          30-MINUTE FACTOR = 0.731
           1-HOUR FACTOR = 0.731
           3-HOUR FACTOR = 0.956
           6-HOUR FACTOR = 0.977
          24-HOUR FACTOR = 0.985

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   5.176


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.552	475.563
2	1.654	950.383
3	2.745	940.175
4	4.192	1246.583
5	5.855	1433.627
6	7.587	1493.107
7	9.776	1886.945
8	12.356	2223.208
9	15.340	2571.963
10	18.936	3099.599
11	22.656	3206.393
12	27.208	3922.984
13	31.167	3412.861
14	34.484	2858.776
15	37.724	2792.923
16	40.356	2268.279
17	43.087	2353.640
18	45.567	2137.699
19	48.023	2117.176
20	50.327	1985.288
21	52.223	1634.108
22	53.893	1439.374
23	55.239	1160.055
24	56.772	1321.390
25	57.915	985.193
26	59.090	1012.789
27	60.225	978.335
28	61.335	957.131
29	62.424	938.140
30	63.447	881.956
31	64.353	781.211
32	65.254	776.147
33	66.095	725.270
34	66.904	696.501
35	67.719	703.030
36	68.475	651.548
37	69.226	646.767
38	69.916	594.989
39	70.588	578.944
40	71.248	569.633
41	71.900	561.518
42	72.551	560.861
43	73.194	554.725
44	73.769	495.142
45	74.299	456.771
46	74.822	451.425
47	75.336	442.949
48	75.818	415.304
49	76.289	405.947
50	76.763	408.294
51	77.229	401.455
52	77.676	385.463
53	78.105	369.937
54	78.534	369.319
55	78.960	367.721
56	79.380	362.040
57	79.759	326.550
58	80.127	316.936
59	80.492	314.529
60	80.855	312.905
61	81.216	311.360
62	81.565	300.543

63	81.902	290.501
64	82.238	290.251
65	82.576	290.527
66	82.912	290.218
67	83.247	288.384
68	83.541	253.321
69	83.810	232.167
70	84.079	231.720
71	84.348	231.976
72	84.617	231.759
73	84.886	231.720
74	85.155	232.002
75	85.401	212.321
76	85.625	192.409
77	85.847	191.410
78	86.069	191.403
79	86.292	191.988
80	86.511	189.503
81	86.727	185.544
82	86.942	185.643
83	87.156	184.794
84	87.353	169.624
85	87.545	165.047
86	87.735	164.028
87	87.924	163.022
88	88.113	163.015
89	88.302	163.002
90	88.492	162.982
91	88.680	162.752
92	88.870	163.285
93	89.057	161.279
94	89.230	149.015
95	89.400	146.937
96	89.570	146.720
97	89.740	146.359
98	89.911	146.720
99	90.081	146.609
100	90.247	143.104
101	90.414	144.314
102	90.582	144.314
103	90.748	143.715
104	90.914	142.558
105	91.065	130.609
106	91.214	128.255
107	91.363	128.295
108	91.511	127.670
109	91.660	128.328
110	91.808	127.650
111	91.957	128.282
112	92.106	128.295
113	92.254	128.288
114	92.403	127.670
115	92.551	127.729
116	92.700	128.860
117	92.837	117.938
118	92.962	107.653
119	93.085	106.167
120	93.206	103.800
121	93.327	104.839
122	93.448	104.372
123	93.569	104.339
124	93.690	104.300
125	93.811	103.833
126	93.933	104.872
127	94.054	104.372
128	94.175	104.346
129	94.295	103.760
130	94.417	104.944
131	94.538	104.293
132	94.645	92.358
133	94.738	80.337
134	94.833	81.402
135	94.926	80.324
136	95.020	80.824
137	95.113	80.337
138	95.207	81.442
139	95.301	80.909
140	95.395	80.824
141	95.488	80.331
142	95.581	80.298
143	95.676	81.481
144	95.770	80.830
145	95.863	80.324
146	95.957	80.870
147	96.051	80.863
148	96.144	80.298
149	96.238	81.442
150	96.331	80.291

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1027.2599

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 498.6432

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 200.0 400.0 600.0 800.0
14.000	144.9109	295.32	. .V Q . . .
14.083	146.9786	300.23	. .V Q . . .
14.167	149.0867	306.10	. .V Q . . .
14.250	151.2352	311.96	. . V Q . . .
14.333	153.4281	318.41	. . V Q . . .
14.417	155.6678	325.21	. . V Q . . .
14.500	157.9552	332.12	. . V Q . . .
14.583	160.2942	339.63	. . V Q . . .
14.667	162.6894	347.79	. . V Q . . .
14.750	165.1448	356.52	. . V Q . . .
14.833	167.6668	366.19	. . V Q . . .
14.917	170.2568	376.07	. . V Q . . .
15.000	172.9232	387.16	. . V Q. . . .
15.083	175.6597	397.34	. . V Q. . . .
15.167	178.4592	406.49	. . V Q . . .
15.250	181.3210	415.54	. . V Q . . .
15.333	184.2393	423.73	. . V .Q . . .
15.417	187.2050	430.63	. . V .Q . . .
15.500	190.2066	435.82	. . V .Q . . .
15.583	193.2462	441.35	. . V . Q . . .
15.667	196.3182	446.06	. . V . Q . . .
15.750	199.4102	448.95	. . V . Q . . .
15.833	202.5165	451.05	. . V . Q . . .
15.917	205.6369	453.07	. . V . Q . . .
16.000	208.7819	456.65	. . V . Q . . .
16.083	212.1836	493.94	. . V . Q . . .
16.167	215.8226	528.38	. . V . Q . . .
16.250	219.4523	527.03	. . V . Q . . .
16.333	223.2151	546.36	. . V . Q . . .
16.417	227.0652	559.03	. . V . Q . . .
16.500	230.9650	566.24	. . V . Q . . .
16.583	235.0857	598.33	. . V . Q. . . .
16.667	239.4058	627.28	. . V. .Q . . .
16.750	243.9397	658.33	. . V. . Q . . .
16.833	248.7817	703.06	. . V. . Q . . .
16.917	253.7173	716.65	. . V . Q . . .
17.000	259.0315	771.62	. . V . Q . . .
17.083	264.0850	733.77	. . .V . Q . . .
17.167	268.8707	694.89	. . .V . Q . . .
17.250	273.6304	691.10	. . .V . Q . . .
17.333	278.1439	655.35	. . . V . Q . . .
17.417	282.7192	664.34	. . . V . Q . . .
17.500	287.1883	648.90	. . . V . Q . . .
17.583	291.6433	646.87	. . . V . Q . . .
17.667	295.9982	632.34	. . . V .Q . . .
17.750	300.1427	601.78	. . . V Q . . .
17.833	304.1483	581.61	. . . V Q. . . .
17.917	307.9768	555.89	. . . V Q . . .
18.000	311.8347	560.17	. . . V Q . . .
18.083	315.4682	527.58	. . . VQ . . .
18.167	319.0666	522.49	. . . VQ . . .
18.250	322.5913	511.78	. . . Q . . .
18.333	326.0576	503.31	. . . QV . . .
18.417	329.4555	493.37	. . . Q V . . .
18.500	332.7690	481.12	. . . Q V . . .
18.583	335.9734	465.27	. . . Q V . . .
18.667	339.1157	456.26	. . . Q V . . .
18.750	342.1734	443.98	. . . Q V . . .
18.833	345.1560	433.08	. . .Q V . . .
18.917	348.0813	424.75	. . .Q V . . .
19.000	350.9128	411.13	. . Q V . . .
19.083	353.6828	402.21	. . Q V . . .
19.167	356.3723	390.52	. . Q. V . . .
19.250	359.0020	381.83	. . Q. V . . .
19.333	361.5810	374.48	. . Q . V. . .
19.417	364.1107	367.31	. . Q . V. . .
19.500	366.5957	360.82	. . Q . V. . .
19.583	369.0331	353.91	. . Q . V. . .
19.667	371.3978	343.36	. . Q . V. . .
19.750	373.7061	335.17	. . Q . V. . .
19.833	375.9769	329.72	. . Q . V . .
19.917	378.2112	324.41	. . Q . V . .
20.000	380.3985	317.60	. . Q . V . .

END OF FLOODSCx ROUTING ANALYSIS

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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU49002E.FLD
  TIME/DATE OF STUDY: 13:18 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1049.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    8128.900 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.660 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.870
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.070
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.680
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.18
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.32
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.46
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.92
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.43
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.61

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.705
          30-MINUTE FACTOR = 0.705
           1-HOUR FACTOR = 0.705
           3-HOUR FACTOR = 0.951
           6-HOUR FACTOR = 0.974
          24-HOUR FACTOR = 0.983

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   5.020


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.534	524.716
2	1.601	1048.920
3	2.654	1035.258
4	4.006	1329.045
5	5.612	1579.209
6	7.253	1612.999
7	9.316	2028.591
8	11.716	2359.363
9	14.472	2708.748
10	17.790	3261.875
11	21.420	3568.567
12	25.477	3988.436
13	29.743	4194.161
14	33.067	3267.674
15	36.326	3204.534
16	39.048	2675.162
17	41.703	2610.340
18	44.241	2494.965
19	46.631	2349.552
20	49.014	2343.169
21	51.092	2042.359
22	52.854	1732.965
23	54.364	1484.050
24	55.750	1363.035
25	57.133	1359.079
26	58.244	1092.613
27	59.380	1116.445
28	60.488	1089.332
29	61.554	1048.218
30	62.623	1051.053
31	63.596	955.911
32	64.477	865.836
33	65.352	860.578
34	66.171	805.622
35	66.954	769.216
36	67.751	784.089
37	68.485	721.618
38	69.216	718.498
39	69.895	667.556
40	70.547	640.367
41	71.193	635.312
42	71.826	621.878
43	72.457	621.143
44	73.083	615.383
45	73.673	579.396
46	74.190	508.788
47	74.703	504.145
48	75.204	492.812
49	75.689	476.611
50	76.145	447.787
51	76.606	453.630
52	77.061	446.767
53	77.508	440.332
54	77.930	414.748
55	78.347	409.175
56	78.761	407.488
57	79.174	405.733
58	79.573	392.142
59	79.933	353.995
60	80.289	350.200
61	80.642	347.102
62	80.993	344.815

63	81.342	343.787
64	81.678	329.746
65	82.004	320.723
66	82.330	320.791
67	82.657	321.083
68	82.983	320.716
69	83.308	319.133
70	83.597	283.942
71	83.857	256.228
72	84.118	255.988
73	84.378	256.265
74	84.639	255.980
75	84.899	255.973
76	85.160	256.618
77	85.410	245.285
78	85.629	215.066
79	85.844	211.421
80	86.059	211.421
81	86.274	211.788
82	86.489	211.053
83	86.699	206.575
84	86.907	204.775
85	87.116	205.038
86	87.318	198.760
87	87.504	182.754
88	87.690	182.664
89	87.873	180.354
90	88.056	179.799
91	88.239	179.829
92	88.422	179.806
93	88.604	179.446
94	88.788	180.226
95	88.971	179.776
96	89.150	176.836
97	89.317	163.501
98	89.482	162.143
99	89.647	162.211
100	89.811	161.836
101	89.976	162.173
102	90.140	161.431
103	90.301	157.740
104	90.463	159.068
105	90.624	159.045
106	90.786	158.408
107	90.947	158.355
108	91.096	146.475
109	91.238	140.347
110	91.383	141.772
111	91.525	140.437
112	91.669	141.112
113	91.813	141.727
114	91.957	141.142
115	92.100	140.384
116	92.244	141.742
117	92.387	141.097
118	92.531	141.097
119	92.674	141.022
120	92.816	139.822
121	92.941	122.459
122	93.062	118.971
123	93.179	115.378
124	93.296	114.178
125	93.412	114.958
126	93.529	114.906
127	93.646	114.291
128	93.763	114.913
129	93.879	114.898
130	93.996	114.246

131	94.112	114.291
132	94.229	114.906
133	94.345	114.238
134	94.462	114.966
135	94.579	114.906
136	94.683	102.253
137	94.774	89.674
138	94.864	88.227
139	94.954	89.059
140	95.045	88.894
141	95.135	89.007
142	95.226	88.947
143	95.316	88.294
144	95.405	88.324
145	95.497	89.614
146	95.586	88.294
147	95.677	88.999
148	95.767	88.947
149	95.858	88.947
150	95.948	88.962

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1157.7218

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 557.1355

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 225.0 450.0 675.0 900.0
14.000	161.2291	332.06	.V Q . . .
14.083	163.5565	337.94	.V Q . . .
14.167	165.9288	344.46	.V Q . . .
14.250	168.3467	351.07	. V Q . . .
14.333	170.8137	358.22	. V Q . . .
14.417	173.3334	365.85	. V Q . . .
14.500	175.9062	373.58	. V Q . . .
14.583	178.5371	382.00	. V Q . . .
14.667	181.2294	390.92	. V Q . . .
14.750	183.9879	400.53	. V Q . . .
14.833	186.8188	411.06	. V Q . . .
14.917	189.7260	422.12	. V Q . . .
15.000	192.7145	433.93	. V Q. . . .
15.083	195.7864	446.04	. V Q. . . .
15.167	198.9299	456.42	. V Q . . .
15.250	202.1438	466.66	. V Q . . .
15.333	205.4215	475.92	. V .Q . . .
15.417	208.7511	483.45	. V .Q . . .
15.500	212.1203	489.21	. V .Q . . .
15.583	215.5303	495.13	. V . Q . . .
15.667	218.9774	500.52	. V . Q . . .
15.750	222.4481	503.94	. V . Q . . .
15.833	225.9347	506.25	. V . Q . . .
15.917	229.4373	508.59	. V . Q . . .
16.000	232.9646	512.16	. V . Q . . .
16.083	236.7612	551.25	. V . Q . . .
16.167	240.8016	586.67	. V . Q . . .
16.250	244.8256	584.29	. V . Q . . .
16.333	248.9695	601.68	. V . Q . . .
16.417	253.2117	615.98	. V . Q . . .
16.500	257.4860	620.63	. V . Q . . .
16.583	261.9754	651.86	. V . Q . . .
16.667	266.6505	678.83	. V. Q . . .
16.750	271.5280	708.20	. V. .Q . . .
16.833	276.7111	752.59	. V. . Q . . .
16.917	282.0838	780.12	. V . Q . . .
17.000	287.6864	813.50	. V . Q . . .
17.083	293.3849	827.43	. .V . Q . . .
17.167	298.6497	764.45	. .V . Q . . .
17.250	303.8993	762.24	. .V . Q . . .
17.333	308.9142	728.17	. . V . Q . . .
17.417	313.9249	727.55	. . V . Q . . .
17.500	318.8912	721.11	. . V . Q . . .
17.583	323.7934	711.79	. . V .Q . . .
17.667	328.6724	708.43	. . V .Q . . .
17.750	333.3752	682.84	. . V Q . . .
17.833	337.8916	655.79	. . V Q. . . .
17.917	342.2476	632.48	. . V Q . . . .
18.000	346.5013	617.64	. . V Q . . . .
18.083	350.6910	608.35	. . V Q . . . .
18.167	354.6969	581.66	. . Q . . . .
18.250	358.6577	575.11	. . Q . . . .
18.333	362.5486	564.96	. . QV . . . .
18.417	366.3633	553.89	. . Q V . . . .
18.500	370.1155	544.81	. . Q V . . . .
18.583	373.7574	528.80	. . Q V . . . .
18.667	377.2901	512.94	. . . Q V . . .
18.750	380.7535	502.89	. . . Q V . . .
18.833	384.1232	489.28	. . .Q V . . .
18.917	387.4078	476.92	. . .Q V . . .
19.000	390.6267	467.38	. . Q V . . .
19.083	393.7423	452.38	. . Q V . . .
19.167	396.7958	443.37	. . Q. V . . .
19.250	399.7642	431.01	. . Q. V . . .
19.333	402.6661	421.36	. . Q . V . . .
19.417	405.5130	413.37	. . Q . V. . .
19.500	408.3040	405.25	. . Q . V. . .
19.583	411.0464	398.19	. . Q . V. . .
19.667	413.7372	390.71	. . Q . V. . .
19.750	416.3649	381.53	. . Q . V. . .
19.833	418.9185	370.78	. . Q . V . .
19.917	421.4329	365.09	. . Q . V . .
20.000	423.9055	359.04	. . Q . V . .

END OF FLOODSCx ROUTING ANALYSIS

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**************************************************************************

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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU50002E.FLD
  TIME/DATE OF STUDY: 13:19 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1050.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    9515.800 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.670 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.870
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.070
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.690
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.18
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.32
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.45
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.92
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.42
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.60

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.680
          30-MINUTE FACTOR = 0.684
           1-HOUR FACTOR = 0.685
           3-HOUR FACTOR = 0.944
           6-HOUR FACTOR = 0.971
          24-HOUR FACTOR = 0.982

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   4.990


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.531	610.561
2	1.591	1220.587
3	2.638	1204.702
4	3.972	1534.943
5	5.568	1837.151
6	7.194	1871.598
7	9.237	2350.470
8	11.597	2715.938
9	14.314	3126.727
10	17.581	3760.151
11	21.208	4173.406
12	25.151	4538.270
13	29.453	4950.705
14	32.823	3877.842
15	36.040	3702.278
16	38.826	3206.707
17	41.435	3001.772
18	43.989	2939.982
19	46.363	2731.461
20	48.741	2736.882
21	50.862	2440.670
22	52.639	2045.147
23	54.195	1790.034
24	55.521	1526.339
25	56.968	1665.432
26	58.067	1264.681
27	59.204	1308.142
28	60.304	1265.932
29	61.380	1238.964
30	62.428	1205.842
31	63.436	1160.062
32	64.309	1005.029
33	65.182	1004.542
34	66.015	957.735
35	66.789	891.683
36	67.589	919.709
37	68.325	847.607
38	69.053	838.055
39	69.745	796.481
40	70.391	743.186
41	71.039	745.882
42	71.668	723.879
43	72.297	722.966
44	72.921	718.988
45	73.526	695.300
46	74.050	603.592
47	74.561	588.412
48	75.062	576.559
49	75.553	564.565
50	76.010	525.696
51	76.466	525.520
52	76.921	523.229
53	77.370	516.249
54	77.797	491.902
55	78.211	476.282
56	78.624	474.939
57	79.034	472.682
58	79.440	467.282
59	79.808	422.952
60	80.162	408.061
61	80.515	405.207
62	80.864	401.687

63	81.212	400.747
64	81.553	392.433
65	81.878	374.152
66	82.203	373.696
67	82.527	373.371
68	82.851	372.932
69	83.176	373.547
70	83.484	354.362
71	83.747	303.227
72	84.006	298.302
73	84.265	297.994
74	84.524	297.977
75	84.783	297.933
76	85.042	298.003
77	85.300	296.353
78	85.528	263.103
79	85.743	246.579
80	85.956	245.964
81	86.170	246.342
82	86.384	245.964
83	86.596	243.980
84	86.803	237.921
85	87.010	238.984
86	87.217	237.368
87	87.408	220.168
88	87.592	212.284
89	87.776	211.300
90	87.958	208.886
91	88.140	209.650
92	88.322	209.246
93	88.503	209.272
94	88.685	208.842
95	88.867	209.632
96	89.049	209.184
97	89.221	198.411
98	89.386	189.183
99	89.549	188.060
100	89.713	188.946
101	89.877	188.007
102	90.041	189.631
103	90.202	185.338
104	90.362	183.248
105	90.523	185.601
106	90.683	184.135
107	90.843	184.714
108	91.001	181.036
109	91.145	166.022
110	91.288	164.476
111	91.430	163.651
112	91.573	164.485
113	91.715	163.756
114	91.859	165.188
115	92.001	162.940
116	92.143	164.450
117	92.286	164.494
118	92.429	164.441
119	92.572	164.468
120	92.714	163.774
121	92.852	158.155
122	92.974	140.200
123	93.093	137.741
124	93.209	133.553
125	93.326	133.650
126	93.442	133.711
127	93.557	132.851
128	93.673	132.930
129	93.789	133.711
130	93.904	132.912
131	94.020	132.868
132	94.136	133.711
133	94.252	133.702
134	94.368	132.930
135	94.483	132.860
136	94.599	133.702
137	94.699	114.123
138	94.789	103.921
139	94.878	103.078
140	94.968	103.139
141	95.058	103.139
142	95.147	103.139
143	95.238	103.868
144	95.327	103.139
145	95.417	103.139
146	95.507	103.929
147	95.596	102.349
148	95.686	103.868
149	95.776	103.139
150	95.865	103.078

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1369.1344

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 627.2909

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 250.0 500.0 750.0 1000.0
14.000	182.0962	371.57	.V Q . . .
14.083	184.7023	378.41	.V Q . . .
14.167	187.3610	386.04	.V Q . . .
14.250	190.0729	393.77	. V Q . . .
14.333	192.8426	402.16	. V Q . . .
14.417	195.6748	411.23	. V Q . . .
14.500	198.5696	420.33	. V Q . . .
14.583	201.5339	430.42	. V Q . . .
14.667	204.5714	441.05	. V Q . . .
14.750	207.6883	452.57	. V Q . . .
14.833	210.8926	465.27	. V Q . . .
14.917	214.1897	478.73	. V Q. . . .
15.000	217.5841	492.87	. V Q. . . .
15.083	221.0808	507.72	. V Q . . .
15.167	224.6635	520.22	. V Q . . .
15.250	228.3293	532.27	. V .Q . . .
15.333	232.0701	543.17	. V .Q . . .
15.417	235.8685	551.53	. V . Q . . .
15.500	239.7094	557.69	. V . Q . . .
15.583	243.5926	563.84	. V . Q . . .
15.667	247.5131	569.27	. V . Q . . .
15.750	251.4562	572.54	. V . Q . . .
15.833	255.4132	574.55	. V . Q . . .
15.917	259.3823	576.31	. V . Q . . .
16.000	263.3706	579.11	. V . Q . . .
16.083	267.6472	620.96	. V . Q . . .
16.167	272.1803	658.20	. V . Q . . .
16.250	276.6825	653.71	. V . Q . . .
16.333	281.2990	670.32	. V . Q . . .
16.417	286.0152	684.80	. V . Q . . .
16.500	290.7574	688.56	. V . Q . . .
16.583	295.7298	721.99	. V . Q . . .
16.667	300.8964	750.18	. V. Q . . .
16.750	306.2895	783.08	. V. .Q . . .
16.833	312.0118	830.88	. V. . Q . . .
16.917	317.9687	864.94	. V . Q . . .
17.000	324.1250	893.90	. V . Q . . .
17.083	330.4659	920.70	. .V . . Q . . .
17.167	336.3339	852.03	. .V . Q . . .
17.250	342.1453	843.81	. .V . Q . . .
17.333	347.7611	815.42	. . V . Q . . .
17.417	353.3226	807.54	. . V . Q . . .
17.500	358.8786	806.72	. . V . Q . . .
17.583	364.3522	794.78	. . V .Q . . .
17.667	369.8150	793.20	. . V .Q . . .
17.750	375.1103	768.87	. . V Q . . .
17.833	380.1866	737.09	. . V Q. . . .
17.917	385.0989	713.26	. . V Q . . . .
18.000	389.8457	689.24	. . V Q . . . .
18.083	394.5836	687.94	. . V Q . . . .
18.167	399.0761	652.31	. . VQ . . . .
18.250	403.5252	646.00	. . Q . . . .
18.333	407.8881	633.48	. . QV . . . .
18.417	412.1772	622.78	. . Q V . . . .
18.500	416.3786	610.04	. . Q V . . . .
18.583	420.4850	596.26	. . Q V . . . .
18.667	424.4461	575.16	. . Q V . . . .
18.750	428.3316	564.17	. . Q V . . . .
18.833	432.1199	550.06	. . Q V . . . .
18.917	435.8031	534.80	. . .Q V . . . .
19.000	439.4196	525.12	. . .Q V . . . .
19.083	442.9198	508.23	. . Q V . . . .
19.167	446.3487	497.87	. . Q. V . . . .
19.250	449.6915	485.37	. . Q. V . . . .
19.333	452.9504	473.20	. . Q . V . . . .
19.417	456.1519	464.86	. . Q . V. . . .
19.500	459.2882	455.39	. . Q . V. . . .
19.583	462.3706	447.57	. . Q . V. . . .
19.667	465.3974	439.49	. . Q . V. . . .
19.750	468.3616	430.40	. . Q . V. . . .
19.833	471.2388	417.77	. . Q . V . . .
19.917	474.0676	410.73	. . Q . V . . .
20.000	476.8512	404.19	. . Q . V . . .

END OF FLOODSCx ROUTING ANALYSIS

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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU51002E.FLD
  TIME/DATE OF STUDY: 13:20 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1051.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    9976.100 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.730 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.870
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.070
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.690
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.18
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.32
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.45
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.92
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.42
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.59

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.672
          30-MINUTE FACTOR = 0.677
           1-HOUR FACTOR = 0.680
           3-HOUR FACTOR = 0.941
           6-HOUR FACTOR = 0.970
          24-HOUR FACTOR = 0.981

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   4.817


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.512	617.896
2	1.536	1235.548
3	2.547	1220.049
4	3.780	1486.717
5	5.317	1854.205
6	6.876	1881.720
7	8.759	2271.950
8	10.929	2617.004
9	13.446	3037.837
10	16.434	3603.926
11	19.939	4229.354
12	23.404	4180.172
13	27.738	5229.433
14	31.311	4310.341
15	34.384	3708.112
16	37.449	3696.898
17	39.893	2949.689
18	42.476	3116.318
19	44.844	2855.851
20	47.140	2771.071
21	49.405	2732.438
22	51.334	2327.227
23	53.002	2012.153
24	54.428	1720.583
25	55.765	1612.713
26	57.099	1609.699
27	58.160	1280.818
28	59.255	1320.518
29	60.316	1280.454
30	61.357	1255.426
31	62.365	1215.768
32	63.354	1193.943
33	64.197	1017.203
34	65.043	1020.724
35	65.857	982.156
36	66.610	908.223
37	67.379	927.949
38	68.106	876.439
39	68.810	849.276
40	69.499	831.318
41	70.130	761.859
42	70.757	755.839
43	71.370	740.485
44	71.977	731.814
45	72.583	731.290
46	73.182	722.821
47	73.736	668.016
48	74.231	596.909
49	74.722	593.007
50	75.203	579.908
51	75.669	562.824
52	76.106	527.229
53	76.549	533.931
54	76.986	527.496
55	77.418	521.375
56	77.828	494.543
57	78.227	481.776
58	78.626	480.994
59	79.023	478.306
60	79.415	473.787
61	79.773	431.703
62	80.115	412.759

63	80.456	411.121
64	80.793	406.620
65	81.130	406.454
66	81.462	400.830
67	81.779	382.043
68	82.092	377.754
69	82.405	377.864
70	82.718	377.763
71	83.031	377.781
72	83.342	374.817
73	83.614	327.892
74	83.864	302.164
75	84.114	301.520
76	84.364	301.492
77	84.614	301.557
78	84.864	301.962
79	85.114	301.078
80	85.359	296.006
81	85.573	257.954
82	85.780	249.191
83	85.986	249.154
84	86.193	249.145
85	86.399	249.145
86	86.603	246.089
87	86.803	241.348
88	87.003	240.851
89	87.203	241.302
90	87.389	224.228
91	87.567	215.363
92	87.745	214.268
93	87.920	211.479
94	88.095	211.829
95	88.271	211.774
96	88.447	211.801
97	88.622	211.783
98	88.798	211.829
99	88.973	211.405
100	89.146	208.349
101	89.306	193.484
102	89.464	190.474
103	89.622	190.980
104	89.781	191.394
105	89.938	189.664
106	90.097	191.578
107	90.251	186.092
108	90.407	188.127
109	90.561	185.641
110	90.716	187.188
111	90.871	187.409
112	91.021	180.431
113	91.160	167.720
114	91.297	165.280
115	91.435	166.762
116	91.573	166.081
117	91.711	166.790
118	91.848	165.234
119	91.986	166.928
120	92.124	165.971
121	92.261	165.998
122	92.399	165.971
123	92.537	166.081
124	92.675	166.910
125	92.811	164.332
126	92.932	145.463
127	93.047	139.572
128	93.161	137.142
129	93.273	134.785
130	93.384	134.573
131	93.497	135.494
132	93.608	134.583
133	93.720	134.647
134	93.831	134.573
135	93.944	135.494
136	94.055	134.647
137	94.167	134.647
138	94.279	135.420
139	94.391	134.647
140	94.502	134.583
141	94.614	134.638
142	94.708	113.375
143	94.793	103.066
144	94.881	105.643
145	94.967	104.069
146	95.053	103.940
147	95.140	104.860
148	95.227	104.778
149	95.314	104.916
150	95.400	103.866

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1429.7355

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 650.9187

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 250.0 500.0 750.0 1000.0
14.000	187.2638	384.55	.V Q . . .
14.083	189.9599	391.47	.V Q . . .
14.167	192.7128	399.73	.V Q . . .
14.250	195.5200	407.60	. V Q . . .
14.333	198.3858	416.11	. V Q . . .
14.417	201.3156	425.41	. V Q . . .
14.500	204.3098	434.75	. V Q . . .
14.583	207.3739	444.91	. V Q . . .
14.667	210.5127	455.76	. V Q . . .
14.750	213.7308	467.26	. V Q . . .
14.833	217.0360	479.92	. V Q. . . .
14.917	220.4369	493.80	. V Q. . . .
15.000	223.9313	507.40	. V Q . . .
15.083	227.5341	523.12	. V Q . . .
15.167	231.2308	536.77	. V .Q . . .
15.250	235.0120	549.03	. V .Q . . .
15.333	238.8772	561.22	. V . Q . . .
15.417	242.7997	569.56	. V . Q . . .
15.500	246.7679	576.17	. V . Q . . .
15.583	250.7805	582.63	. V . Q . . .
15.667	254.8328	588.40	. V . Q . . .
15.750	258.9120	592.30	. V . Q . . .
15.833	263.0102	595.05	. V . Q . . .
15.917	267.1262	597.65	. V . Q . . .
16.000	271.2675	601.31	. V . Q . . .
16.083	275.6956	642.96	. V . Q . . .
16.167	280.3855	680.98	. V . Q . . .
16.250	285.0421	676.13	. V . Q . . .
16.333	289.7922	689.72	. V . Q . . .
16.417	294.6611	706.97	. V . Q . . .
16.500	299.5406	708.49	. V . Q . . .
16.583	304.6061	735.52	. V . Q. . .
16.667	309.8473	761.02	. V. Q . .
16.750	315.3162	794.08	. V. .Q . .
16.833	321.0754	836.24	. V. . Q . .
16.917	327.1578	883.16	. V . Q . .
17.000	333.2672	887.10	. V . Q . .
17.083	339.8439	954.93	. V . Q .
17.167	346.0127	895.71	. .V . Q . .
17.250	351.9438	861.19	. .V . Q . .
17.333	357.8824	862.29	. .V . Q . .
17.417	363.5360	820.91	. . V . Q . .
17.500	369.2891	835.35	. . V . Q . .
17.583	374.9402	820.54	. . V . Q . .
17.667	380.5615	816.21	. . V . Q . .
17.750	386.1367	809.52	. . V . Q . .
17.833	391.4959	778.16	. . V .Q . .
17.917	396.6681	750.99	. . V Q . .
18.000	401.6644	725.47	. . V Q. . .
18.083	406.5489	709.22	. . V Q . . .
18.167	411.3603	698.62	. . V Q . . .
18.250	415.9638	668.42	. . VQ . . .
18.333	420.5157	660.95	. . VQ . . .
18.417	424.9850	648.93	. . QV . . .
18.500	429.3771	637.74	. . QV . . .
18.583	433.6768	624.31	. . Q V . . .
18.667	437.8884	611.52	. . . Q V . .
18.750	441.9427	588.68	. . . Q V . .
18.833	445.9196	577.45	. . . Q V . .
18.917	449.7982	563.17	. . Q V . .
19.000	453.5696	547.61	. . .Q V . .
19.083	457.2624	536.20	. . .Q V . .
19.167	460.8539	521.49	. . Q V . .
19.250	464.3662	509.98	. . Q V . .
19.333	467.8024	498.93	. . Q. V . .
19.417	471.1493	485.97	. . Q. V . .
19.500	474.4336	476.87	. . Q. V. .
19.583	477.6544	467.67	. . Q . V. .
19.667	480.8176	459.30	. . Q . V. .
19.750	483.9271	451.51	. . Q . V. .
19.833	486.9818	443.54	. . Q . V. .
19.917	489.9647	433.11	. . Q . V .
20.000	492.8750	422.57	. . Q . V .

END OF FLOODSCx ROUTING ANALYSIS

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             F L O O D    R O U T I N G    A N A L Y S I S
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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU52002E.FLD
  TIME/DATE OF STUDY: 13:20 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1052.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   10727.700 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.840 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.870
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.070
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.690
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.18
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.32
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.45
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.91
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.40
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.56

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.659
          30-MINUTE FACTOR = 0.667
           1-HOUR FACTOR = 0.670
           3-HOUR FACTOR = 0.937
           6-HOUR FACTOR = 0.968
          24-HOUR FACTOR = 0.980

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   4.529


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.482	624.726
2	1.445	1249.449
3	2.397	1235.731
4	3.474	1397.699
5	4.903	1853.240
6	6.364	1896.130
7	7.940	2044.833
8	9.891	2529.946
9	12.163	2947.763
10	14.690	3279.532
11	17.681	3879.480
12	21.002	4309.280
13	24.437	4456.420
14	28.511	5284.877
15	31.740	4189.481
16	34.617	3732.587
17	37.494	3732.619
18	39.774	2958.443
19	42.213	3164.346
20	44.465	2922.087
21	46.618	2792.455
22	48.773	2795.974
23	50.715	2519.204
24	52.352	2124.646
25	53.829	1915.204
26	54.999	1518.854
27	56.394	1808.902
28	57.463	1387.668
29	58.490	1332.456
30	59.506	1317.905
31	60.506	1297.579
32	61.471	1252.126
33	62.425	1236.893
34	63.353	1204.363
35	64.144	1026.328
36	64.941	1034.553
37	65.715	1003.443
38	66.430	927.385
39	67.145	928.009
40	67.851	916.111
41	68.514	859.483
42	69.174	856.603
43	69.793	803.301
44	70.379	760.006
45	70.969	765.559
46	71.540	741.407
47	72.111	739.883
48	72.680	738.596
49	73.242	729.658
50	73.757	667.151
51	74.221	602.832
52	74.684	600.635
53	75.137	586.995
54	75.580	575.553
55	75.994	536.623
56	76.407	536.197
57	76.822	538.563
58	77.230	528.942
59	77.628	516.965
60	78.005	488.705
61	78.380	486.953
62	78.755	485.340

63	79.127	483.162
64	79.493	474.274
65	79.822	428.000
66	80.144	417.597
67	80.464	415.360
68	80.781	411.004
69	81.098	411.093
70	81.412	406.600
71	81.712	389.644
72	82.006	381.923
73	82.301	381.884
74	82.595	381.933
75	82.889	381.884
76	83.184	381.725
77	83.466	365.829
78	83.706	311.705
79	83.941	305.113
80	84.176	305.064
81	84.411	305.093
82	84.646	304.608
83	84.881	305.103
84	85.116	304.579
85	85.348	300.738
86	85.550	262.541
87	85.744	251.633
88	85.938	252.068
89	86.133	251.989
90	86.327	252.009
91	86.520	250.643
92	86.709	245.644
93	86.897	243.635
94	87.085	243.586
95	87.271	241.170
96	87.441	220.206
97	87.608	217.791
98	87.775	215.663
99	87.940	214.267
100	88.105	214.109
101	88.270	213.643
102	88.435	214.712
103	88.600	213.653
104	88.765	214.109
105	88.930	214.693
106	89.094	212.703
107	89.248	199.509
108	89.397	192.837
109	89.545	193.134
110	89.694	192.837
111	89.843	192.699
112	89.992	194.184
113	90.139	190.373
114	90.284	188.551
115	90.431	189.818
116	90.576	188.502
117	90.721	188.759
118	90.868	189.521
119	91.009	183.761
120	91.140	170.121
121	91.269	167.221
122	91.399	168.240
123	91.528	168.181
124	91.658	168.181
125	91.787	167.211
126	91.917	168.181
127	92.047	169.171
128	92.176	167.211
129	92.305	167.270
130	92.435	169.151
131	92.565	168.181
132	92.694	167.211
133	92.822	166.221
134	92.934	145.821
135	93.043	140.941
136	93.150	138.714
137	93.255	136.823
138	93.360	135.942
139	93.465	136.665
140	93.570	135.853
141	93.676	136.843
142	93.780	135.863
143	93.885	135.853
144	93.991	137.714
145	94.095	134.893
146	94.201	137.724
147	94.305	134.883
148	94.411	137.803
149	94.515	134.883
150	94.620	135.774

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1519.3187

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 684.5955

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                    2 4 - H O U R    S T O R M
                  R U N O F F    H Y D R O G R A P H

================================================================================
             HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
       (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      250.0     500.0     750.0    1000.0
--------------------------------------------------------------------------------
  14.000    195.2344    398.31  .         .V   Q    .         .         .
  14.083    198.0281    405.64  .         .V    Q   .         .         .
  14.167    200.8780    413.81  .         .V    Q   .         .         .
  14.250    203.7871    422.40  .         .V    Q   .         .         .
  14.333    206.7543    430.83  .         . V    Q  .         .         .
  14.417    209.7858    440.18  .         . V    Q  .         .         .
  14.500    212.8825    449.64  .         . V    Q  .         .         .
  14.583    216.0465    459.42  .         . V     Q .         .         .
  14.667    219.2846    470.17  .         . V     Q .         .         .
  14.750    222.6026    481.77  .         .  V     Q.         .         .
  14.833    226.0049    494.01  .         .  V     Q.         .         .
  14.917    229.4982    507.23  .         .  V      Q         .         .
  15.000    233.0883    521.29  .         .  V      Q         .         .
  15.083    236.7766    535.54  .         .  V       .Q       .         .
  15.167    240.5735    551.31  .         .   V      . Q      .         .
  15.250    244.4630    564.75  .         .   V      . Q      .         .
  15.333    248.4379    577.16  .         .   V       . Q     .         .
  15.417    252.4830    587.36  .         .   V       . Q     .         .
  15.500    256.5732    593.88  .         .   V       . Q     .         .
  15.583    260.7135    601.18  .         .    V       .  Q    .         .
  15.667    264.8993    607.78  .         .    V       .  Q    .         .
  15.750    269.1147    612.07  .         .    V       .  Q    .         .
  15.833    273.3568    615.95  .         .    V       .  Q    .         .
  15.917    277.6314    620.68  .         .     V      .  Q    .         .
  16.000    281.9427    626.00  .         .     V      .   Q   .         .
  16.083    286.5430    667.96  .         .     V      .    Q  .         .
  16.167    291.4058    706.08  .         .      V     .      Q .         .
  16.250    296.2536    703.90  .         .      V     .      Q .         .
  16.333    301.1473    710.57  .         .      V     .      Q .         .
  16.417    306.2108    735.22  .         .      V     .       Q.         .
  16.500    311.2667    734.11  .         .       V    .       Q.         .
  16.583    316.3941    744.50  .         .       V    .       Q.         .
  16.667    321.7487    777.50  .         .       V    .        .Q        .
  16.750    327.3107    807.59  .         .        V.          . Q       .
  16.833    333.0576    834.46  .         .        V.          .  Q      .
  16.917    339.1011    877.51  .         .        V.          .    Q    .
  17.000    345.3782    911.44  .         .         V          .     Q   .
  17.083    351.7572    926.23  .         .         V          .      Q  .
  17.167    358.4803    976.19  .         .         V          .       Q.
  17.250    364.7379    908.60  .         .         .V         .     Q   .
  17.333    370.8251    883.87  .         .         .V         .    Q    .
  17.417    376.9203    885.02  .         .         . V        .    Q    .
  17.500    382.7347    844.25  .         .         . V        .  Q      .
  17.583    388.6519    859.19  .         .         . V        .   Q     .
  17.667    394.4718    845.04  .         .         .  V       .  Q      .
  17.750    400.2411    837.72  .         .         .  V       .  Q      .
  17.833    405.9841    833.87  .         .         .  V       .  Q      .
  17.917    411.5662    810.52  .         .         .   V      . Q       .
  18.000    416.9300    778.82  .         .         .   V      .Q        .
  18.083    422.1450    757.21  .         .         .   V     Q          .
  18.167    427.1219    722.65  .         .         .   V   Q .          .
  18.250    432.1563    731.00  .         .         .    V   Q.          .
  18.333    436.9444    695.22  .         .         .    V Q  .          .
  18.417    441.6400    681.81  .         .         .    V Q  .          .
  18.500    446.2609    670.94  .         .         .     Q   .          .
  18.583    450.8084    660.31  .         .         .     Q   .          .
  18.667    455.2617    646.62  .         .         .    QV   .          .
  18.750    459.6295    634.19  .         .         .    QV   .          .
  18.833    463.8985    619.87  .         .         .   Q  V  .          .
  18.917    468.0089    596.83  .         .         .  Q   V  .          .
  19.000    472.0413    585.51  .         .         .  Q   V  .          .
  19.083    475.9796    571.85  .         .         . Q    V  .          .
  19.167    479.8049    555.42  .         .         . Q     V .          .
  19.250    483.5521    544.09  .         .         .Q      V .          .
  19.333    487.2256    533.40  .         .         .Q      V .          .
  19.417    490.8072    520.04  .         .         Q       V .          .
  19.500    494.3263    510.97  .         .         Q       V .          .
  19.583    497.7619    498.85  .         .        Q.        V.          .
  19.667    501.1225    487.96  .         .        Q.        V.          .
  19.750    504.4294    480.16  .         .        Q.        V.          .
  19.833    507.6719    470.81  .         .       Q .        V.          .
  19.917    510.8651    463.66  .         .       Q .        V.          .
  20.000    514.0106    456.72  .         .       Q .         V          .
================================================================================

  END OF FLOODSCx ROUTING ANALYSIS
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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU53002E.FLD
  TIME/DATE OF STUDY: 13:20 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1053.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   12821.300 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.890 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.060
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.860
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.070
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.680
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.18
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.32
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.45
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.91
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.40
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.55

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.624
          30-MINUTE FACTOR = 0.638
           1-HOUR FACTOR = 0.644
           3-HOUR FACTOR = 0.927
           6-HOUR FACTOR = 0.964
          24-HOUR FACTOR = 0.978

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   4.409


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.467	723.741
2	1.400	1447.482
3	2.324	1433.086
4	3.339	1572.683
5	4.711	2127.037
6	6.123	2189.609
7	7.595	2283.003
8	9.461	2892.695
9	11.586	3295.352
10	13.924	3626.245
11	16.706	4313.314
12	19.934	5004.308
13	23.040	4817.211
14	27.003	6144.562
15	30.424	5303.875
16	33.241	4369.125
17	36.128	4475.598
18	38.562	3773.821
19	40.862	3566.661
20	43.193	3614.288
21	45.334	3320.266
22	47.507	3369.485
23	49.608	3256.970
24	51.366	2725.746
25	52.914	2400.582
26	54.286	2127.523
27	55.437	1784.496
28	56.796	2108.299
29	57.779	1523.988
30	58.794	1573.153
31	59.779	1528.253
32	60.762	1523.485
33	61.692	1442.154
34	62.636	1463.028
35	63.523	1375.741
36	64.296	1199.516
37	65.077	1209.708
38	65.833	1173.177
39	66.533	1084.547
40	67.230	1081.577
41	67.923	1074.326
42	68.569	1002.423
43	69.214	999.750
44	69.829	953.057
45	70.402	888.548
46	70.980	897.066
47	71.541	868.851
48	72.096	861.635
49	72.652	861.256
50	73.202	853.685
51	73.730	817.533
52	74.189	712.755
53	74.643	702.818
54	75.088	690.361
55	75.527	681.062
56	75.942	643.514
57	76.342	619.890
58	76.749	630.466
59	77.148	619.854
60	77.545	614.744
61	77.922	584.435
62	78.288	567.306

63	78.653	566.738
64	79.017	564.230
65	79.379	561.887
66	79.727	539.588
67	80.043	489.642
68	80.356	485.821
69	80.667	482.390
70	80.976	477.930
71	81.284	478.285
72	81.588	471.578
73	81.878	449.160
74	82.165	444.392
75	82.450	442.618
76	82.737	444.487
77	83.022	442.570
78	83.308	443.753
79	83.585	428.469
80	83.820	364.753
81	84.048	353.929
82	84.276	353.278
83	84.504	353.290
84	84.732	353.278
85	84.959	353.242
86	85.187	353.384
87	85.415	352.627
88	85.619	317.374
89	85.809	293.312
90	85.997	292.022
91	86.185	292.046
92	86.374	292.661
93	86.562	292.058
94	86.747	286.947
95	86.929	280.938
96	87.110	280.938
97	87.291	281.553
98	87.464	267.298
99	87.626	250.854
100	87.787	250.653
101	87.947	247.163
102	88.106	247.163
103	88.265	247.187
104	88.424	246.560
105	88.583	246.548
106	88.742	246.524
107	88.902	247.116
108	89.061	246.749
109	89.219	245.211
110	89.366	227.159
111	89.509	223.018
112	89.652	221.753
113	89.796	223.338
114	89.940	221.930
115	90.083	222.936
116	90.225	220.203
117	90.366	218.416
118	90.507	217.943
119	90.647	217.115
120	90.787	218.121
121	90.928	218.215
122	91.067	214.584
123	91.194	198.045
124	91.319	193.408
125	91.444	194.484
126	91.569	193.325
127	91.695	194.591
128	91.819	192.118
129	91.944	194.591
130	92.069	193.325
131	92.193	193.384
132	92.319	194.425
133	92.444	193.384
134	92.568	193.420
135	92.694	194.496
136	92.818	193.408
137	92.937	183.767
138	93.043	163.774
139	93.147	162.130
140	93.250	158.888
141	93.351	156.842
142	93.452	156.534
143	93.554	159.113
144	93.655	156.640
145	93.756	156.735
146	93.858	156.747
147	93.959	157.918
148	94.060	156.652
149	94.162	157.918
150	94.263	156.735

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1783.2523

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 829.6405

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 300.0 600.0 900.0 1200.0
14.000	237.0845	488.41	.V Q . . .
14.083	240.5117	497.62	.V Q . . .
14.167	244.0114	508.16	.V Q . . .
14.250	247.5803	518.20	.V Q . . .
14.333	251.2243	529.11	. V Q . . .
14.417	254.9462	540.42	. V Q . . .
14.500	258.7480	552.02	. V Q . . .
14.583	262.6305	563.75	. V Q . . .
14.667	266.6035	576.88	. V Q. . . .
14.750	270.6719	590.73	. V Q. . . .
14.833	274.8411	605.36	. V Q . . .
14.917	279.1199	621.29	. V Q . . .
15.000	283.5168	638.43	. V .Q . . .
15.083	288.0280	655.03	. V .Q . . .
15.167	292.6725	674.38	. V . Q . . .
15.250	297.4354	691.57	. V . Q . . .
15.333	302.3015	706.57	. V . Q . . .
15.417	307.2542	719.12	. V . Q . . .
15.500	312.2646	727.52	. V . Q . . .
15.583	317.3324	735.84	. V . Q . . .
15.667	322.4577	744.19	. V . Q . . .
15.750	327.6174	749.19	. V . Q . . .
15.833	332.8089	753.80	. V . Q . . .
15.917	338.0426	759.94	. V . Q . . .
16.000	343.3203	766.32	. V . Q . . .
16.083	348.9016	810.40	. V . Q . . .
16.167	354.7593	850.54	. V . Q . . .
16.250	360.5946	847.28	. V . Q . . .
16.333	366.4567	851.17	. V . Q . . .
16.417	372.5042	878.10	. V . Q. . . .
16.500	378.5387	876.21	. V . Q. . . .
16.583	384.6035	880.61	. V . Q. . . .
16.667	390.9177	916.83	. V . Q . . .
16.750	397.4146	943.35	. V. .Q . . .
16.833	404.0823	968.15	. V. . Q . . .
16.917	411.0614	1013.37	. V. . Q . . .
17.000	418.3572	1059.35	. V . Q . . .
17.083	425.6385	1057.25	. V . Q . . .
17.167	433.4260	1130.75	. V . Q . . .
17.250	440.8831	1082.77	. .V . Q . . .
17.333	448.0146	1035.49	. .V . Q . . .
17.417	455.1958	1042.70	. .V . Q . . .
17.500	462.1572	1010.80	. . V . Q . . .
17.583	469.0859	1006.04	. . V . Q . . .
17.667	476.0361	1009.17	. . V . Q . . .
17.750	482.8917	995.44	. . V . Q . . .
17.833	489.7543	996.45	. . V . Q . . .
17.917	496.5320	984.12	. . V . Q . . .
18.000	503.0499	946.40	. . V .Q . . .
18.083	509.3814	919.33	. . V Q . . .
18.167	515.5210	891.48	. . V Q. . . .
18.250	521.4608	862.46	. . V Q . . .
18.333	527.4462	869.08	. . V Q . . .
18.417	533.1230	824.28	. . V Q . . .
18.500	538.7425	815.94	. . V Q . . .
18.583	544.2616	801.37	. . Q . . .
18.667	549.6980	789.36	. . Q . . .
18.750	555.0085	771.09	. . QV . . .
18.833	560.2275	757.79	. . Q V . . .
18.917	565.3054	737.31	. . Q V . . .
19.000	570.2137	712.70	. . Q V . . .
19.083	575.0293	699.22	. . Q V . . .
19.167	579.7250	681.81	. . Q V . . .
19.250	584.2957	663.67	. . Q V . . .
19.333	588.7748	650.37	. .Q V . . .
19.417	593.1680	637.88	. .Q V . . .
19.500	597.4569	622.75	. . Q V . . .
19.583	601.6688	611.56	. . Q V. . . .
19.667	605.7889	598.25	. . Q. V. . . .
19.750	609.8168	584.84	. . Q. V. . . .
19.833	613.7781	575.18	. . Q. V. . . .
19.917	617.6622	563.98	. Q . V. . . .
20.000	621.4867	555.31	. Q . V. . . .

END OF FLOODSCx ROUTING ANALYSIS

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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU54002E.FLD
  TIME/DATE OF STUDY: 13:21 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1054.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   13627.500 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.970 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.060
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.860
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.070
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.680
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.17
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.32
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.45
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.90
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.39
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.53

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.610
          30-MINUTE FACTOR = 0.627
           1-HOUR FACTOR = 0.634
           3-HOUR FACTOR = 0.922
           6-HOUR FACTOR = 0.963
          24-HOUR FACTOR = 0.977

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   4.230


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.448	738.011
2	1.343	1476.022
3	2.231	1463.564
4	3.166	1539.987
5	4.456	2126.099
6	5.804	2221.627
7	7.172	2254.506
8	8.910	2864.150
9	10.785	3090.560
10	12.960	3584.062
11	15.490	4170.260
12	18.396	4789.709
13	21.421	4984.967
14	24.756	5495.854
15	28.520	6204.373
16	31.515	4935.608
17	34.183	4396.097
18	36.930	4528.311
19	39.090	3559.391
20	41.366	3751.569
21	43.562	3618.632
22	45.603	3363.642
23	47.693	3443.995
24	49.700	3308.348
25	51.374	2759.149
26	52.861	2451.248
27	54.201	2207.202
28	55.277	1773.858
29	56.614	2202.726
30	57.585	1601.641
31	58.552	1593.669
32	59.507	1573.708
33	60.445	1545.360
34	61.369	1523.381
35	62.245	1442.821
36	63.162	1511.354
37	63.919	1248.165
38	64.670	1238.075
39	65.411	1220.591
40	66.117	1163.820
41	66.777	1086.818
42	67.456	1120.478
43	68.100	1060.803
44	68.720	1022.277
45	69.338	1017.788
46	69.917	953.435
47	70.466	905.491
48	71.022	915.739
49	71.558	883.801
50	72.091	878.281
51	72.624	878.948
52	73.152	870.674
53	73.666	845.916
54	74.111	733.997
55	74.546	717.248
56	74.976	708.975
57	75.398	694.892
58	75.808	675.038
59	76.191	632.488
60	76.579	638.587
61	76.967	639.366
62	77.348	628.226

63	77.723	617.412
64	78.076	582.407
65	78.427	578.509
66	78.777	576.749
67	79.126	574.938
68	79.472	571.178
69	79.798	536.839
70	80.099	495.409
71	80.400	495.798
72	80.697	490.656
73	80.993	487.676
74	81.289	487.210
75	81.580	480.421
76	81.860	460.252
77	82.134	451.878
78	82.408	452.431
79	82.683	452.469
80	82.957	451.853
81	83.232	453.072
82	83.503	446.484
83	83.740	391.649
84	83.959	359.863
85	84.178	360.680
86	84.396	360.202
87	84.615	360.806
88	84.834	360.077
89	85.052	360.102
90	85.271	360.190
91	85.486	354.192
92	85.674	309.794
93	85.854	298.075
94	86.035	297.824
95	86.216	298.628
96	86.397	297.886
97	86.578	297.924
98	86.755	291.386
99	86.929	286.595
100	87.103	287.199
101	87.276	285.966
102	87.444	276.825
103	87.600	255.777
104	87.754	255.186
105	87.908	253.287
106	88.061	252.155
107	88.214	251.451
108	88.366	251.514
109	88.519	251.979
110	88.671	250.948
111	88.825	252.759
112	88.977	250.672
113	89.130	252.206
114	89.277	242.888
115	89.416	229.271
116	89.554	226.442
117	89.691	226.731
118	89.829	227.209
119	89.967	226.442
120	90.104	226.731
121	90.241	225.172
122	90.376	222.406
123	90.510	220.884
124	90.645	222.305
125	90.779	221.085
126	90.914	222.393
127	91.048	221.085
128	91.172	204.073
129	91.291	197.334
130	91.411	196.328
131	91.531	198.830
132	91.651	197.434
133	91.771	197.522
134	91.891	197.434
135	92.011	197.535
136	92.130	197.422
137	92.250	197.535
138	92.370	197.510
139	92.490	197.459
140	92.610	197.510
141	92.729	197.434
142	92.849	197.723
143	92.960	181.528
144	93.060	166.113
145	93.160	163.787
146	93.259	163.208
147	93.355	158.556
148	93.452	159.864
149	93.550	161.385
150	93.647	159.750

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1885.0449

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 862.3914

---

2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 300.0 600.0 900.0 1200.0
14.000	246.3480	509.92	.V Q . . .
14.083	249.9279	519.81	.V Q . . .
14.167	253.5840	530.87	.V Q . . .
14.250	257.3141	541.61	.V Q . . .
14.333	261.1153	551.93	. V Q . . .
14.417	265.0008	564.17	. V Q . . .
14.500	268.9662	575.77	. V Q. . . .
14.583	273.0120	587.46	. V Q. . . .
14.667	277.1471	600.42	. V Q . . .
14.750	281.3746	613.83	. V Q . . .
14.833	285.7011	628.22	. V Q . . .
14.917	290.1342	643.68	. V .Q . . .
15.000	294.6829	660.47	. V . Q . . .
15.083	299.3468	677.20	. V . Q . . .
15.167	304.1322	694.84	. V . Q . . .
15.250	309.0482	713.80	. V . Q . . .
15.333	314.0748	729.87	. V . Q . . .
15.417	319.1851	742.01	. V . Q . . .
15.500	324.3639	751.97	. V . Q . . .
15.583	329.5995	760.20	. V . Q . . .
15.667	334.8954	768.97	. V . Q . . .
15.750	340.2332	775.05	. V . Q . . .
15.833	345.6058	780.10	. V . Q . . .
15.917	351.0285	787.38	. V . Q . . .
16.000	356.5104	795.97	. V . Q . . .
16.083	362.2735	836.80	. V . Q . . .
16.167	368.2850	872.87	. V . Q. . . .
16.250	374.2897	871.88	. V . Q. . . .
16.333	380.2994	872.60	. V . Q. . . .
16.417	386.4855	898.22	. V . Q. . . .
16.500	392.6866	900.41	. V . Q . . .
16.583	398.8773	898.89	. V . Q. . . .
16.667	405.2720	928.50	. V . Q . . .
16.750	411.7811	945.12	. V. .Q . . .
16.833	418.4906	974.22	. V. . Q . . .
16.917	425.4405	1009.13	. V. . Q . . .
17.000	432.6486	1046.61	. V . Q . . .
17.083	439.9720	1063.36	. V . Q . . .
17.167	447.4901	1091.63	. V . Q . . .
17.250	455.2249	1123.10	. .V . Q . . .
17.333	462.5520	1063.89	. .V . Q . . .
17.417	469.7180	1040.50	. .V . Q . . .
17.500	476.9394	1048.55	. . V . Q . . .
17.583	483.9023	1011.01	. . V . Q . . .
17.667	490.9533	1023.81	. . V . Q . . .
17.750	497.9590	1017.22	. . V . Q . . .
17.833	504.8954	1007.17	. . V . Q . . .
17.917	511.8279	1006.60	. . V . Q . . .
18.000	518.6685	993.25	. . V . Q . . .
18.083	525.2666	958.05	. . V .Q . . .
18.167	531.6818	931.49	. . V .Q . . .
18.250	537.9305	907.30	. . V Q . . .
18.333	543.9747	877.63	. . V Q. . . .
18.417	550.0734	885.52	. . V Q. . . .
18.500	555.8914	844.77	. . V Q . . . .
18.583	561.6335	833.76	. . VQ . . . .
18.667	567.2758	819.26	. . VQ . . . .
18.750	572.8293	806.37	. . Q . . . .
18.833	578.2794	791.34	. . Q . . . .
18.917	583.5986	772.36	. . Q V . . . .
19.000	588.8254	758.92	. . Q V . . . .
19.083	593.8619	731.30	. . Q V . . . .
19.167	598.7910	715.71	. . Q V . . . .
19.250	603.6048	698.96	. . Q V . . . .
19.333	608.3122	683.51	. Q V . . . .
19.417	612.9030	666.59	. Q V . . . .
19.500	617.4193	655.75	.Q V . . . .
19.583	621.8412	642.07	.Q V . . . .
19.667	626.1735	629.05	Q V. . . .
19.750	630.4263	617.51	Q V. . . .
19.833	634.5873	604.18	Q V. . . .
19.917	638.6630	591.78	Q. V. . . .
20.000	642.6715	582.04	Q. V. . . .

END OF FLOODSCx ROUTING ANALYSIS

```
**************************************************************************

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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU55002E.FLD
  TIME/DATE OF STUDY: 13:21 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1055.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   14658.900 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    2.040 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.060
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.860
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.070
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.680
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.17
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.31
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.45
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.89
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.37
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.49

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.593
          30-MINUTE FACTOR = 0.613
           1-HOUR FACTOR = 0.622
           3-HOUR FACTOR = 0.917
           6-HOUR FACTOR = 0.961
          24-HOUR FACTOR = 0.976

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   4.085


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.432	766.627
2	1.297	1533.254
3	2.156	1522.304
4	3.034	1555.702
5	4.249	2154.668
6	5.546	2298.657
7	6.865	2339.350
8	8.416	2748.854
9	10.178	3124.934
10	12.262	3693.911
11	14.538	4035.702
12	17.171	4666.391
13	20.193	5358.414
14	23.054	5071.616
15	26.744	6541.220
16	29.989	5753.837
17	32.662	4738.507
18	35.292	4662.420
19	37.780	4411.130
20	39.822	3619.180
21	42.045	3941.032
22	44.107	3656.409
23	46.075	3488.571
24	48.089	3570.603
25	49.992	3373.821
26	51.571	2798.339
27	52.989	2513.236
28	54.266	2265.043
29	55.303	1838.531
30	56.601	2301.238
31	57.542	1667.630
32	58.473	1650.121
33	59.400	1642.905
34	60.303	1601.247
35	61.208	1604.067
36	62.047	1487.944
37	62.944	1589.615
38	63.707	1353.805
39	64.429	1279.983
40	65.150	1278.563
41	65.850	1239.785
42	66.497	1147.880
43	67.138	1135.977
44	67.795	1163.948
45	68.394	1061.980
46	68.992	1060.559
47	69.580	1042.611
48	70.120	957.604
49	70.652	943.307
50	71.185	944.443
51	71.700	913.281
52	72.215	912.347
53	72.729	912.537
54	73.238	902.325
55	73.727	866.415
56	74.153	754.086
57	74.573	745.145
58	74.987	734.771
59	75.395	722.639
60	75.791	702.608
61	76.162	657.649
62	76.535	661.558

63	76.912	667.103
64	77.279	651.779
65	77.644	647.153
66	77.989	610.405
67	78.328	600.937
68	78.666	600.247
69	79.003	597.623
70	79.339	594.972
71	79.667	580.987
72	79.962	523.936
73	80.252	514.347
74	80.542	513.576
75	80.828	507.083
76	81.114	506.827
77	81.399	504.433
78	81.677	493.572
79	81.943	471.539
80	82.208	470.254
81	82.473	469.402
82	82.738	470.145
83	83.003	469.415
84	83.268	470.132
85	83.529	462.260
86	83.754	399.664
87	83.966	374.534
88	84.177	374.358
89	84.388	373.614
90	84.599	374.372
91	84.810	375.156
92	85.021	372.857
93	85.232	375.102
94	85.443	372.978
95	85.629	329.927
96	85.804	310.491
97	85.979	310.423
98	86.153	309.165
99	86.328	309.747
100	86.502	309.111
101	86.676	307.461
102	86.844	298.020
103	87.013	298.764
104	87.180	297.330
105	87.347	296.532
106	87.503	275.460
107	87.652	265.180
108	87.802	265.735
109	87.950	261.718
110	88.097	261.339
111	88.245	261.326
112	88.393	262.124
113	88.540	260.555
114	88.688	262.164
115	88.835	260.649
116	88.982	262.056
117	89.129	260.676
118	89.273	255.442
119	89.407	235.871
120	89.540	235.763
121	89.672	235.262
122	89.806	236.588
123	89.938	234.194
124	90.072	237.440
125	90.203	233.341
126	90.334	231.137
127	90.464	230.677
128	90.594	230.975
129	90.724	230.461
130	90.854	231.096
131	90.985	230.542
132	91.110	222.156
133	91.226	205.979
134	91.341	204.519
135	91.458	206.006
136	91.573	204.519
137	91.689	205.993
138	91.804	204.438
139	91.921	206.088
140	92.036	204.627
141	92.152	205.993
142	92.268	204.424
143	92.384	205.871
144	92.499	204.762
145	92.615	204.424
146	92.731	206.088
147	92.847	205.885
148	92.953	188.613
149	93.051	172.328
150	93.148	171.868

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1995.2257

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 905.1052

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 300.0 600.0 900.0 1200.0
14.000	256.9830	531.03	. .V Q . . .
14.083	260.7155	541.97	. .V Q . . .
14.167	264.5291	553.74	. .V Q . . .
14.250	268.4214	565.15	. .V Q . . .
14.333	272.3904	576.31	. . V Q. . .
14.417	276.4413	588.19	. . V Q. . .
14.500	280.5807	601.04	. . V Q . .
14.583	284.8034	613.13	. . V Q . .
14.667	289.1150	626.04	. . V Q . .
14.750	293.5211	639.77	. . V .Q . .
14.833	298.0292	654.58	. . V .Q . .
14.917	302.6442	670.10	. . V . Q . .
15.000	307.3734	686.67	. . V . Q . .
15.083	312.2271	704.77	. . V . Q . .
15.167	317.1981	721.78	. . V . Q . .
15.250	322.3056	741.62	. . V . Q . .
15.333	327.5373	759.63	. . V . Q . .
15.417	332.8610	773.01	. . V . Q . .
15.500	338.2589	783.78	. . V . Q . .
15.583	343.7299	794.38	. . V . Q . .
15.667	349.2651	803.70	. . V . Q . .
15.750	354.8494	810.84	. . V . Q . .
15.833	360.4717	816.37	. . V . Q . .
15.917	366.1436	823.55	. . V . Q . .
16.000	371.8817	833.18	. . V . Q . .
16.083	377.9044	874.50	. . V . Q. .
16.167	384.1734	910.25	. . V . Q .
16.250	390.4456	910.73	. . V . Q .
16.333	396.7263	911.96	. . V . Q .
16.417	403.1697	935.59	. . V . .Q .
16.500	409.6609	942.51	. . V . .Q .
16.583	416.1404	940.83	. . V . .Q .
16.667	422.7375	957.89	. . V . .Q .
16.750	429.4756	978.38	. . V . . Q .
16.833	436.4229	1008.74	. . V. . Q .
16.917	443.5043	1028.22	. . V. . Q .
17.000	450.8326	1064.08	. . V. . Q .
17.083	458.4153	1101.00	. . V . Q .
17.167	465.9621	1095.80	. . V . Q .
17.250	473.9635	1161.81	. . V . Q .
17.333	481.7199	1126.22	. . .V . Q .
17.417	489.1857	1084.03	. . .V . Q .
17.500	496.6361	1081.80	. . .V . Q .
17.583	504.0443	1075.66	. . . V . Q .
17.667	511.2479	1045.97	. . . V . Q .
17.750	518.5619	1062.00	. . . V . Q .
17.833	525.7822	1048.38	. . . V . Q .
17.917	532.9542	1041.38	. . . V . Q .
18.000	540.1137	1039.57	. . . V . Q .
18.083	547.1530	1022.10	. . . V . Q .
18.167	553.9428	985.89	. . . V . Q .
18.250	560.5510	959.50	. . . V .Q .
18.333	567.0033	936.88	. . . V .Q .
18.417	573.2574	908.09	. . . V Q .
18.500	579.5620	915.43	. . . V Q .
18.583	585.5864	874.74	. . . V Q. .
18.667	591.5281	862.73	. . . V Q . .
18.750	597.3676	847.89	. . . V Q . .
18.833	603.1075	833.43	. . . VQ . .
18.917	608.7475	818.93	. . . VQ . .
19.000	614.2422	797.83	. . . QV . .
19.083	619.6492	785.10	. . . QV . .
19.167	624.8771	759.09	. . . Q V . .
19.250	629.9683	739.25	. . . Q V . .
19.333	634.9530	723.78	. . . Q V . .
19.417	639.8394	709.50	. . . Q V . .
19.500	644.6028	691.65	. . . Q V . .
19.583	649.2787	678.95	. . Q V . .
19.667	653.8866	669.06	. . Q V . .
19.750	658.3849	653.15	. . .Q V. .
19.833	662.8062	641.97	. . .Q V. .
19.917	667.1460	630.14	. . .Q V. .
20.000	671.3888	616.05	. . Q V. .

END OF FLOODSCx ROUTING ANALYSIS

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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU56002E.FLD
  TIME/DATE OF STUDY: 13:22 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1056.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   16893.699 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    2.120 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.060
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.860
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.070
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.680
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.17
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.31
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.44
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.88
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.35
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.45

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.561
          30-MINUTE FACTOR = 0.586
           1-HOUR FACTOR = 0.597
           3-HOUR FACTOR = 0.905
           6-HOUR FACTOR = 0.956
          24-HOUR FACTOR = 0.973

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   3.931


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.416	850.162
2	1.248	1700.324
3	2.076	1690.643
4	2.902	1688.324
5	4.028	2299.623
6	5.274	2545.385
7	6.544	2595.238
8	7.912	2795.146
9	9.603	3455.381
10	11.525	3927.237
11	13.558	4151.650
12	15.984	4957.579
13	18.769	5689.179
14	21.547	5676.795
15	24.653	6345.525
16	28.208	7263.519
17	31.057	5820.636
18	33.522	5036.637
19	36.106	5279.182
20	38.317	4515.747
21	40.319	4090.341
22	42.446	4347.152
23	44.408	4007.673
24	46.307	3879.614
25	48.238	3944.863
26	50.058	3719.943
27	51.571	3090.654
28	52.937	2791.257
29	54.186	2551.405
30	55.165	1999.967
31	56.425	2573.734
32	57.376	1943.080
33	58.258	1803.073
34	59.159	1840.717
35	60.030	1778.438
36	60.908	1794.344
37	61.728	1674.789
38	62.568	1715.986
39	63.385	1670.354
40	64.072	1403.933
41	64.771	1427.454
42	65.458	1402.920
43	66.113	1337.748
44	66.725	1252.033
45	67.354	1285.219
46	67.964	1245.470
47	68.541	1177.821
48	69.116	1175.296
49	69.675	1142.827
50	70.190	1052.560
51	70.703	1047.962
52	71.214	1043.847
53	71.710	1012.859
54	72.205	1011.861
55	72.701	1012.297
56	73.191	1001.402
57	73.667	973.750
58	74.081	845.605
59	74.486	826.027
60	74.887	820.400
61	75.280	802.350
62	75.668	793.028

63	76.030	739.096
64	76.386	728.714
65	76.750	742.525
66	77.106	728.153
67	77.460	722.589
68	77.803	700.626
69	78.130	667.487
70	78.456	666.162
71	78.781	664.354
72	79.105	662.639
73	79.427	658.056
74	79.737	631.994
75	80.017	572.809
76	80.296	570.985
77	80.574	568.117
78	80.850	562.583
79	81.125	561.851
80	81.399	559.357
81	81.667	548.788
82	81.923	523.303
83	82.178	520.684
84	82.433	520.715
85	82.688	521.510
86	82.943	520.684
87	83.198	520.762
88	83.452	518.985
89	83.682	470.337
90	83.886	415.921
91	84.089	415.406
92	84.292	414.393
93	84.496	416.279
94	84.698	413.582
95	84.902	416.170
96	85.105	414.580
97	85.308	414.409
98	85.506	405.804
99	85.678	351.576
100	85.847	344.748
101	86.015	342.706
102	86.183	343.751
103	86.351	342.722
104	86.519	343.719
105	86.686	340.555
106	86.847	330.283
107	87.009	330.642
108	87.171	329.737
109	87.333	330.657
110	87.483	307.899
111	87.627	294.089
112	87.771	294.650
113	87.914	291.626
114	88.056	289.600
115	88.198	289.709
116	88.339	289.631
117	88.482	290.551
118	88.623	289.646
119	88.765	289.756
120	88.907	290.426
121	89.049	288.945
122	89.191	291.190
123	89.324	270.630
124	89.452	261.605
125	89.580	260.888
126	89.708	261.760
127	89.836	261.760
128	89.963	260.888
129	90.091	260.763
130	90.218	260.171
131	90.344	256.227
132	90.470	258.066
133	90.595	254.325
134	90.720	256.087
135	90.845	256.211
136	90.970	254.341
137	91.093	250.834
138	91.205	230.024
139	91.316	226.393
140	91.428	228.138
141	91.539	226.393
142	91.651	230.024
143	91.762	226.377
144	91.873	226.408
145	91.985	230.009
146	92.096	226.268
147	92.207	226.657
148	92.319	227.998
149	92.430	228.138
150	92.542	228.263

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 2260.9500

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1012.4872

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 325.0 650.0 975.0 1300.0
14.000	286.6933	593.02	. .V Q . . .
14.083	290.8638	605.56	. .V Q . . .
14.167	295.1320	619.74	. .V Q. . .
14.250	299.4918	633.04	. .V Q. . .
14.333	303.9404	645.94	. . V Q. . .
14.417	308.4852	659.90	. . V Q . .
14.500	313.1244	673.61	. . V Q . .
14.583	317.8647	688.29	. . V .Q . .
14.667	322.7028	702.49	. . V .Q . .
14.750	327.6473	717.95	. . V . Q . .
14.833	332.7056	734.46	. . V . Q . .
14.917	337.8799	751.31	. . V . Q . .
15.000	343.1820	769.87	. . V . Q . .
15.083	348.6209	789.73	. . V . Q . .
15.167	354.1955	809.42	. . V . Q . .
15.250	359.9138	830.31	. . V . Q . .
15.333	365.7857	852.59	. . V . Q . .
15.417	371.7678	868.61	. . V . Q . .
15.500	377.8280	879.94	. . V . Q . .
15.583	383.9716	892.06	. . V . Q . .
15.667	390.1887	902.72	. . V . Q . .
15.750	396.4540	909.71	. . V . Q . .
15.833	402.7623	915.97	. . V . Q . .
15.917	409.1221	923.44	. . V . Q . .
16.000	415.5535	933.84	. . V . Q . .
16.083	422.2674	974.85	. . V . Q. .
16.167	429.2275	1010.62	. . V . .Q .
16.250	436.1911	1011.11	. . V . .Q .
16.333	443.1474	1010.06	. . V . .Q .
16.417	450.2466	1030.81	. . V . .Q .
16.500	457.3956	1038.02	. . V . .Q .
16.583	464.5480	1038.54	. . V . .Q .
16.667	471.7217	1041.62	. . V . . Q .
16.750	479.0809	1068.55	. . V . . Q .
16.833	486.6023	1092.10	. . V. . Q .
16.917	494.2206	1106.17	. . V. . Q .
17.000	502.0988	1143.92	. . V. . Q .
17.083	510.2225	1179.57	. . V . Q .
17.167	518.3961	1186.81	. . V . Q .
17.250	526.7872	1218.38	. . V . Q .
17.333	535.4213	1253.67	. . .V . Q .
17.417	543.6714	1197.92	. . .V . Q .
17.500	551.7263	1169.57	. . .V . Q .
17.583	559.8682	1182.20	. . . V . Q .
17.667	567.8584	1160.18	. . . V . Q .
17.750	575.7677	1148.43	. . . V . Q .
17.833	583.7563	1159.95	. . . V . Q .
17.917	591.6565	1147.10	. . . V . Q .
18.000	599.5132	1140.79	. . . V . Q .
18.083	607.3364	1135.93	. . . V . Q .
18.167	615.0309	1117.25	. . . V . Q .
18.250	622.4661	1079.58	. . . V . Q .
18.333	629.7145	1052.47	. . . V . Q .
18.417	636.8124	1030.61	. . . V .Q .
18.500	643.6927	999.02	. . . V Q .
18.583	650.6251	1006.59	. . . V Q .
18.667	657.2972	968.79	. . . V Q. .
18.750	663.8453	950.77	. . . V Q. .
18.833	670.2895	935.70	. . . V Q . .
18.917	676.6202	919.23	. . . V Q . .
19.000	682.8419	903.38	. . . VQ . .
19.083	688.9052	880.39	. . . Q . .
19.167	694.8539	863.75	. . . QV . .
19.250	700.6627	843.43	. . . Q V . .
19.333	706.2732	814.65	. . . Q V . .
19.417	711.7794	799.51	. . . Q V . .
19.500	717.1855	784.96	. . . Q V . .
19.583	722.4707	767.42	. . . Q V . .
19.667	727.6428	750.99	. . . Q V . .
19.750	732.7402	740.15	. . . Q V . .
19.833	737.7402	726.00	. . . Q V. .
19.917	742.6400	711.44	. . .Q V. .
20.000	747.4556	699.22	. . .Q V. .

END OF FLOODSCx ROUTING ANALYSIS

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                           Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU57002E.FLD
  TIME/DATE OF STUDY: 13:22 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1057.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   17422.500 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    2.230 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.060
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.860
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.070
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.680
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.17
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.31
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.44
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.87
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.34
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.42

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.555
          30-MINUTE FACTOR = 0.580
           1-HOUR FACTOR = 0.592
           3-HOUR FACTOR = 0.903
           6-HOUR FACTOR = 0.955
          24-HOUR FACTOR = 0.972

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   3.737


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.396	833.525
2	1.187	1667.050
3	1.975	1660.466
4	2.752	1638.284
5	3.747	2096.605
6	4.936	2503.357
7	6.136	2529.020
8	7.350	2558.988
9	8.933	3334.347
10	10.543	3393.248
11	12.467	4052.492
12	14.589	4473.132
13	16.979	5034.053
14	19.756	5852.801
15	22.311	5382.628
16	25.519	6759.879
17	28.782	6875.807
18	31.417	5551.652
19	33.747	4909.244
20	36.205	5179.314
21	38.294	4401.547
22	40.188	3990.877
23	42.225	4291.511
24	44.106	3962.407
25	45.896	3771.472
26	47.749	3904.648
27	49.536	3765.845
28	51.048	3186.440
29	52.402	2853.189
30	53.638	2602.710
31	54.665	2165.452
32	55.720	2222.326
33	56.856	2393.401
34	57.672	1718.218
35	58.530	1809.205
36	59.377	1785.068
37	60.203	1739.221
38	61.038	1760.448
39	61.809	1623.148
40	62.613	1694.812
41	63.388	1632.408
42	64.040	1373.232
43	64.704	1400.713
44	65.358	1377.356
45	65.991	1334.000
46	66.576	1231.922
47	67.163	1236.616
48	67.767	1272.287
49	68.315	1154.679
50	68.862	1153.956
51	69.407	1147.590
52	69.914	1068.869
53	70.399	1022.604
54	70.891	1035.094
55	71.369	1007.606
56	71.840	992.655
57	72.311	991.289
58	72.782	992.479
59	73.247	980.068
60	73.697	948.175
61	74.088	824.217
62	74.472	809.444

63	74.854	805.699
64	75.228	787.132
65	75.600	782.839
66	75.948	733.327
67	76.286	713.088
68	76.630	724.968
69	76.971	719.358
70	77.308	709.407
71	77.642	703.877
72	77.958	664.412
73	78.268	653.063
74	78.577	652.725
75	78.886	651.230
76	79.194	647.661
77	79.500	644.768
78	79.787	604.354
79	80.052	560.276
80	80.318	559.665
81	80.583	557.141
82	80.844	550.904
83	81.106	551.145
84	81.366	549.585
85	81.623	539.796
86	81.867	515.940
87	82.110	510.297
88	82.353	512.065
89	82.595	510.233
90	82.837	510.329
91	83.080	512.130
92	83.322	508.979
93	83.559	499.398
94	83.761	426.978
95	83.954	406.579
96	84.148	407.302
97	84.341	407.447
98	84.534	406.434
99	84.727	407.383
100	84.920	406.498
101	85.113	406.370
102	85.306	407.527
103	85.496	398.718
104	85.661	347.486
105	85.821	337.889
106	85.980	336.008
107	86.140	336.779
108	86.300	336.796
109	86.460	336.876
110	86.619	335.445
111	86.774	327.215
112	86.928	323.967
113	87.082	323.083
114	87.236	324.996
115	87.387	319.322
116	87.526	292.797
117	87.663	288.923
118	87.801	288.923
119	87.936	284.968
120	88.070	283.811
121	88.206	284.759
122	88.340	283.908
123	88.475	283.795
124	88.610	284.631
125	88.745	284.149
126	88.880	283.634
127	89.015	284.759
128	89.150	284.840
129	89.279	272.510
130	89.402	259.264
131	89.523	255.325
132	89.645	255.358
133	89.767	257.383
134	89.888	255.583
135	90.010	257.094
136	90.131	255.486
137	90.252	254.264
138	90.371	249.956
139	90.490	251.821
140	90.610	251.966
141	90.728	249.924
142	90.847	249.924
143	90.967	251.821
144	91.083	246.146
145	91.191	227.177
146	91.297	223.287
147	91.402	221.647
148	91.507	221.519
149	91.614	225.168
150	91.720	223.416

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 2302.2517

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1020.9495

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 325.0 650.0 975.0 1300.0
14.000	285.1167	594.40	. .V Q . . .
14.083	289.2947	606.66	. .V Q . . .
14.167	293.5712	620.95	. .V Q. . .
14.250	297.9449	635.06	. .V Q. . .
14.333	302.4098	648.30	. .V Q. . .
14.417	306.9692	662.03	. . V Q . .
14.500	311.6267	676.27	. . V Q . .
14.583	316.3783	689.92	. . V .Q . .
14.667	321.2249	703.73	. . V .Q . .
14.750	326.1795	719.42	. . V . Q . .
14.833	331.2360	734.19	. . V . Q . .
14.917	336.4042	750.42	. . V . Q . .
15.000	341.6896	767.45	. . V . Q . .
15.083	347.0990	785.44	. . V . Q . .
15.167	352.6436	805.06	. . V . Q . .
15.250	358.3136	823.29	. . V . Q . .
15.333	364.1284	844.31	. . V . Q . .
15.417	370.0689	862.57	. . V . Q . .
15.500	376.0941	874.86	. . V . Q . .
15.583	382.1970	886.14	. . V . Q . .
15.667	388.3844	898.41	. . V . Q . .
15.750	394.6292	906.75	. . V . Q . .
15.833	400.9122	912.29	. . V . Q . .
15.917	407.2520	920.54	. . V . Q . .
16.000	413.6698	931.87	. . V . Q . .
16.083	420.3612	971.59	. . V . Q. .
16.167	427.3042	1008.12	. . V . .Q .
16.250	434.2624	1010.33	. . V . .Q .
16.333	441.2238	1010.79	. . V . .Q .
16.417	448.3055	1028.26	. . V . .Q .
16.500	455.4836	1042.26	. . V . . Q .
16.583	462.6672	1043.07	. . V . . Q .
16.667	469.8401	1041.51	. . V . . Q .
16.750	477.2012	1068.83	. . V . . Q .
16.833	484.5974	1073.93	. . V . . Q .
16.917	492.2130	1105.78	. . V. . Q .
17.000	499.9673	1125.93	. . V. . Q .
17.083	507.9101	1153.30	. . V. . Q .
17.167	516.1028	1189.58	. . V . . Q .
17.250	524.2299	1180.06	. . V . . Q .
17.333	532.7498	1237.09	. . V . . Q .
17.417	541.2930	1240.46	. . .V . . Q .
17.500	549.4977	1191.32	. . .V . . Q .
17.583	557.5400	1167.75	. . .V . . Q .
17.667	565.6824	1182.26	. . . V . . Q .
17.750	573.6590	1158.21	. . . V . . Q .
17.833	581.5560	1146.64	. . . V . . Q .
17.917	589.5339	1158.40	. . . V . . Q .
18.000	597.4299	1146.49	. . . V . . Q .
18.083	605.2473	1135.09	. . . V . . Q .
18.167	613.0427	1131.89	. . . V . . Q .
18.250	620.7421	1117.96	. . . V . . Q .
18.333	628.1996	1082.82	. . . V . . Q .
18.417	635.4641	1054.80	. . . V . . Q .
18.500	642.5768	1032.77	. . . . V . .Q .
18.583	649.5076	1006.36	. . . . V . Q .
18.667	656.3666	995.92	. . . . V . Q .
18.750	663.1674	987.48	. . . . V . Q .
18.833	669.7053	949.30	. . . . V Q. .
18.917	676.1641	937.83	. . . . V Q . .
19.000	682.5103	921.47	. . . . V Q . .
19.083	688.7401	904.56	. . . . VQ . .
19.167	694.8481	886.88	. . . . Q . .
19.250	700.8014	864.42	. . . . QV . .
19.333	706.6426	848.14	. . . . QV . .
19.417	712.3375	826.91	. . . . Q V . .
19.500	717.8578	801.56	. . . . Q . V . .
19.583	723.2892	788.64	. . . . Q . V . .
19.667	728.6163	773.49	. . . . Q . V . .
19.750	733.8408	758.60	. . . . Q . V . .
19.833	738.9572	742.89	. . . . Q . V . .
19.917	743.9903	730.81	. . . . Q . V. .
20.000	748.9500	720.15	. . . . Q . V. .

END OF FLOODSCx ROUTING ANALYSIS

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**************************************************************************

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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU58002E.FLD
  TIME/DATE OF STUDY: 13:23 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1058.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   23888.100 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    2.350 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.070
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.840
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.080
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.680
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.17
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.31
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.44
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.86
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.31
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.36

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.491
          30-MINUTE FACTOR = 0.522
           1-HOUR FACTOR = 0.541
           3-HOUR FACTOR = 0.872
           6-HOUR FACTOR = 0.943
          24-HOUR FACTOR = 0.965

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   3.546


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.373	1076.923
2	1.118	2153.846
3	1.862	2148.744
4	2.595	2118.143
5	3.457	2488.250
6	4.571	3220.655
7	5.692	3236.994
8	6.832	3292.484
9	8.133	3760.250
10	9.648	4376.095
11	11.397	5054.130
12	13.178	5144.248
13	15.319	6185.728
14	17.670	6792.333
15	20.289	7564.821
16	22.708	6988.871
17	25.857	9098.312
18	28.842	8623.701
19	31.316	7145.952
20	33.509	6336.075
21	35.836	6723.210
22	37.878	5899.116
23	39.663	5157.566
24	41.631	5684.051
25	43.467	5303.765
26	45.206	5024.196
27	47.031	5272.312
28	48.794	5094.353
29	50.406	4655.989
30	51.763	3920.104
31	53.004	3586.457
32	54.165	3353.119
33	55.051	2558.946
34	56.178	3256.866
35	57.178	2889.904
36	57.952	2236.045
37	58.780	2389.660
38	59.586	2330.281
39	60.379	2290.365
40	61.185	2329.157
41	61.919	2118.643
42	62.681	2202.752
43	63.447	2212.692
44	64.070	1798.904
45	64.705	1836.286
46	65.335	1820.130
47	65.953	1784.181
48	66.526	1656.475
49	67.082	1604.193
50	67.659	1667.473
51	68.201	1567.781
52	68.723	1507.852
53	69.244	1504.832
54	69.758	1483.717
55	70.231	1368.177
56	70.694	1337.761
57	71.166	1361.190
58	71.618	1307.983
59	72.066	1293.921
60	72.513	1291.320
61	72.961	1294.318
62	73.404	1277.721

63	73.838	1254.732
64	74.218	1097.293
65	74.584	1059.470
66	74.950	1056.803
67	75.308	1033.241
68	75.662	1022.177
69	76.006	994.846
70	76.329	931.720
71	76.651	930.883
72	76.981	953.100
73	77.303	929.869
74	77.622	922.441
75	77.936	908.621
76	78.233	856.516
77	78.527	851.182
78	78.821	849.485
79	79.115	846.840
80	79.407	843.468
81	79.696	837.054
82	79.973	799.959
83	80.226	730.353
84	80.478	728.546
85	80.730	726.628
86	80.978	718.429
87	81.226	713.976
88	81.473	715.784
89	81.718	707.188
90	81.956	687.836
91	82.186	663.524
92	82.415	660.857
93	82.644	662.422
94	82.874	665.023
95	83.103	660.703
96	83.333	663.811
97	83.562	661.673
98	83.784	642.343
99	83.976	554.862
100	84.158	526.605
101	84.340	526.253
102	84.523	526.385
103	84.705	526.583
104	84.887	526.253
105	85.069	526.385
106	85.252	526.473
107	85.434	526.253
108	85.616	526.517
109	85.784	484.815
110	85.936	439.852
111	86.087	435.752
112	86.238	435.862
113	86.389	435.730
114	86.539	435.620
115	86.691	437.295
116	86.841	432.953
117	86.986	421.359
118	87.131	416.400
119	87.275	416.334
120	87.419	416.246
121	87.562	415.033
122	87.695	382.809
123	87.823	369.717
124	87.952	373.442
125	88.080	368.240
126	88.206	364.824
127	88.333	365.750
128	88.459	364.714
129	88.585	365.970
130	88.712	365.948
131	88.838	364.758
132	88.965	365.794
133	89.091	363.457
134	89.218	367.469
135	89.344	363.237
136	89.466	352.503
137	89.579	328.456
138	89.694	330.065
139	89.808	329.580
140	89.922	328.698
141	90.036	331.365
142	90.150	328.478
143	90.264	329.558
144	90.378	328.236
145	90.489	320.984
146	90.599	319.441
147	90.711	324.092
148	90.822	319.243
149	90.933	321.403
150	91.045	322.108

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 3068.6624

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1332.0977

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                    2 4 - H O U R    S T O R M
                  R U N O F F    H Y D R O G R A P H

================================================================================
             HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
       (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      400.0     800.0    1200.0    1600.0
--------------------------------------------------------------------------------
  14.000    372.5967    776.84  .         .V       Q.         .         .
  14.083    378.0607    793.37  .         .V       Q.         .         .
  14.167    383.6521    811.87  .         .V        Q         .         .
  14.250    389.3738    830.79  .         .V        Q         .         .
  14.333    395.2234    849.36  .         .V        .Q        .         .
  14.417    401.2022    868.13  .         . V       .Q        .         .
  14.500    407.3132    887.32  .         . V       . Q       .         .
  14.583    413.5532    906.05  .         . V       . Q       .         .
  14.667    419.9199    924.46  .         . V       .  Q      .         .
  14.750    426.4122    942.67  .         . V       .  Q      .         .
  14.833    433.0456    963.17  .         .  V      .   Q     .         .
  14.917    439.8260    984.52  .         .  V      .   Q     .         .
  15.000    446.7465   1004.85  .         .  V      .    Q    .         .
  15.083    453.8232   1027.54  .         .  V      .    Q    .         .
  15.167    461.0625   1051.15  .         .  V      .     Q   .         .
  15.250    468.4738   1076.11  .         .   V     .     Q   .         .
  15.333    476.0460   1099.48  .         .   V     .      Q  .         .
  15.417    483.7833   1123.46  .         .   V     .       Q .         .
  15.500    491.6552   1142.99  .         .   V     .       Q .         .
  15.583    499.6405   1159.47  .         .    V    .       Q .         .
  15.667    507.7258   1173.99  .         .    V    .       Q.         .
  15.750    515.9019   1187.16  .         .    V    .       Q.         .
  15.833    524.1354   1195.52  .         .    V    .       Q.         .
  15.917    532.4307   1204.48  .         .    V    .        Q         .
  16.000    540.8239   1218.69  .         .     V   .        Q         .
  16.083    549.5025   1260.13  .         .     V   .         .Q       .
  16.167    558.4207   1294.91  .         .     V   .         . Q      .
  16.250    567.3582   1297.73  .         .      V  .         . Q      .
  16.333    576.3172   1300.85  .         .      V  .         . Q      .
  16.417    585.3654   1313.80  .         .      V  .         . Q      .
  16.500    594.5554   1334.38  .         .      V  .         .  Q     .
  16.583    603.7290   1332.01  .         .       V .         .  Q     .
  16.667    612.9203   1334.59  .         .       V .         .  Q     .
  16.750    622.1622   1341.91  .         .       V .         .  Q     .
  16.833    631.5176   1358.41  .         .       V .         .  Q     .
  16.917    641.0251   1380.50  .         .        V.         .   Q    .
  17.000    650.6031   1390.72  .         .        V.         .   Q    .
  17.083    660.4004   1422.56  .         .        V.         .    Q   .
  17.167    670.3354   1442.57  .         .         V         .     Q  .
  17.250    680.4748   1472.23  .         .         V         .     Q  .
  17.333    690.5725   1466.19  .         .         V         .     Q  .
  17.417    701.0995   1528.52  .         .         .V        .      Q .
  17.500    711.5280   1514.20  .         .         .V        .       Q.
  17.583    721.6985   1476.77  .         .         .V        .     Q  .
  17.667    731.7268   1456.11  .         .         .V        .     Q  .
  17.750    741.8683   1472.56  .         .         . V       .     Q  .
  17.833    751.8983   1456.35  .         .         . V       .     Q  .
  17.917    761.8207   1440.73  .         .         . V       .     Q  .
  18.000    771.8480   1455.97  .         .         .  V      .     Q  .
  18.083    781.8036   1445.56  .         .         .  V      .     Q  .
  18.167    791.6684   1432.36  .         .         .  V      .    Q   .
  18.250    801.5058   1428.39  .         .         .   V     .    Q   .
  18.333    811.2482   1414.60  .         .         .   V     .    Q   .
  18.417    820.7944   1386.10  .         .         .   V     .   Q    .
  18.500    830.0729   1347.24  .         .         .   V     .  Q     .
  18.583    839.1842   1322.95  .         .         .    V    .  Q     .
  18.667    848.1586   1303.09  .         .         .    V    . Q      .
  18.750    856.8925   1268.15  .         .         .    V    .Q       .
  18.833    865.6428   1270.55  .         .         .    V    .Q       .
  18.917    874.1920   1241.34  .         .         .     V   .Q       .
  19.000    882.4973   1205.93  .         .         .     V   Q        .
  19.083    890.6895   1189.51  .         .         .     V  Q.        .
  19.167    898.7354   1168.26  .         .         .     V  Q.        .
  19.250    906.6210   1144.99  .         .         .      VQ .        .
  19.333    914.3560   1123.12  .         .         .      VQ .        .
  19.417    921.8813   1092.68  .         .         .      Q  .        .
  19.500    929.2612   1071.57  .         .         .     QV  .        .
  19.583    936.4954   1050.39  .         .         .     Q V .        .
  19.667    943.5245   1020.63  .         .         .    Q  V .        .
  19.750    950.4402   1004.16  .         .         .    Q  V .        .
  19.833    957.2287    985.69  .         .         .   Q   V .        .
  19.917    963.9031    969.13  .         .         .   Q   V .        .
  20.000    970.4456    949.97  .         .         .  Q    V.        .
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  END OF FLOODSCx ROUTING ANALYSIS
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             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
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                           Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU59002E.FLD
  TIME/DATE OF STUDY: 13:23 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1059.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   25469.000 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    2.410 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.070
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.840
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.080
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.690
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.17
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.31
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.43
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.85
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.29
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.32

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.476
          30-MINUTE FACTOR = 0.511
           1-HOUR FACTOR = 0.531
           3-HOUR FACTOR = 0.866
           6-HOUR FACTOR = 0.940
          24-HOUR FACTOR = 0.963

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   3.458


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.363	1119.608
2	1.090	2239.215
3	1.816	2235.295
4	2.531	2202.525
5	3.340	2490.843
6	4.419	3324.390
7	5.508	3352.571
8	6.621	3429.020
9	7.814	3674.625
10	9.325	4655.574
11	10.890	4819.487
12	12.637	5381.712
13	14.637	6159.051
14	16.823	6733.723
15	19.377	7867.094
16	21.723	7225.346
17	24.507	8576.258
18	27.654	9693.394
19	30.211	7874.091
20	32.420	6804.519
21	34.645	6853.557
22	36.886	6903.541
23	38.623	5348.175
24	40.472	5695.255
25	42.359	5814.728
26	44.120	5421.636
27	45.809	5203.675
28	47.595	5501.088
29	49.301	5254.823
30	50.776	4542.452
31	52.075	4000.430
32	53.262	3658.004
33	54.357	3371.589
34	55.211	2630.349
35	56.345	3492.707
36	57.268	2842.798
37	58.027	2338.506
38	58.834	2486.906
39	59.619	2417.171
40	60.392	2381.181
41	61.179	2424.597
42	61.895	2203.323
43	62.634	2278.534
44	63.391	2331.409
45	64.002	1881.095
46	64.621	1905.734
47	65.236	1897.063
48	65.842	1865.456
49	66.411	1751.858
50	66.952	1668.152
51	67.507	1709.465
52	68.054	1684.743
53	68.563	1566.633
54	69.072	1566.375
55	69.578	1559.043
56	70.054	1466.853
57	70.506	1393.088
58	70.962	1402.652
59	71.414	1393.934
60	71.850	1343.809
61	72.287	1344.819
62	72.723	1343.621

63	73.158	1340.307
64	73.588	1322.354
65	73.994	1251.925
66	74.353	1105.780
67	74.710	1100.046
68	75.066	1094.383
69	75.412	1067.170
70	75.757	1062.000
71	76.086	1012.909
72	76.399	964.312
73	76.715	973.336
74	77.036	989.409
75	77.349	962.808
76	77.660	958.836
77	77.965	940.882
78	78.254	887.655
79	78.541	884.883
80	78.827	882.768
81	79.113	881.005
82	79.398	875.976
83	79.681	872.052
84	79.953	836.450
85	80.200	761.885
86	80.446	756.668
87	80.691	757.067
88	80.934	747.903
89	81.175	743.132
90	81.417	743.532
91	81.657	739.184
92	81.891	722.194
93	82.116	693.031
94	82.340	688.801
95	82.563	687.203
96	82.787	689.999
97	83.011	690.164
98	83.234	687.320
99	83.458	688.660
100	83.680	685.511
101	83.883	624.247
102	84.062	552.126
103	84.240	547.403
104	84.417	546.063
105	84.595	548.719
106	84.773	546.063
107	84.950	547.379
108	85.129	548.977
109	85.306	545.781
110	85.484	547.544
111	85.660	544.442
112	85.818	487.056
113	85.966	453.192
114	86.113	454.673
115	86.260	452.957
116	86.407	451.641
117	86.555	454.790
118	86.702	452.981
119	86.848	451.101
120	86.990	436.578
121	87.131	434.205
122	87.271	431.432
123	87.411	432.983
124	87.552	432.865
125	87.682	399.378
126	87.807	387.605
127	87.932	384.761
128	88.058	385.654
129	88.181	379.944
130	88.304	377.970
131	88.427	381.307
132	88.551	379.685
133	88.674	379.709
134	88.797	379.685
135	88.920	379.215
136	89.044	380.085
137	89.167	379.826
138	89.291	381.025
139	89.412	372.377
140	89.525	350.217
141	89.636	341.710
142	89.748	344.365
143	89.859	342.180
144	89.971	342.955
145	90.081	341.428
146	90.193	344.624
147	90.304	341.710
148	90.415	339.618
149	90.523	333.038
150	90.632	336.281

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 3259.8770

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1343.0247

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                    2 4 - H O U R    S T O R M
                  R U N O F F    H Y D R O G R A P H

================================================================================
             HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
       (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      400.0     800.0    1200.0    1600.0
--------------------------------------------------------------------------------
  14.000    373.7051    777.80  .         .V       Q.         .         .
  14.083    379.1789    794.79  .         .V       Q.         .         .
  14.167    384.7831    813.74  .         .V        Q         .         .
  14.250    390.5156    832.36  .         .V        Q         .         .
  14.333    396.3790    851.37  .         .V        .Q        .         .
  14.417    402.3752    870.65  .         .V        .Q        .         .
  14.500    408.5095    890.70  .         . V       . Q       .         .
  14.583    414.7765    909.96  .         . V       . Q       .         .
  14.667    421.1734    928.84  .         . V       .  Q      .         .
  14.750    427.7007    947.77  .         . V       .  Q      .         .
  14.833    434.3650    967.65  .         . V       .   Q     .         .
  14.917    441.1765    989.03  .         .  V      .   Q     .         .
  15.000    448.1358   1010.49  .         .  V      .    Q    .         .
  15.083    455.2480   1032.70  .         .  V      .    Q    .         .
  15.167    462.5213   1056.08  .         .  V      .     Q   .         .
  15.250    469.9696   1081.50  .         .  V      .      Q  .         .
  15.333    477.5802   1105.05  .         .   V     .      Q  .         .
  15.417    485.3466   1127.68  .         .   V     .       Q .         .
  15.500    493.2575   1148.66  .         .   V     .       Q .         .
  15.583    501.2867   1165.84  .         .   V     .        Q.         .
  15.667    509.4210   1181.10  .         .    V    .        Q.         .
  15.750    517.6447   1194.08  .         .    V    .        Q.         .
  15.833    525.9371   1204.06  .         .    V    .         Q         .
  15.917    534.2896   1212.79  .         .    V    .         Q         .
  16.000    542.7353   1226.31  .         .     V   .         Q         .
  16.083    551.4653   1267.60  .         .     V   .         .Q        .
  16.167    560.4229   1300.63  .         .     V   .         . Q       .
  16.250    569.3995   1303.42  .         .     V   .         . Q       .
  16.333    578.3912   1305.59  .         .      V  .         . Q       .
  16.417    587.4583   1316.54  .         .      V  .         . Q       .
  16.500    596.6810   1339.14  .         .      V  .         .  Q      .
  16.583    605.8884   1336.90  .         .       V .         .  Q      .
  16.667    615.1094   1338.90  .         .       V .         .  Q      .
  16.750    624.3561   1342.62  .         .       V .         .  Q      .
  16.833    633.7346   1361.75  .         .       V .         .   Q     .
  16.917    643.1627   1368.96  .         .        V.         .   Q     .
  17.000    652.7420   1390.91  .         .        V.         .    Q    .
  17.083    662.4808   1414.07  .         .        V.         .    Q    .
  17.167    672.3348   1430.81  .         .         V         .    Q    .
  17.250    682.4304   1465.88  .         .         V         .     Q   .
  17.333    692.4850   1459.92  .         .         V         .     Q   .
  17.417    702.8283   1501.85  .         .         V         .      Q  .
  17.500    713.3514   1527.95  .         .         .V        .       Q .
  17.583    723.5759   1484.60  .         .         .V        .      Q  .
  17.667    733.6307   1459.95  .         .         .V        .     Q   .
  17.750    743.7202   1464.98  .         .         . V       .     Q   .
  17.833    753.8600   1472.31  .         .         . V       .     Q   .
  17.917    763.7728   1439.35  .         .         . V       .    Q    .
  18.000    773.7687   1451.40  .         .         .  V      .     Q   .
  18.083    783.7756   1453.00  .         .         .  V      .     Q   .
  18.167    793.7086   1442.27  .         .         .  V      .     Q   .
  18.250    803.5337   1426.60  .         .         .  V      .    Q    .
  18.333    813.3512   1425.50  .         .         .   V     .    Q    .
  18.417    823.0367   1406.34  .         .         .   V     .    Q    .
  18.500    832.4694   1369.62  .         .         .   V     .   Q     .
  18.583    841.6935   1339.33  .         .         .    V    .  Q      .
  18.667    850.7642   1317.06  .         .         .    V    . Q       .
  18.750    859.6890   1295.88  .         .         .    V    . Q       .
  18.833    868.3841   1262.54  .         .         .    V    .Q        .
  18.917    877.1195   1268.38  .         .         .     V   .Q        .
  19.000    885.6064   1232.29  .         .         .     V   Q         .
  19.083    893.8777   1200.99  .         .         .     V   Q         .
  19.167    902.0291   1183.58  .         .         .     V  Q.         .
  19.250    910.0302   1161.77  .         .         .      V Q.         .
  19.333    917.8760   1139.22  .         .         .      VQ .         .
  19.417    925.5591   1115.58  .         .         .      Q  .         .
  19.500    933.0360   1085.65  .         .         .      Q  .         .
  19.583    940.3782   1066.09  .         .         .     Q V .         .
  19.667    947.5891   1047.02  .         .         .     Q V .         .
  19.750    954.5940   1017.12  .         .         .    Q  V .         .
  19.833    961.4852   1000.60  .         .         .    Q  V .         .
  19.917    968.2585    983.49  .         .         .   Q   V .         .
  20.000    974.9186    967.05  .         .         .   Q    V.         .
================================================================================

  END OF FLOODSCx ROUTING ANALYSIS
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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU60002E.FLD
  TIME/DATE OF STUDY: 13:24 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1060.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   26854.801 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    2.600 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.070
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.840
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.080
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.700
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.16
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.31
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.43
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.84
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.27
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.28

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.466
          30-MINUTE FACTOR = 0.502
           1-HOUR FACTOR = 0.523
           3-HOUR FACTOR = 0.860
           6-HOUR FACTOR = 0.938
          24-HOUR FACTOR = 0.962

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   3.205


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.337	1094.258
2	1.011	2188.516
3	1.684	2187.619
4	2.348	2156.704
5	3.033	2223.179
6	3.982	3081.768
7	4.988	3269.334
8	6.011	3320.341
9	7.037	3331.578
10	8.268	3999.594
11	9.634	4437.508
12	11.202	5090.806
13	12.786	5145.498
14	14.665	6102.932
15	16.679	6540.865
16	19.038	7661.619
17	21.264	7227.911
18	23.626	7671.406
19	26.585	9609.354
20	29.153	8340.021
21	31.396	7286.511
22	33.353	6354.968
23	35.452	6818.652
24	37.428	6416.140
25	38.993	5082.604
26	40.738	5667.015
27	42.473	5633.564
28	44.106	5303.627
29	45.661	5050.169
30	47.328	5416.208
31	48.913	5146.941
32	50.367	4722.290
33	51.598	3997.237
34	52.740	3710.959
35	53.810	3474.140
36	54.699	2887.685
37	55.573	2838.017
38	56.629	3430.171
39	57.403	2513.210
40	58.118	2321.933
41	58.867	2431.999
42	59.594	2360.476
43	60.310	2327.694
44	61.042	2375.392
45	61.718	2196.232
46	62.383	2161.109
47	63.107	2351.134
48	63.720	1990.646
49	64.282	1825.225
50	64.858	1869.455
51	65.425	1842.075
52	65.983	1810.606
53	66.500	1679.231
54	67.001	1629.724
55	67.517	1675.192
56	68.026	1652.817
57	68.497	1530.908
58	68.969	1531.800
59	69.439	1525.258
60	69.894	1479.542
61	70.316	1369.997
62	70.734	1358.401

63	71.161	1387.069
64	71.571	1330.054
65	71.976	1314.369
66	72.380	1313.403
67	72.785	1313.700
68	73.187	1308.497
69	73.585	1292.341
70	73.965	1232.749
71	74.299	1084.649
72	74.630	1074.985
73	74.961	1073.747
74	75.284	1051.149
75	75.604	1037.669
76	75.920	1026.345
77	76.214	955.628
78	76.504	943.065
79	76.799	958.205
80	77.097	965.019
81	77.386	938.878
82	77.674	935.880
83	77.957	919.526
84	78.224	868.829
85	78.491	864.493
86	78.757	863.774
87	79.022	861.247
88	79.286	858.373
89	79.549	854.706
90	79.809	844.150
91	80.049	779.578
92	80.277	740.576
93	80.505	738.718
94	80.732	739.437
95	80.957	728.708
96	81.181	727.146
97	81.405	728.039
98	81.627	721.224
99	81.846	711.982
100	82.056	680.489
101	82.263	672.238
102	82.470	673.700
103	82.678	674.022
104	82.885	673.749
105	83.092	672.039
106	83.299	673.898
107	83.506	672.188
108	83.712	667.282
109	83.896	598.745
110	84.062	538.781
111	84.227	534.296
112	84.391	534.197
113	84.556	535.981
114	84.721	534.618
115	84.885	534.346
116	85.050	535.956
117	85.215	534.371
118	85.379	534.470
119	85.544	534.321
120	85.706	526.144
121	85.847	458.103
122	85.984	444.227
123	86.120	443.310
124	86.257	443.434
125	86.393	441.625
126	86.529	443.434
127	86.666	443.285
128	86.802	443.310
129	86.935	430.227
130	87.066	425.470
131	87.196	421.802
132	87.326	422.100
133	87.456	425.148
134	87.585	416.971
135	87.704	385.527
136	87.820	376.954
137	87.936	377.201
138	88.051	375.170
139	88.166	372.890
140	88.280	370.586
141	88.394	370.908
142	88.509	370.734
143	88.623	372.097
144	88.737	370.759
145	88.852	371.131
146	88.966	372.023
147	89.080	369.322
148	89.194	371.824
149	89.309	371.478
150	89.421	365.159

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 3430.3850

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1320.2793

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 375.0 750.0 1125.0 1500.0
14.000	362.2047	749.91	. V Q. . .
14.083	367.4735	765.03	. .V Q . .
14.167	372.8684	783.34	. .V Q . .
14.250	378.3889	801.57	. .V .Q . .
14.333	384.0317	819.34	. .V .Q . .
14.417	389.7953	836.87	. .V . Q . .
14.500	395.6955	856.72	. .V . Q . .
14.583	401.7321	876.52	. . V . Q . .
14.667	407.9016	895.80	. . V . Q . .
14.750	414.1966	914.03	. . V . Q . .
14.833	420.6235	933.19	. . V . Q . .
14.917	427.1856	952.81	. . V . Q . .
15.000	433.8856	972.84	. . V . Q . .
15.083	440.7226	992.73	. . V . Q . .
15.167	447.7145	1015.23	. . V . Q . .
15.250	454.8569	1037.08	. . V . Q . .
15.333	462.1617	1060.65	. . V . Q . .
15.417	469.5992	1079.93	. . V . Q . .
15.500	477.1514	1096.58	. . V . Q. .
15.583	484.8468	1117.37	. . V . Q. .
15.667	492.6693	1135.83	. . V . Q .
15.750	500.5972	1151.12	. . V . Q .
15.833	508.5976	1161.66	. . V . Q .
15.917	516.6891	1174.90	. . V . .Q .
16.000	524.8891	1190.63	. . V . .Q .
16.083	533.3208	1224.29	. . V . . Q .
16.167	541.9538	1253.51	. . V . . Q .
16.250	550.6245	1258.98	. . V . . Q .
16.333	559.3141	1261.74	. . V . . Q .
16.417	568.0593	1269.80	. . V . . Q .
16.500	576.9613	1292.57	. . V . . Q .
16.583	585.9141	1299.95	. . V . . Q .
16.667	594.8755	1301.19	. . V . . Q .
16.750	603.8531	1303.55	. . V . . Q .
16.833	612.9407	1319.53	. . V . . Q .
16.917	622.0715	1325.79	. . V . . Q .
17.000	631.2917	1338.77	. . V. . Q .
17.083	640.5444	1343.48	. . V. . Q .
17.167	649.9705	1368.67	. . V. . Q .
17.250	659.4731	1379.79	. . V. . Q .
17.333	669.1431	1404.08	. . V . Q .
17.417	678.8220	1405.37	. . V . Q .
17.500	688.6201	1422.70	. . V . Q .
17.583	698.6718	1459.50	. . .V . Q .
17.667	708.5616	1436.00	. . .V . Q .
17.750	718.3234	1417.41	. . .V . Q .
17.833	727.9739	1401.25	. . . V . Q .
17.917	737.7231	1415.60	. . . V . Q .
18.000	747.4268	1408.96	. . . V . Q .
18.083	756.9729	1386.10	. . . V . Q .
18.167	766.5709	1393.63	. . . V . Q .
18.250	776.1367	1388.95	. . . V . Q .
18.333	785.6242	1377.59	. . . V . Q .
18.417	795.0236	1364.79	. . . V . Q .
18.500	804.3824	1358.91	. . . V . Q .
18.583	813.5913	1337.13	. . . V . Q .
18.667	822.6357	1313.24	. . . V . Q .
18.750	831.4803	1284.25	. . . V . Q .
18.833	840.1940	1265.22	. . . V . Q .
18.917	848.7706	1245.32	. . . V . Q .
19.000	857.1686	1219.39	. . . V . Q .
19.083	865.4681	1205.08	. . . V . Q .
19.167	873.7113	1196.92	. . . V .Q .
19.250	881.6948	1159.20	. . . V Q .
19.333	889.5101	1134.78	. . . V Q .
19.417	897.2043	1117.21	. . . V Q. .
19.500	904.7563	1096.55	. . . V Q. .
19.583	912.1369	1071.66	. . . VQ . .
19.667	919.3676	1049.90	. . . Q . .
19.750	926.4457	1027.74	. . . QV . .
19.833	933.4011	1009.93	. . . Q V . .
19.917	940.2498	994.43	. . . Q V . .
20.000	946.9349	970.68	. . . Q V . .

END OF FLOODSCx ROUTING ANALYSIS

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**************************************************************************

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              Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                           Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU61002E.FLD
  TIME/DATE OF STUDY: 13:24 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1061.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   32181.301 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    2.820 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.080
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.810
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.100
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.710
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.16
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.30
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.43
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.82
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.23
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.20

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.429
          30-MINUTE FACTOR = 0.467
           1-HOUR FACTOR = 0.491
           3-HOUR FACTOR = 0.839
           6-HOUR FACTOR = 0.929
          24-HOUR FACTOR = 0.957

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   2.955


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.308	1197.306
2	0.923	2394.610
3	1.538	2394.610
4	2.147	2371.040
5	2.754	2359.815
6	3.510	2944.605
7	4.436	3601.076
8	5.354	3575.118
9	6.298	3672.988
10	7.241	3670.593
11	8.458	4737.376
12	9.670	4717.021
13	11.148	5749.750
14	12.576	5557.688
15	14.265	6573.037
16	16.072	7035.848
17	18.147	8073.263
18	20.277	8291.589
19	22.222	7570.107
20	24.762	9886.068
21	27.418	10335.754
22	29.563	8348.748
23	31.545	7712.686
24	33.373	7115.737
25	35.307	7525.538
26	37.134	7109.509
27	38.585	5649.517
28	40.198	6277.970
29	41.864	6482.481
30	43.405	5996.436
31	44.878	5735.167
32	46.456	6141.620
33	48.004	6023.827
34	49.509	5855.779
35	50.774	4925.882
36	51.916	4443.296
37	52.969	4098.545
38	53.977	3922.035
39	54.808	3234.478
40	55.617	3149.511
41	56.619	3899.825
42	57.404	3053.187
43	58.060	2552.636
44	58.757	2712.919
45	59.448	2688.913
46	60.121	2619.668
47	60.794	2622.445
48	61.483	2679.144
49	62.090	2364.145
50	62.717	2437.680
51	63.401	2662.427
52	63.961	2180.880
53	64.480	2019.914
54	65.017	2088.133
55	65.546	2060.549
56	66.071	2044.158
57	66.574	1958.108
58	67.040	1812.998
59	67.506	1811.691
60	67.998	1914.192
61	68.447	1748.564
62	68.884	1699.630

63	69.320	1699.422
64	69.754	1689.979
65	70.177	1643.718
66	70.568	1524.203
67	70.957	1511.168
68	71.353	1542.375
69	71.739	1501.755
70	72.113	1455.404
71	72.487	1455.404
72	72.860	1451.307
73	73.234	1458.492
74	73.603	1435.896
75	73.970	1425.207
76	74.313	1335.326
77	74.620	1197.580
78	74.928	1197.550
79	75.235	1195.234
80	75.535	1168.718
81	75.830	1146.448
82	76.125	1146.448
83	76.403	1084.657
84	76.671	1041.780
85	76.940	1047.006
86	77.217	1076.046
87	77.489	1059.893
88	77.754	1031.655
89	78.020	1033.734
90	78.280	1011.998
91	78.526	959.234
92	78.771	955.077
93	79.017	956.086
94	79.261	951.187
95	79.505	948.604
96	79.748	944.179
97	79.989	937.825
98	80.224	914.249
99	80.437	828.555
100	80.647	818.043
101	80.857	817.449
102	81.066	815.787
103	81.272	801.504
104	81.478	799.752
105	81.684	801.326
106	81.889	796.932
107	82.090	784.460
108	82.285	759.251
109	82.476	742.653
110	82.666	740.515
111	82.857	740.515
112	83.046	737.991
113	83.237	742.860
114	83.427	740.515
115	83.617	740.307
116	83.808	740.247
117	83.996	734.725
118	84.169	671.775
119	84.322	595.197
120	84.472	585.280
121	84.623	587.061
122	84.774	587.863
123	84.925	585.042
124	85.076	587.388
125	85.226	587.507
126	85.377	585.309
127	85.528	587.120
128	85.679	587.596
129	85.829	585.487
130	85.978	580.855
131	86.110	511.849
132	86.235	488.777
133	86.360	484.887
134	86.486	488.985
135	86.610	484.887
136	86.735	486.699
137	86.860	486.996
138	86.985	485.095
139	87.110	485.927
140	87.230	468.586
141	87.349	462.469
142	87.467	459.530
143	87.586	462.261
144	87.704	459.708
145	87.823	464.162
146	87.934	428.738
147	88.039	412.021
148	88.145	412.050
149	88.252	413.683
150	88.356	404.776

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 4008.1753

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1445.7600

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 400.0 800.0 1200.0 1600.0
14.000	390.0815	801.44	. V Q . .
14.083	395.7279	819.86	. V Q . .
14.167	401.5135	840.06	. .V .Q . .
14.250	407.4249	858.34	. .V .Q . .
14.333	413.4677	877.41	. .V .Q . .
14.417	419.6436	896.75	. .V . Q . .
14.500	425.9560	916.55	. .V . Q . .
14.583	432.4109	937.25	. .V . Q . .
14.667	439.0111	958.36	. . V . Q . .
14.750	445.7567	979.46	. . V . Q . .
14.833	452.6453	1000.23	. . V . Q . .
14.917	459.6821	1021.74	. . V . Q . .
15.000	466.8612	1042.42	. . V . Q . .
15.083	474.1921	1064.45	. . V . Q . .
15.167	481.6693	1085.69	. . V . Q . .
15.250	489.2981	1107.69	. . V . Q . .
15.333	497.0819	1130.22	. . V . Q . .
15.417	505.0190	1152.46	. . V . Q . .
15.500	513.0833	1170.94	. . V . Q. .
15.583	521.2617	1187.50	. . V . Q. .
15.667	529.5882	1209.01	. . V . Q .
15.750	538.0603	1230.15	. . V . Q .
15.833	546.6347	1245.00	. . V . .Q .
15.917	555.3041	1258.80	. . V . .Q .
16.000	564.0874	1275.33	. . V . .Q .
16.083	573.1111	1310.24	. . V . . Q .
16.167	582.3446	1340.71	. . V . . Q .
16.250	591.6160	1346.21	. . V . . Q .
16.333	600.9310	1352.53	. . V . . Q .
16.417	610.3013	1360.57	. . V . . Q .
16.500	619.8076	1380.32	. . V . . Q .
16.583	629.4221	1396.02	. . V . . Q .
16.667	639.0726	1401.27	. . V . . Q .
16.750	648.7563	1406.08	. . V . . Q .
16.833	658.4804	1411.93	. . V . . Q .
16.917	668.3613	1434.71	. . V . . Q .
17.000	678.2465	1435.33	. . V . . Q .
17.083	688.2129	1447.12	. . V. . Q .
17.167	698.1606	1444.40	. . V. . Q .
17.250	708.2463	1464.46	. . V. . Q .
17.333	718.4009	1474.44	. . V. . Q .
17.417	728.6847	1493.21	. . V . Q .
17.500	739.0079	1498.93	. . V . Q .
17.583	749.3326	1499.14	. . V . Q .
17.667	759.9376	1539.84	. . .V . Q .
17.750	770.5797	1545.23	. . .V . Q .
17.833	781.0287	1517.20	. . .V . Q .
17.917	791.4230	1509.24	. . .V . Q .
18.000	801.7949	1506.00	. . . V . Q .
18.083	812.2180	1513.43	. . . V . Q .
18.167	822.5672	1502.71	. . . V . Q .
18.250	832.7593	1479.89	. . . V . Q .
18.333	842.9907	1485.61	. . . V . Q .
18.417	853.1938	1481.49	. . . V . Q .
18.500	863.2916	1466.21	. . . V . Q .
18.583	873.3080	1454.38	. . . V . Q .
18.667	883.2809	1448.08	. . . V . Q .
18.750	893.1216	1428.86	. . . V . Q .
18.833	902.8395	1411.04	. . . V . Q .
18.917	912.3593	1382.27	. . . V . Q .
19.000	921.7413	1362.27	. . . V . Q .
19.083	930.9716	1340.25	. . . V . Q .
19.167	940.0760	1321.97	. . . V . Q .
19.250	949.0126	1297.59	. . . V . Q .
19.333	957.8273	1279.90	. . . V .Q .
19.417	966.5709	1269.56	. . . V .Q .
19.500	975.0755	1234.88	. . . V Q .
19.583	983.3845	1206.47	. . . V Q .
19.667	991.5424	1184.52	. . . V Q. .
19.750	999.5418	1161.51	. . . V Q. .
19.833	1007.3841	1138.70	. . . VQ . .
19.917	1015.0818	1117.71	. . . QV . .
20.000	1022.6536	1099.43	. . . QV . .

END OF FLOODSCx ROUTING ANALYSIS

```
**************************************************************************

             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
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                          Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU62002E.FLD
  TIME/DATE OF STUDY: 13:24 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1062.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   46437.301 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    3.060 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.150
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.640
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.200
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.590
         LOW LOSS FRACTION = 0.730
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.16
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.30
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.42
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.78
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.16
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.06

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.357
          30-MINUTE FACTOR = 0.406
           1-HOUR FACTOR = 0.444
           3-HOUR FACTOR = 0.794
           6-HOUR FACTOR = 0.908
          24-HOUR FACTOR = 0.946

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   2.723


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


==========================================================================
```

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.267	1500.343
2	0.801	3000.689
3	1.336	3000.687
4	1.868	2987.546
5	2.396	2966.794
6	2.970	3225.431
7	3.743	4338.359
8	4.532	4433.588
9	5.332	4490.636
10	6.159	4645.647
11	7.020	4835.857
12	8.108	6107.268
13	9.150	5855.932
14	10.438	7230.890
15	11.677	6959.862
16	13.071	7827.868
17	14.586	8509.919
18	16.225	9203.442
19	18.122	10650.174
20	19.815	9511.778
21	21.632	10201.193
22	23.902	12751.637
23	26.101	12346.370
24	27.979	10546.892
25	29.713	9737.484
26	31.390	9419.068
27	33.142	9839.577
28	34.931	10049.023
29	36.390	8191.552
30	37.927	8633.645
31	39.668	9776.711
32	41.239	8820.692
33	42.856	9085.121
34	44.420	8780.502
35	46.351	10846.123
36	48.039	9479.396
37	49.659	9098.746
38	50.963	7321.548
39	52.139	6602.944
40	53.235	6158.815
41	54.304	5999.726
42	55.230	5202.304
43	56.029	4486.528
44	57.024	5590.282
45	57.961	5258.776
46	58.659	3920.265
47	59.348	3870.605
48	60.032	3841.255
49	60.709	3805.393
50	61.390	3819.896
51	62.075	3848.625
52	62.793	4035.351
53	63.364	3205.002
54	63.944	3255.926
55	64.645	3935.625
56	65.243	3357.515
57	65.708	2614.638
58	66.228	2922.106
59	66.752	2938.646
60	67.263	2869.105
61	67.799	3015.255
62	68.289	2747.849

63	68.734	2499.166
64	69.179	2499.166
65	69.651	2653.329
66	70.069	2346.589
67	70.482	2319.724
68	70.895	2320.495
69	71.306	2308.455
70	71.712	2277.948
71	72.096	2158.149
72	72.471	2103.733
73	72.844	2096.321
74	73.238	2212.050
75	73.597	2017.526
76	73.946	1957.026
77	74.294	1955.826
78	74.642	1953.555
79	74.993	1970.865
80	75.336	1926.648
81	75.671	1881.916
82	76.001	1852.780
83	76.299	1673.723
84	76.594	1656.113
85	76.888	1652.000
86	77.180	1639.232
87	77.457	1554.052
88	77.729	1531.858
89	78.001	1526.930
90	78.258	1443.379
91	78.506	1392.863
92	78.754	1392.520
93	79.016	1469.430
94	79.277	1468.744
95	79.522	1374.267
96	79.765	1366.469
97	80.008	1364.841
98	80.241	1305.669
99	80.468	1276.191
100	80.695	1274.734
101	80.922	1273.877
102	81.147	1265.308
103	81.371	1255.282
104	81.593	1246.370
105	81.813	1236.943
106	82.028	1205.365
107	82.227	1122.071
108	82.422	1091.778
109	82.615	1087.751
110	82.810	1092.850
111	83.001	1072.540
112	83.187	1041.733
113	83.372	1041.091
114	83.558	1045.333
115	83.742	1035.478
116	83.922	1006.942
117	84.097	984.233
118	84.268	958.525
119	84.438	959.039
120	84.609	959.253
121	84.781	962.510
122	84.951	954.497
123	85.122	961.867
124	85.293	959.039
125	85.463	959.296
126	85.634	959.082
127	85.801	938.387
128	85.954	857.921
129	86.090	763.015
130	86.223	745.319
131	86.356	746.476
132	86.488	744.720
133	86.621	744.548
134	86.754	747.890
135	86.887	744.720
136	87.019	743.948
137	87.152	745.362
138	87.284	743.906
139	87.417	747.890
140	87.550	744.720
141	87.682	739.364
142	87.801	669.823
143	87.913	629.548
144	88.024	624.149
145	88.134	619.521
146	88.245	622.949
147	88.356	623.506
148	88.467	622.135
149	88.578	620.978
150	88.689	622.906

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 5504.9863

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1804.8489

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================================================================================

                    2 4 - H O U R    S T O R M
                  R U N O F F    H Y D R O G R A P H

================================================================================
             HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
       (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      475.0     950.0    1425.0    1900.0
--------------------------------------------------------------------------------
  14.000    475.8846    967.67  .         V         Q         .         .
  14.083    482.6977    989.26  .         V         Q         .         .
  14.167    489.6727   1012.77  .         V         .Q        .         .
  14.250    496.8133   1036.82  .         .V        .Q        .         .
  14.333    504.1211   1061.09  .         .V        . Q       .         .
  14.417    511.5795   1082.96  .         .V        . Q       .         .
  14.500    519.1950   1105.77  .         .V        .  Q      .         .
  14.583    526.9891   1131.71  .         .V        .  Q      .         .
  14.667    534.9539   1156.49  .         .V        .   Q     .         .
  14.750    543.0917   1181.60  .         . V       .   Q     .         .
  14.833    551.4008   1206.48  .         . V       .    Q    .         .
  14.917    559.9005   1234.15  .         . V       .    Q    .         .
  15.000    568.5911   1261.88  .         . V       .     Q   .         .
  15.083    577.4655   1288.56  .         . V       .      Q  .         .
  15.167    586.5208   1314.83  .         . V       .      Q  .         .
  15.250    595.7463   1339.55  .         .  V      .       Q .         .
  15.333    605.1450   1364.70  .         .  V      .       Q .         .
  15.417    614.7007   1387.49  .         .  V      .        Q.         .
  15.500    624.3920   1407.18  .         .  V      .        Q.         .
  15.583    634.2295   1428.40  .         .   V     .         Q         .
  15.667    644.2123   1449.50  .         .   V     .         Q         .
  15.750    654.3374   1470.17  .         .   V     .         Q         .
  15.833    664.6095   1491.51  .         .   V     .         .Q        .
  15.917    675.0208   1511.71  .         .   V     .         .Q        .
  16.000    685.5744   1532.39  .         .    V    .         . Q       .
  16.083    696.3807   1569.08  .         .    V    .         .  Q      .
  16.167    707.4100   1601.46  .         .    V    .         .  Q      .
  16.250    718.5323   1614.95  .         .    V    .         .  Q      .
  16.333    729.7311   1626.06  .         .     V   .         .   Q     .
  16.417    741.0070   1637.26  .         .     V   .         .   Q     .
  16.500    752.3962   1653.72  .         .     V   .         .   Q     .
  16.583    763.9797   1681.93  .         .     V   .         .    Q    .
  16.667    775.6405   1693.15  .         .      V  .         .    Q    .
  16.750    787.3696   1703.07  .         .      V  .         .    Q    .
  16.833    799.1688   1713.24  .         .      V  .         .     Q   .
  16.917    811.0706   1728.13  .         .      V  .         .     Q   .
  17.000    823.1561   1754.81  .         .       V .         .     Q   .
  17.083    835.2847   1761.08  .         .       V .         .      Q  .
  17.167    847.5076   1774.76  .         .       V .         .      Q  .
  17.250    859.6927   1769.27  .         .        V.         .      Q  .
  17.333    871.9858   1784.95  .         .        V.         .      Q  .
  17.417    884.3778   1799.33  .         .        V.         .      Q  .
  17.500    896.8600   1812.41  .         .        V.         .       Q .
  17.583    909.4434   1827.12  .         .         V         .       Q .
  17.667    921.9758   1819.71  .         .         V         .       Q .
  17.750    934.6518   1840.55  .         .         V         .       Q .
  17.833    947.5555   1873.63  .         .         .V        .        Q.
  17.917    960.4177   1867.59  .         .         .V        .        Q.
  18.000    973.1227   1844.77  .         .         .V        .       Q .
  18.083    985.7620   1835.21  .         .         .V        .       Q .
  18.167    998.3906   1833.67  .         .         . V       .       Q .
  18.250   1011.0218   1834.06  .         .         . V       .       Q .
  18.333   1023.6212   1829.43  .         .         . V       .       Q .
  18.417   1036.0325   1802.12  .         .         . V       .      Q  .
  18.500   1048.4574   1804.10  .         .         .  V      .      Q  .
  18.583   1060.9108   1808.24  .         .         .  V      .       Q .
  18.667   1073.2522   1791.97  .         .         .  V      .       Q .
  18.750   1085.5508   1785.75  .         .         .   V     .       Q .
  18.833   1097.7610   1772.92  .         .         .   V     .       Q .
  18.917   1110.0591   1785.69  .         .         .   V     .       Q .
  19.000   1122.1317   1752.95  .         .         .   V     .      Q  .
  19.083   1134.0637   1732.53  .         .         .    V    .      Q  .
  19.167   1145.7499   1696.84  .         .         .    V    .     Q   .
  19.250   1157.3083   1678.29  .         .         .    V    .     Q   .
  19.333   1168.7245   1657.62  .         .         .    V    .    Q    .
  19.417   1180.0280   1641.26  .         .         .     V   .    Q    .
  19.500   1191.1476   1614.57  .         .         .     V   .   Q     .
  19.583   1202.0703   1585.98  .         .         .     V   .   Q     .
  19.667   1212.9294   1576.75  .         .         .     V   .   Q     .
  19.750   1223.5957   1548.74  .         .         .      V  . Q       .
  19.833   1233.9727   1506.73  .         .         .      V  .Q        .
  19.917   1244.1232   1473.86  .         .         .      V  .Q        .
  20.000   1254.0946   1447.85  .         .         .      V  Q         .
================================================================================

  END OF FLOODSCx ROUTING ANALYSIS
```

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

TECHNICAL APPENDIX I-A
HYDROLOGIC ANALYSIS
UPSTREAM AREAS
10-YEAR EXPECTED VALUE

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
        (c) Copyright 1983-2003 Advanced Engineering Software (aes)
            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                          Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU35010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.030
        MOUNTAIN                           0.920
        VALLEY(UNDEVELOPED)/DESERT         0.050
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1001.00 IS CODE =  21
--------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
==========================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   330.00
  ELEVATION DATA: UPSTREAM(FEET) =   3210.00  DOWNSTREAM(FEET) =   3190.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   12.581
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.392
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        1.30      0.25      1.00    75   12.58
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      2.51
  TOTAL AREA(ACRES) =      1.30   PEAK FLOW RATE(CFS) =      2.51

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

**************************************************************************
  FLOW PROCESS FROM NODE   1001.00 TO NODE   1002.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3190.00  DOWNSTREAM(FEET) =   3175.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   154.00   CHANNEL SLOPE =  0.0974
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      2.51
  FLOW VELOCITY(FEET/SEC.) =   3.98   FLOW DEPTH(FEET) =   0.44
  TRAVEL TIME(MIN.) =   0.64   Tc(MIN.) =  13.23
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1002.00 =   484.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1001.00 TO NODE   1002.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  13.23
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.713
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        1.20      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.20      SUBAREA RUNOFF(CFS) =    2.66
  EFFECTIVE AREA(ACRES) =      2.50   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      2.50       PEAK FLOW RATE(CFS) =       5.54

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

**************************************************************************
  FLOW PROCESS FROM NODE   1002.00 TO NODE   1003.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3175.00  DOWNSTREAM(FEET) =   3160.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   136.00   CHANNEL SLOPE =  0.1103
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
```

```
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      5.54
  FLOW VELOCITY(FEET/SEC.) =   5.15   FLOW DEPTH(FEET) =   0.65
  TRAVEL TIME(MIN.) =   0.44   Tc(MIN.) =  13.67
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1003.00 =   620.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1002.00 TO NODE   1003.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  13.67
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.660
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.30      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        2.10      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    2.40      SUBAREA RUNOFF(CFS) =    5.19
  EFFECTIVE AREA(ACRES) =      4.90   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      4.90       PEAK FLOW RATE(CFS) =      10.62

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1003.00 TO NODE   1004.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3160.00  DOWNSTREAM(FEET) =   3120.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   357.00   CHANNEL SLOPE =  0.1120
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     10.62
  FLOW VELOCITY(FEET/SEC.) =   5.95   FLOW DEPTH(FEET) =   0.67
  TRAVEL TIME(MIN.) =   1.00   Tc(MIN.) =  14.67
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1004.00 =   977.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1003.00 TO NODE   1004.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  14.67
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.540
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.10      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        3.20      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.30      SUBAREA RUNOFF(CFS) =    6.80
  EFFECTIVE AREA(ACRES) =      8.20   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      8.20       PEAK FLOW RATE(CFS) =      16.88

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1004.00 TO NODE   1005.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3120.00  DOWNSTREAM(FEET) =   3100.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   332.00   CHANNEL SLOPE =  0.0602
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     16.88
  FLOW VELOCITY(FEET/SEC.) =   5.39   FLOW DEPTH(FEET) =   1.03
  TRAVEL TIME(MIN.) =   1.03   Tc(MIN.) =  15.69
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1005.00 =  1309.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1004.00 TO NODE   1005.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  15.69
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.403
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        5.50      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    5.50      SUBAREA RUNOFF(CFS) =   10.66
  EFFECTIVE AREA(ACRES) =     13.70   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     13.70       PEAK FLOW RATE(CFS) =      26.53

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1005.00 TO NODE   1006.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3100.00  DOWNSTREAM(FEET) =   3080.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   195.00   CHANNEL SLOPE =  0.1026
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     26.53
  FLOW VELOCITY(FEET/SEC.) =   7.40   FLOW DEPTH(FEET) =   1.14
  TRAVEL TIME(MIN.) =   0.44   Tc(MIN.) =  16.13
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1006.00 =  1504.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1005.00 TO NODE   1006.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.13
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.342
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        7.80      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    7.80      SUBAREA RUNOFF(CFS) =   14.68
```

```
  EFFECTIVE AREA(ACRES) =     21.50   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     21.50       PEAK FLOW RATE(CFS) =      40.46

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1006.00 TO NODE   1007.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3080.00  DOWNSTREAM(FEET) =   3075.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   220.00   CHANNEL SLOPE =  0.0227
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     40.46
  FLOW VELOCITY(FEET/SEC.) =   4.69   FLOW DEPTH(FEET) =   1.80
  TRAVEL TIME(MIN.) =   0.78   Tc(MIN.) =  16.91
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1007.00 =  1724.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1006.00 TO NODE   1007.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.91
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.232
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       10.10      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   10.10      SUBAREA RUNOFF(CFS) =   18.02
  EFFECTIVE AREA(ACRES) =     31.60   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     31.60       PEAK FLOW RATE(CFS) =      56.36

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1007.00 TO NODE   1008.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3075.00  DOWNSTREAM(FEET) =   3060.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   340.00   CHANNEL SLOPE =  0.0441
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     56.36
  FLOW VELOCITY(FEET/SEC.) =   6.53   FLOW DEPTH(FEET) =   1.80
  TRAVEL TIME(MIN.) =   0.87   Tc(MIN.) =  17.78
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1008.00 =  2064.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1007.00 TO NODE   1008.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.78
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.111
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
```

```
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       14.60      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        4.60      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   19.20      SUBAREA RUNOFF(CFS) =   31.50
  EFFECTIVE AREA(ACRES) =     50.80   AREA-AVERAGED Fm(INCH/HR) =  0.26
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     50.80       PEAK FLOW RATE(CFS) =      84.40

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1008.00 TO NODE   1009.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3060.00  DOWNSTREAM(FEET) =   3040.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   409.00   CHANNEL SLOPE =  0.0489
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     84.40
  FLOW VELOCITY(FEET/SEC.) =   7.44   FLOW DEPTH(FEET) =   1.92
  TRAVEL TIME(MIN.) =   0.92   Tc(MIN.) =  18.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1009.00 =  2473.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1008.00 TO NODE   1009.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.70
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.982
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        9.60      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       22.90      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   32.50      SUBAREA RUNOFF(CFS) =   50.24
  EFFECTIVE AREA(ACRES) =     83.30   AREA-AVERAGED Fm(INCH/HR) =  0.26
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     83.30       PEAK FLOW RATE(CFS) =     128.78

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1009.00 TO NODE   1010.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3040.00  DOWNSTREAM(FEET) =   3000.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1354.00   CHANNEL SLOPE =  0.0295
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    128.78
  FLOW VELOCITY(FEET/SEC.) =   6.85   FLOW DEPTH(FEET) =   2.51
  TRAVEL TIME(MIN.) =   3.29   Tc(MIN.) =  21.99
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1010.00 =  3827.00 FEET.
```

```
****************************************************************************
  FLOW PROCESS FROM NODE   1009.00 TO NODE   1010.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  21.99
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.710
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       22.50      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       20.80      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   43.30      SUBAREA RUNOFF(CFS) =   55.90
  EFFECTIVE AREA(ACRES) =    126.60   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    126.60       PEAK FLOW RATE(CFS) =     164.28

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1010.00 TO NODE   1011.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3000.00  DOWNSTREAM(FEET) =   2960.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1293.00   CHANNEL SLOPE =  0.0309
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    164.28
  FLOW VELOCITY(FEET/SEC.) =   7.45   FLOW DEPTH(FEET) =   2.82
  TRAVEL TIME(MIN.) =   2.89   Tc(MIN.) =  24.88
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1011.00 =  5120.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1010.00 TO NODE   1011.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  24.88
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.580
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       24.80      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       52.80      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   77.60      SUBAREA RUNOFF(CFS) =   91.79
  EFFECTIVE AREA(ACRES) =    204.20   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    204.20       PEAK FLOW RATE(CFS) =     241.23

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1011.00 TO NODE   1012.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2960.00  DOWNSTREAM(FEET) =   2940.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   900.00   CHANNEL SLOPE =  0.0222
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    241.23
  FLOW VELOCITY(FEET/SEC.) =   7.24   FLOW DEPTH(FEET) =   3.50
  TRAVEL TIME(MIN.) =   2.07   Tc(MIN.) =  26.96
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1012.00 =  6020.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1011.00 TO NODE   1012.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  26.96
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.487
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       10.90      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       15.10      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   26.00      SUBAREA RUNOFF(CFS) =   28.46
  EFFECTIVE AREA(ACRES) =    230.20   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    230.20       PEAK FLOW RATE(CFS) =     252.55

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1012.00 TO NODE   1013.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2940.00  DOWNSTREAM(FEET) =   2920.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   830.00   CHANNEL SLOPE =  0.0241
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    252.55
  FLOW VELOCITY(FEET/SEC.) =   7.56   FLOW DEPTH(FEET) =   3.51
  TRAVEL TIME(MIN.) =   1.83   Tc(MIN.) =  28.79
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1013.00 =  6850.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1012.00 TO NODE   1013.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  28.79
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.405
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        3.20      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       21.50      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   24.70      SUBAREA RUNOFF(CFS) =   25.52
  EFFECTIVE AREA(ACRES) =    254.90   AREA-AVERAGED Fm(INCH/HR) =  0.27
```

```
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    254.90       PEAK FLOW RATE(CFS) =     261.02

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1013.00 TO NODE   1014.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2920.00  DOWNSTREAM(FEET) =   2905.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   564.00   CHANNEL SLOPE =  0.0266
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    261.02
  FLOW VELOCITY(FEET/SEC.) =   7.91   FLOW DEPTH(FEET) =   3.48
  TRAVEL TIME(MIN.) =   1.19   Tc(MIN.) =  29.97
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1014.00 =  7414.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1013.00 TO NODE   1014.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  29.97
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.351
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       79.00      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        2.90      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   81.90      SUBAREA RUNOFF(CFS) =   77.61
  EFFECTIVE AREA(ACRES) =    336.80   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    336.80       PEAK FLOW RATE(CFS) =     326.35

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1014.00 TO NODE   1015.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2905.00  DOWNSTREAM(FEET) =   2880.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   901.00   CHANNEL SLOPE =  0.0277
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    326.35
  FLOW VELOCITY(FEET/SEC.) =   8.46   FLOW DEPTH(FEET) =   3.63
  TRAVEL TIME(MIN.) =   1.77   Tc(MIN.) =  31.75
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1015.00 =  8315.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1014.00 TO NODE   1015.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  31.75
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.330
  SUBAREA LOSS RATE DATA(AMC  II):
```

```
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        1.80      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       14.10      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   15.90      SUBAREA RUNOFF(CFS) =   15.37
  EFFECTIVE AREA(ACRES) =    352.70   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    352.70       PEAK FLOW RATE(CFS) =     335.19

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1015.00 TO NODE   1035.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2880.00  DOWNSTREAM(FEET) =   2840.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1895.00   CHANNEL SLOPE =  0.0211
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    335.19
  FLOW VELOCITY(FEET/SEC.) =   7.71   FLOW DEPTH(FEET) =   3.96
  TRAVEL TIME(MIN.) =   4.10   Tc(MIN.) =  35.85
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1035.00 = 10210.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1015.00 TO NODE   1035.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  35.85
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.282
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        8.00      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       28.80      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   36.80      SUBAREA RUNOFF(CFS) =   33.81
  EFFECTIVE AREA(ACRES) =    389.50   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    389.50       PEAK FLOW RATE(CFS) =     353.83

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1035.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  35.85
  RAINFALL INTENSITY(INCH/HR) =   1.28
  AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =   389.50
```

```
  TOTAL STREAM AREA(ACRES) =   389.50
  PEAK FLOW RATE(CFS) AT CONFLUENCE =    353.83

****************************************************************************
  FLOW PROCESS FROM NODE   1020.00 TO NODE   1021.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   330.00
  ELEVATION DATA: UPSTREAM(FEET) =   3525.00  DOWNSTREAM(FEET) =   3485.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   10.952
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.986
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.70      0.30      1.00    63   10.95
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.30      0.20      1.00    81   10.95
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      2.44
  TOTAL AREA(ACRES) =      1.00   PEAK FLOW RATE(CFS) =      2.44

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1021.00 TO NODE   1022.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3485.00  DOWNSTREAM(FEET) =   3440.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   191.00   CHANNEL SLOPE =  0.2356
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      2.44
  FLOW VELOCITY(FEET/SEC.) =   5.39   FLOW DEPTH(FEET) =   0.34
  TRAVEL TIME(MIN.) =   0.59   Tc(MIN.) =  11.54
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1022.00 =   521.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1021.00 TO NODE   1022.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.54
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.915
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.10      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.80      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.90      SUBAREA RUNOFF(CFS) =    2.19
  EFFECTIVE AREA(ACRES) =      1.90   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.90       PEAK FLOW RATE(CFS) =       4.57

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1022.00 TO NODE   1023.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3440.00  DOWNSTREAM(FEET) =   3400.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   227.00   CHANNEL SLOPE =  0.1762
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      4.57
  FLOW VELOCITY(FEET/SEC.) =   5.84   FLOW DEPTH(FEET) =   0.52
  TRAVEL TIME(MIN.) =   0.65   Tc(MIN.) =  12.19
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1023.00 =   748.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1022.00 TO NODE   1023.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.19
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.837
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.20      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.20      SUBAREA RUNOFF(CFS) =    2.85
  EFFECTIVE AREA(ACRES) =      3.10   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      3.10       PEAK FLOW RATE(CFS) =       7.29

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1023.00 TO NODE   1024.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3400.00  DOWNSTREAM(FEET) =   3280.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   160.00   CHANNEL SLOPE =  0.7500
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      7.29
  FLOW VELOCITY(FEET/SEC.) =  11.26   FLOW DEPTH(FEET) =   0.45
  TRAVEL TIME(MIN.) =   0.24   Tc(MIN.) =  12.43
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1024.00 =   908.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1023.00 TO NODE   1024.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.43
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.809
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        0.10      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.60      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
```

```
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.70      SUBAREA RUNOFF(CFS) =    1.64
  EFFECTIVE AREA(ACRES) =      3.80   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      3.80       PEAK FLOW RATE(CFS) =       8.85

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1024.00 TO NODE   1025.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3280.00  DOWNSTREAM(FEET) =   3240.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   138.00   CHANNEL SLOPE =  0.2899
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      8.85
  FLOW VELOCITY(FEET/SEC.) =   8.33   FLOW DEPTH(FEET) =   0.65
  TRAVEL TIME(MIN.) =   0.28   Tc(MIN.) =  12.70
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1025.00 =  1046.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1024.00 TO NODE   1025.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.70
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.776
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        2.80      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.30      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.10      SUBAREA RUNOFF(CFS) =    7.06
  EFFECTIVE AREA(ACRES) =      6.90   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      6.90       PEAK FLOW RATE(CFS) =      15.79

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1025.00 TO NODE   1026.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3240.00  DOWNSTREAM(FEET) =   3200.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   200.00   CHANNEL SLOPE =  0.2000
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     15.79
  FLOW VELOCITY(FEET/SEC.) =   8.17   FLOW DEPTH(FEET) =   0.71
  TRAVEL TIME(MIN.) =   0.41   Tc(MIN.) =  13.11
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1026.00 =  1246.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1025.00 TO NODE   1026.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  13.11
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.727
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        1.50      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.80      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.30      SUBAREA RUNOFF(CFS) =    7.44
  EFFECTIVE AREA(ACRES) =     10.20   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     10.20       PEAK FLOW RATE(CFS) =      22.93

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1026.00 TO NODE   1027.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3200.00  DOWNSTREAM(FEET) =   3120.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   477.00   CHANNEL SLOPE =  0.1677
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     22.93
  FLOW VELOCITY(FEET/SEC.) =   8.53   FLOW DEPTH(FEET) =   0.92
  TRAVEL TIME(MIN.) =   0.93   Tc(MIN.) =  14.04
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1027.00 =  1723.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1026.00 TO NODE   1027.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  14.04
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.615
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        3.90      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        3.10      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    7.00      SUBAREA RUNOFF(CFS) =   15.04
  EFFECTIVE AREA(ACRES) =     17.20   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     17.20       PEAK FLOW RATE(CFS) =      36.94

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1027.00 TO NODE   1028.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3120.00  DOWNSTREAM(FEET) =   3100.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   273.00   CHANNEL SLOPE =  0.0733
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   3.00
```

```
  CHANNEL FLOW THRU SUBAREA(CFS) =     36.94
  FLOW VELOCITY(FEET/SEC.) =   6.98   FLOW DEPTH(FEET) =   1.25
  TRAVEL TIME(MIN.) =   0.65   Tc(MIN.) =  14.69
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1028.00 =  1996.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1027.00 TO NODE   1028.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  14.69
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.537
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        2.70      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.50      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.20      SUBAREA RUNOFF(CFS) =    6.61
  EFFECTIVE AREA(ACRES) =     20.40   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     20.40       PEAK FLOW RATE(CFS) =      42.33

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1028.00 TO NODE   1029.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3100.00  DOWNSTREAM(FEET) =   3080.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   212.00   CHANNEL SLOPE =  0.0943
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     42.33
  FLOW VELOCITY(FEET/SEC.) =   7.94   FLOW DEPTH(FEET) =   1.25
  TRAVEL TIME(MIN.) =   0.45   Tc(MIN.) =  15.14
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1029.00 =  2208.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1028.00 TO NODE   1029.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  15.14
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.480
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        4.60      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        4.40      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        8.70      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   17.70      SUBAREA RUNOFF(CFS) =   35.71
  EFFECTIVE AREA(ACRES) =     38.10   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     38.10       PEAK FLOW RATE(CFS) =      77.02

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1029.00 TO NODE   1030.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3080.00  DOWNSTREAM(FEET) =   3000.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   781.00   CHANNEL SLOPE =  0.1024
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     77.02
  FLOW VELOCITY(FEET/SEC.) =   9.65   FLOW DEPTH(FEET) =   1.70
  TRAVEL TIME(MIN.) =   1.35   Tc(MIN.) =  16.49
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1030.00 =  2989.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1029.00 TO NODE   1030.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.49
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.292
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       24.90      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        6.60      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   31.50      SUBAREA RUNOFF(CFS) =   58.17
  EFFECTIVE AREA(ACRES) =     69.60   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     69.60       PEAK FLOW RATE(CFS) =     128.71

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1030.00 TO NODE   1031.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3000.00  DOWNSTREAM(FEET) =   2980.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   392.00   CHANNEL SLOPE =  0.0510
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    128.71
  FLOW VELOCITY(FEET/SEC.) =   8.46   FLOW DEPTH(FEET) =   2.38
  TRAVEL TIME(MIN.) =   0.77   Tc(MIN.) =  17.26
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1031.00 =  3381.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1030.00 TO NODE   1031.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.26
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.183
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       53.50      0.25      1.00    75
```

```
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        2.40      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   55.90      SUBAREA RUNOFF(CFS) =   97.38
  EFFECTIVE AREA(ACRES) =    125.50   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    125.50       PEAK FLOW RATE(CFS) =     219.32

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1031.00 TO NODE   1032.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2980.00  DOWNSTREAM(FEET) =   2920.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1552.00   CHANNEL SLOPE =  0.0387
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    219.32
  FLOW VELOCITY(FEET/SEC.) =   8.73   FLOW DEPTH(FEET) =   3.10
  TRAVEL TIME(MIN.) =   2.96   Tc(MIN.) =  20.23
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1032.00 =  4933.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1031.00 TO NODE   1032.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  20.23
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.790
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       65.60      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       44.00      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  109.60      SUBAREA RUNOFF(CFS) =  153.87
  EFFECTIVE AREA(ACRES) =    235.10   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    235.10       PEAK FLOW RATE(CFS) =     328.74

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1032.00 TO NODE   1033.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2920.00  DOWNSTREAM(FEET) =   2900.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   976.00   CHANNEL SLOPE =  0.0205
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    328.74
  FLOW VELOCITY(FEET/SEC.) =   7.59   FLOW DEPTH(FEET) =   3.95
  TRAVEL TIME(MIN.) =   2.14   Tc(MIN.) =  22.37
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1033.00 =  5909.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1032.00 TO NODE   1033.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  22.37
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.693
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       35.60      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.60      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   36.20      SUBAREA RUNOFF(CFS) =   47.05
  EFFECTIVE AREA(ACRES) =    271.30   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    271.30       PEAK FLOW RATE(CFS) =     355.38

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1033.00 TO NODE   1034.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2900.00  DOWNSTREAM(FEET) =   2880.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   942.00   CHANNEL SLOPE =  0.0212
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    355.38
  FLOW VELOCITY(FEET/SEC.) =   7.85   FLOW DEPTH(FEET) =   4.08
  TRAVEL TIME(MIN.) =   2.00   Tc(MIN.) =  24.37
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1034.00 =  6851.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1033.00 TO NODE   1034.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  24.37
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.603
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       30.50      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.20      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   31.70      SUBAREA RUNOFF(CFS) =   38.67
  EFFECTIVE AREA(ACRES) =    303.00   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    303.00       PEAK FLOW RATE(CFS) =     372.06

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1034.00 TO NODE   1035.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2880.00  DOWNSTREAM(FEET) =   2840.00
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  CHANNEL LENGTH THRU SUBAREA(FEET) =  1097.00   CHANNEL SLOPE =  0.0365
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    372.06
  FLOW VELOCITY(FEET/SEC.) =   9.68   FLOW DEPTH(FEET) =   3.62
  TRAVEL TIME(MIN.) =   1.89   Tc(MIN.) =  26.26
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1035.00 =  7948.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1034.00 TO NODE   1035.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  26.26
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.518
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        1.20      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      113.90      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       18.60      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  133.70      SUBAREA RUNOFF(CFS) =  153.41
  EFFECTIVE AREA(ACRES) =    436.70   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    436.70       PEAK FLOW RATE(CFS) =     502.29

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1035.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  26.26
  RAINFALL INTENSITY(INCH/HR) =   1.52
  AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =   436.70
  TOTAL STREAM AREA(ACRES) =   436.70
  PEAK FLOW RATE(CFS) AT CONFLUENCE =    502.29

  ** CONFLUENCE DATA **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1    353.83  35.85    1.282  0.27( 0.27) 1.00   389.5    1000.00
      2    502.29  26.26    1.518  0.24( 0.24) 1.00   436.7    1020.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1    822.24  26.26    1.518  0.25( 0.25) 1.00   722.0    1020.00
      2    763.15  35.85    1.282  0.26( 0.26) 1.00   826.2    1000.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    822.24    Tc(MIN.) =    26.26
  EFFECTIVE AREA(ACRES) =   722.03   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    826.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1035.00 = 10210.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1035.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>PEAK FLOW RATE ESTIMATOR CHANGED TO UNIT-HYDROGRAPH METHOD<<<<<
  >>>>>USING TIME-OF-CONCENTRATION OF LONGEST FLOWPATH<<<<<
============================================================================
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.40;30M= 0.68;1H= 0.99;3H= 2.01;6H= 3.14;24H= 5.71
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  5.0%
           MOUNTAIN= 92.0%;FOOTHILL=  3.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.60; LAG(HR) = 0.48; Fm(INCH/HR) = 0.26; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.96; 30M = 0.96; 1HR = 0.96;
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =    826.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1035.00 = 10210.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0517; Lca/L=0.4,n=.0464; Lca/L=0.5,n=.0426;Lca/L=0.6,n=.0398
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     214.20
  UNIT-HYDROGRAPH METHOD PEAK FLOW RATE(CFS) =    739.10
  TOTAL PEAK FLOW RATE(CFS) =    739.10 (SOURCE FLOW INCLUDED)
  RATIONAL METHOD PEAK FLOW RATE(CFS) =    822.24
   (UPSTREAM NODE PEAK FLOW RATE(CFS) =    822.24)
  PEAK FLOW RATE(CFS) USED =    822.24
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =    826.20  TC(MIN.) =     35.85
  AREA-AVERAGED Fm(INCH/HR)=  0.26   Ybar =  0.50
  PEAK FLOW RATE(CFS)   =    822.24
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU36010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.170
        FOOTHILL                           0.030
        MOUNTAIN                           0.750
        VALLEY(UNDEVELOPED)/DESERT         0.050
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1035.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU35010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      822.24    Tc(MIN.) =  35.85
  AREA-AVERAGED Fm(INCH/HR) =  0.26    Ybar = 0.50
  TOTAL AREA(ACRES) =     826.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1035.00 = 10210.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1035.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      822.24    Tc(MIN.) =  35.85
  AREA-AVERAGED Fm(INCH/HR) =  0.26    Ybar = 0.50
  TOTAL AREA(ACRES) =     826.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1035.00 = 10210.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1035.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1036.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2840.00  DOWNSTREAM(FEET) =   2800.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1878.00   CHANNEL SLOPE =  0.0213
  CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    822.24
  FLOW VELOCITY(FEET/SEC.) =  11.38   FLOW DEPTH(FEET) =   4.86
  TRAVEL TIME(MIN.) =   2.75   Tc(MIN.) =  38.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1036.00 = 12088.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1036.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  38.60
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.259
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       31.30      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       21.90      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   53.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.40;30M= 0.68;1H= 0.99;3H= 2.01;6H= 3.14;24H= 5.71
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  5.0%
           MOUNTAIN= 91.0%;FOOTHILL=  3.0%;DESERT(UNDEV.)=  1.0%
  Tc(HR) = 0.64; LAG(HR) = 0.51; Fm(INCH/HR) = 0.26; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.96; 30M = 0.96; 1HR = 0.96;
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =    879.40
```

```
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1036.00 = 12088.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0484; Lca/L=0.4,n=.0434; Lca/L=0.5,n=.0398;Lca/L=0.6,n=.0372
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     226.20
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =    727.85
  TOTAL AREA(ACRES) =    879.40       PEAK FLOW RATE(CFS) =     822.24
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =    879.40  TC(MIN.) =     38.60
  AREA-AVERAGED Fm(INCH/HR)=  0.26   Ybar =  0.50
  PEAK FLOW RATE(CFS)   =    822.24
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU37010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.130
        MOUNTAIN                           0.710
        VALLEY(UNDEVELOPED)/DESERT         0.150
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1036.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU36010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      822.24    Tc(MIN.) =  38.60
  AREA-AVERAGED Fm(INCH/HR) =  0.26    Ybar = 0.50
  TOTAL AREA(ACRES) =     879.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1036.00 = 12088.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1036.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      822.24    Tc(MIN.) =  38.60
  AREA-AVERAGED Fm(INCH/HR) =  0.26    Ybar = 0.50
  TOTAL AREA(ACRES) =     879.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1036.00 = 12088.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1036.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1037.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2800.00  DOWNSTREAM(FEET) =   2760.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1959.00   CHANNEL SLOPE =  0.0204
  CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    822.24
  FLOW VELOCITY(FEET/SEC.) =  11.21   FLOW DEPTH(FEET) =   4.92
  TRAVEL TIME(MIN.) =   2.91   Tc(MIN.) =  41.51
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1037.00 = 14047.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1037.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  41.51
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.207
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       40.40      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       56.40      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   96.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.40;30M= 0.68;1H= 0.99;3H= 2.01;6H= 3.14;24H= 5.71
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.69; LAG(HR) = 0.55; Fm(INCH/HR) = 0.26; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.96; 30M = 0.96; 1HR = 0.96;
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =    976.20
```

```
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1037.00 = 14047.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0459; Lca/L=0.4,n=.0412; Lca/L=0.5,n=.0378;Lca/L=0.6,n=.0353
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =     249.24
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =    791.63
  TOTAL AREA(ACRES) =    976.20       PEAK FLOW RATE(CFS) =     822.24
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =    976.20  TC(MIN.) =     41.51
  AREA-AVERAGED Fm(INCH/HR)=  0.26   Ybar =  0.51
  PEAK FLOW RATE(CFS)   =    822.24
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU38010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.040
        MOUNTAIN                           0.890
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1037.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU37010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      822.24    Tc(MIN.) =  41.51
  AREA-AVERAGED Fm(INCH/HR) =  0.26    Ybar = 0.51
  TOTAL AREA(ACRES) =     976.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1037.00 = 14047.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1037.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      822.24    Tc(MIN.) =  41.51
  AREA-AVERAGED Fm(INCH/HR) =  0.26    Ybar = 0.51
  TOTAL AREA(ACRES) =     976.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1037.00 = 14047.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1037.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1038.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2760.00  DOWNSTREAM(FEET) =   2700.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2116.00   CHANNEL SLOPE =  0.0284
  CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    822.24
  FLOW VELOCITY(FEET/SEC.) =  12.64   FLOW DEPTH(FEET) =   4.49
  TRAVEL TIME(MIN.) =   2.79   Tc(MIN.) =  44.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1038.00 = 16163.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1038.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  44.30
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.163
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       17.10      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      137.10      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       11.50      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  165.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.40;30M= 0.68;1H= 0.99;3H= 2.01;6H= 3.14;24H= 5.71
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.74; LAG(HR) = 0.59; Fm(INCH/HR) = 0.26; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.95; 30M = 0.95; 1HR = 0.95;
```

```
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1141.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1038.00 = 16163.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0439; Lca/L=0.4,n=.0394; Lca/L=0.5,n=.0362;Lca/L=0.6,n=.0338
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =     292.92
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =    894.04
  TOTAL AREA(ACRES) =   1141.90       PEAK FLOW RATE(CFS) =     894.04

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   1141.90  TC(MIN.) =     44.30
  AREA-AVERAGED Fm(INCH/HR)=  0.26   Ybar =  0.50
  PEAK FLOW RATE(CFS)   =    894.04
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU39010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  =====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.040
        MOUNTAIN                           0.890
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1938.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU38010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      894.04    Tc(MIN.) =  44.30
  AREA-AVERAGED Fm(INCH/HR) =  0.26    Ybar = 0.50
  TOTAL AREA(ACRES) =    1141.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1938.00 = 16163.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1038.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      894.04    Tc(MIN.) =  44.30
  AREA-AVERAGED Fm(INCH/HR) =  0.26    Ybar = 0.50
  TOTAL AREA(ACRES) =    1141.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1038.00 = 16163.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1038.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1039.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2700.00  DOWNSTREAM(FEET) =   2600.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2298.00   CHANNEL SLOPE =  0.0435
  CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    894.04
  FLOW VELOCITY(FEET/SEC.) =  15.09   FLOW DEPTH(FEET) =   4.18
  TRAVEL TIME(MIN.) =   2.54   Tc(MIN.) =  46.84
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1039.00 = 18461.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1039.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  46.84
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.126
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        3.20      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       10.50      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       88.80      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  102.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.40;30M= 0.68;1H= 0.99;3H= 2.01;6H= 3.14;24H= 5.71
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.78; LAG(HR) = 0.62; Fm(INCH/HR) = 0.25; Ybar = 0.49
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.94; 30M = 0.94; 1HR = 0.94;
```

```
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1244.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1039.00 = 18461.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0423; Lca/L=0.4,n=.0380; Lca/L=0.5,n=.0349;Lca/L=0.6,n=.0325
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =     324.01
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =    932.15
  TOTAL AREA(ACRES) =   1244.40       PEAK FLOW RATE(CFS) =     932.15

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   1244.40  TC(MIN.) =     46.84
  AREA-AVERAGED Fm(INCH/HR)=  0.25   Ybar =  0.49
  PEAK FLOW RATE(CFS)   =    932.15
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU40010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.040
        MOUNTAIN                           0.890
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1039.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU39010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      932.15    Tc(MIN.) =  46.84
  AREA-AVERAGED Fm(INCH/HR) =  0.25    Ybar = 0.49
  TOTAL AREA(ACRES) =    1244.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1039.00 = 18461.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1039.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      932.15    Tc(MIN.) =  46.84
  AREA-AVERAGED Fm(INCH/HR) =  0.25    Ybar = 0.49
  TOTAL AREA(ACRES) =    1244.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1039.00 = 18461.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1039.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1040.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2600.00  DOWNSTREAM(FEET) =   2400.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  3287.00   CHANNEL SLOPE =  0.0608
  CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    932.15
  FLOW VELOCITY(FEET/SEC.) =  17.22   FLOW DEPTH(FEET) =   3.90
  TRAVEL TIME(MIN.) =   3.18   Tc(MIN.) =  50.02
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1040.00 = 21748.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1040.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  50.02
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.085
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      115.00      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  115.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.40;30M= 0.68;1H= 0.99;3H= 2.01;6H= 3.14;24H= 5.71
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.83; LAG(HR) = 0.67; Fm(INCH/HR) = 0.25; Ybar = 0.48
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.94; 30M = 0.94; 1HR = 0.94;
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1359.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1040.00 = 21748.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
```

```
 Lca/L=0.3,n=.0408; Lca/L=0.4,n=.0366; Lca/L=0.5,n=.0336;Lca/L=0.6,n=.0314
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =     359.80
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =    962.51
  TOTAL AREA(ACRES) =   1359.40       PEAK FLOW RATE(CFS) =     962.51

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   1359.40  TC(MIN.) =     50.02
  AREA-AVERAGED Fm(INCH/HR)=  0.25   Ybar =  0.48
  PEAK FLOW RATE(CFS)   =    962.51
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU41010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.040
        MOUNTAIN                           0.890
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1040.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU40010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      962.51    Tc(MIN.) =  50.02
  AREA-AVERAGED Fm(INCH/HR) =  0.25    Ybar = 0.48
  TOTAL AREA(ACRES) =    1359.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1040.00 = 21748.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1040.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      962.51    Tc(MIN.) =  50.02
  AREA-AVERAGED Fm(INCH/HR) =  0.25    Ybar = 0.48
  TOTAL AREA(ACRES) =    1359.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1040.00 = 21748.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1040.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1041.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2400.00  DOWNSTREAM(FEET) =   2200.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2212.00   CHANNEL SLOPE =  0.0904
  CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    962.51
  FLOW VELOCITY(FEET/SEC.) =  17.06   FLOW DEPTH(FEET) =   4.02
  TRAVEL TIME(MIN.) =   2.16   Tc(MIN.) =  52.18
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1041.00 = 23960.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1041.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  52.18
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.059
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       61.20      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      156.90      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  218.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.40;30M= 0.68;1H= 0.99;3H= 2.01;6H= 3.14;24H= 5.71
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.87; LAG(HR) = 0.70; Fm(INCH/HR) = 0.24; Ybar = 0.47
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.93; 30M = 0.93; 1HR = 0.93;
  3HR = 0.99; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1577.50
```

```
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1041.00 = 23960.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0405; Lca/L=0.4,n=.0363; Lca/L=0.5,n=.0334;Lca/L=0.6,n=.0311
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =     424.90
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1110.95
  TOTAL AREA(ACRES) =   1577.50       PEAK FLOW RATE(CFS) =    1110.95

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   1577.50  TC(MIN.) =     52.18
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.47
  PEAK FLOW RATE(CFS)   =   1110.95
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU42010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.040
        MOUNTAIN                           0.890
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1041.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU41010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1110.95    Tc(MIN.) =  52.18
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.47
  TOTAL AREA(ACRES) =    1577.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1041.00 = 23960.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1041.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1110.95    Tc(MIN.) =  52.18
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.47
  TOTAL AREA(ACRES) =    1577.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1041.00 = 23960.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1041.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1042.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2200.00  DOWNSTREAM(FEET) =   2000.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1708.00   CHANNEL SLOPE =  0.1171
  CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1110.95
  FLOW VELOCITY(FEET/SEC.) =  19.50   FLOW DEPTH(FEET) =   4.05
  TRAVEL TIME(MIN.) =   1.46   Tc(MIN.) =  53.64
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1042.00 = 25668.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1042.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  53.64
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.042
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      169.60      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       24.80      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  194.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.40;30M= 0.68;1H= 0.99;3H= 2.01;6H= 3.14;24H= 5.71
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.89; LAG(HR) = 0.72; Fm(INCH/HR) = 0.24; Ybar = 0.47
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.92; 30M = 0.92; 1HR = 0.92;
  3HR = 0.99; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1771.90
```

```
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1042.00 = 25668.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0404; Lca/L=0.4,n=.0362; Lca/L=0.5,n=.0333;Lca/L=0.6,n=.0310
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =     477.72
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1228.87
  TOTAL AREA(ACRES) =   1771.90       PEAK FLOW RATE(CFS) =    1228.87

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   1771.90  TC(MIN.) =     53.64
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.47
  PEAK FLOW RATE(CFS)   =   1228.87
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU43010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  =====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.040
        MOUNTAIN                           0.890
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1042.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU42010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1228.87    Tc(MIN.) =  53.64
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.47
  TOTAL AREA(ACRES) =    1771.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1042.00 = 25668.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1042.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1228.87    Tc(MIN.) =  53.64
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.47
  TOTAL AREA(ACRES) =    1771.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1042.00 = 25668.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1042.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1043.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2000.00  DOWNSTREAM(FEET) =   1990.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1322.00   CHANNEL SLOPE =  0.0076
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1228.87
  FLOW VELOCITY(FEET/SEC.) =   8.26   FLOW DEPTH(FEET) =   5.77
  TRAVEL TIME(MIN.) =   2.67   Tc(MIN.) =  56.31
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1043.00 = 26990.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1043.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  56.31
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.014
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        7.40      0.40      1.00    40
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       42.50      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      106.00      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  155.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.40;30M= 0.68;1H= 0.99;3H= 2.01;6H= 3.14;24H= 5.70
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.94; LAG(HR) = 0.75; Fm(INCH/HR) = 0.24; Ybar = 0.47
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.91; 30M = 0.91; 1HR = 0.91;
```

```
  3HR = 0.99; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1927.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1043.00 = 26990.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0405; Lca/L=0.4,n=.0363; Lca/L=0.5,n=.0333;Lca/L=0.6,n=.0311
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =     521.45
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1292.88
  TOTAL AREA(ACRES) =   1927.80       PEAK FLOW RATE(CFS) =    1292.88

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.98; 3HR = 1.99; 6HR = 3.09; 24HR = 5.62
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   1927.80  TC(MIN.) =     56.31
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.47
  PEAK FLOW RATE(CFS)   =   1292.88
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU44010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ======  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.040
        MOUNTAIN                           0.890
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1043.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU43010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1292.88    Tc(MIN.) =  56.31
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.47
  TOTAL AREA(ACRES) =    1927.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1043.00 = 26990.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1043.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1292.88    Tc(MIN.) =  56.31
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.47
  TOTAL AREA(ACRES) =    1927.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1043.00 = 26990.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1043.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1044.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1990.00  DOWNSTREAM(FEET) =   1980.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1681.00   CHANNEL SLOPE =  0.0059
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1292.88
  FLOW VELOCITY(FEET/SEC.) =   7.48   FLOW DEPTH(FEET) =   5.64
  TRAVEL TIME(MIN.) =   3.75   Tc(MIN.) =  60.05
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1044.00 = 28671.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1044.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  60.05
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.977
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        2.20      0.40      1.00    40
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       27.60      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       59.80      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   89.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.40;30M= 0.68;1H= 0.99;3H= 2.01;6H= 3.13;24H= 5.69
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.00; LAG(HR) = 0.80; Fm(INCH/HR) = 0.24; Ybar = 0.46
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.91; 30M = 0.91; 1HR = 0.91;
```

```
  3HR = 0.99; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   2017.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1044.00 = 28671.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0408; Lca/L=0.4,n=.0366; Lca/L=0.5,n=.0336;Lca/L=0.6,n=.0314
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =     545.89
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1269.16
  TOTAL AREA(ACRES) =   2017.40       PEAK FLOW RATE(CFS) =    1292.88
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.39; 30M = 0.67; 1HR = 0.97; 3HR = 1.95; 6HR = 3.02; 24HR = 5.46
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   2017.40  TC(MIN.) =     60.05
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.46
  PEAK FLOW RATE(CFS)   =   1292.88
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU45010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  =====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.040
        MOUNTAIN                           0.890
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1044.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU44010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1292.88    Tc(MIN.) =  60.05
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.46
  TOTAL AREA(ACRES) =    2017.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1044.00 = 28671.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1044.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1292.88    Tc(MIN.) =  60.05
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.46
  TOTAL AREA(ACRES) =    2017.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1044.00 = 28671.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1044.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1045.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1980.00  DOWNSTREAM(FEET) =   1960.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2360.00   CHANNEL SLOPE =  0.0085
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1292.88
  FLOW VELOCITY(FEET/SEC.) =   8.45   FLOW DEPTH(FEET) =   5.08
  TRAVEL TIME(MIN.) =   4.65   Tc(MIN.) =  64.71
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1045.00 = 31031.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1045.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  64.71
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.936
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       40.90      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      179.40      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       97.70      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  318.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.40;30M= 0.68;1H= 0.98;3H= 1.99;6H= 3.10;24H= 5.64
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.08; LAG(HR) = 0.86; Fm(INCH/HR) = 0.24; Ybar = 0.47
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.90; 30M = 0.90; 1HR = 0.90;
```

```
  3HR = 0.98; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   2335.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1045.00 = 31031.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0409; Lca/L=0.4,n=.0367; Lca/L=0.5,n=.0337;Lca/L=0.6,n=.0315
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =     622.72
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1422.12
  TOTAL AREA(ACRES) =   2335.40       PEAK FLOW RATE(CFS) =    1422.12

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.38; 30M = 0.67; 1HR = 0.96; 3HR = 1.91; 6HR = 2.94; 24HR = 5.32
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   2335.40  TC(MIN.) =     64.71
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.47
  PEAK FLOW RATE(CFS)   =   1422.12
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU46010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ======  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.040
        MOUNTAIN                           0.890
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1045.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU45010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1422.12    Tc(MIN.) =  64.71
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.47
  TOTAL AREA(ACRES) =    2335.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1045.00 = 31031.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1045.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1422.12    Tc(MIN.) =  64.71
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.47
  TOTAL AREA(ACRES) =    2335.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1045.00 = 31031.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1045.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1046.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1960.00  DOWNSTREAM(FEET) =   1915.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2743.00   CHANNEL SLOPE =  0.0164
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1422.12
  FLOW VELOCITY(FEET/SEC.) =  10.91   FLOW DEPTH(FEET) =   4.43
  TRAVEL TIME(MIN.) =   4.19   Tc(MIN.) =  68.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1046.00 = 33774.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1046.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  68.90
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.903
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       30.70      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       79.90      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  110.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.39;30M= 0.68;1H= 0.98;3H= 1.98;6H= 3.08;24H= 5.59
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.15; LAG(HR) = 0.92; Fm(INCH/HR) = 0.24; Ybar = 0.47
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.89; 30M = 0.89; 1HR = 0.89;
  3HR = 0.98; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   2446.00
```

```
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1046.00 = 33774.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0405; Lca/L=0.4,n=.0363; Lca/L=0.5,n=.0333;Lca/L=0.6,n=.0311
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =     638.43
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1400.35
  TOTAL AREA(ACRES) =   2446.00       PEAK FLOW RATE(CFS) =    1422.12
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.33; 30M = 0.64; 1HR = 0.89; 3HR = 1.68; 6HR = 2.52; 24HR = 4.46
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   2446.00  TC(MIN.) =     68.90
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.47
  PEAK FLOW RATE(CFS)   =   1422.12
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU47010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  =====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.040
        MOUNTAIN                           0.890
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1046.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU46010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1422.12    Tc(MIN.) =  68.90
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.47
  TOTAL AREA(ACRES) =    2446.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1046.00 = 33774.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1046.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1422.12    Tc(MIN.) =  68.90
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.47
  TOTAL AREA(ACRES) =    2446.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1046.00 = 33774.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1046.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1047.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1915.00  DOWNSTREAM(FEET) =   1910.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   221.00   CHANNEL SLOPE =  0.0226
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1422.12
  FLOW VELOCITY(FEET/SEC.) =  12.17   FLOW DEPTH(FEET) =   4.03
  TRAVEL TIME(MIN.) =   0.30   Tc(MIN.) =  69.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1047.00 = 33995.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1047.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  69.20
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.901
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B      146.30      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C     1591.10      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      118.40      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1855.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.40;30M= 0.68;1H= 0.98;3H= 1.98;6H= 3.09;24H= 5.61
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.15; LAG(HR) = 0.92; Fm(INCH/HR) = 0.25; Ybar = 0.48
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.81; 30M = 0.81; 1HR = 0.81;
```

```
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4301.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1047.00 = 33995.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0404; Lca/L=0.4,n=.0363; Lca/L=0.5,n=.0333;Lca/L=0.6,n=.0311
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    1111.34
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2258.73
  TOTAL AREA(ACRES) =   4301.80       PEAK FLOW RATE(CFS) =    2258.73

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 1.99; 6HR = 3.11; 24HR = 5.65
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   4301.80  TC(MIN.) =     69.20
  AREA-AVERAGED Fm(INCH/HR)=  0.25   Ybar =  0.48
  PEAK FLOW RATE(CFS)   =   2258.73
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU48010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.070
        MOUNTAIN                           0.860
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1047.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU47010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2258.73    Tc(MIN.) =  69.20
  AREA-AVERAGED Fm(INCH/HR) =  0.25    Ybar = 0.48
  TOTAL AREA(ACRES) =    4301.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1047.00 = 33995.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1047.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2258.73    Tc(MIN.) =  69.20
  AREA-AVERAGED Fm(INCH/HR) =  0.25    Ybar = 0.48
  TOTAL AREA(ACRES) =    4301.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1047.00 = 33995.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1047.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1048.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1910.00  DOWNSTREAM(FEET) =   1750.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1601.00   CHANNEL SLOPE =  0.0999
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2258.73
  FLOW VELOCITY(FEET/SEC.) =  20.08   FLOW DEPTH(FEET) =   3.89
  TRAVEL TIME(MIN.) =   1.33   Tc(MIN.) =  70.53
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 35596.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1048.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  70.53
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.891
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        3.60      0.40      1.00    40
  NATURAL FAIR COVER
  "WOODLAND"                 A        3.30      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       59.50      0.30      1.00    63
  NATURAL POOR COVER
  "BARREN"                   B        0.40      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B        0.10      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B       16.70      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.31
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   83.60
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.40;30M= 0.68;1H= 0.98;3H= 1.98;6H= 3.09;24H= 5.62
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 88.9%;FOOTHILL=  4.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.18; LAG(HR) = 0.94; Fm(INCH/HR) = 0.25; Ybar = 0.48
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.80; 30M = 0.80; 1HR = 0.80;
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4385.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 35596.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0403; Lca/L=0.4,n=.0362; Lca/L=0.5,n=.0332;Lca/L=0.6,n=.0310
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    1125.08
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2245.63
  TOTAL AREA(ACRES) =   4385.40       PEAK FLOW RATE(CFS) =    2258.73
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.00; 6HR = 3.12; 24HR = 5.67

****************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1048.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  70.53
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.960
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      926.70      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        0.50      0.25      0.50    69
  NATURAL POOR COVER
  "BARREN"                   C       10.50      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C       10.70      0.25      1.00    79
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C      299.20      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C       40.40      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1288.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.40;30M= 0.68;1H= 0.99;3H= 1.99;6H= 3.10;24H= 5.63
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 88.3%;FOOTHILL=  4.7%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.18; LAG(HR) = 0.94; Fm(INCH/HR) = 0.25; Ybar = 0.47
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.77; 30M = 0.77; 1HR = 0.77;
  3HR = 0.96; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   5673.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 35596.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0403; Lca/L=0.4,n=.0362; Lca/L=0.5,n=.0332;Lca/L=0.6,n=.0310
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    1467.44
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2807.76
  TOTAL AREA(ACRES) =   5673.40       PEAK FLOW RATE(CFS) =    2807.76

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.00; 6HR = 3.12; 24HR = 5.67

****************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1048.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  70.53
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.960
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      805.90      0.20      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 D       51.50      0.20      1.00    79
  NATURAL POOR COVER
  "BARREN"                   D        2.40      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D        3.10      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       23.30      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D      567.30      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1453.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.40;30M= 0.68;1H= 0.99;3H= 1.99;6H= 3.10;24H= 5.64
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 87.8%;FOOTHILL=  5.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.18; LAG(HR) = 0.94; Fm(INCH/HR) = 0.24; Ybar = 0.45
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.73; 30M = 0.73; 1HR = 0.73;
  3HR = 0.96; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   7126.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 35596.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0403; Lca/L=0.4,n=.0362; Lca/L=0.5,n=.0332;Lca/L=0.6,n=.0310
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    1918.80
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3461.64
  TOTAL AREA(ACRES) =   7126.90       PEAK FLOW RATE(CFS) =    3461.64

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.00; 6HR = 3.12; 24HR = 5.67
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   7126.90  TC(MIN.) =     70.53
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.45
  PEAK FLOW RATE(CFS)   =   3461.64
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
        (c) Copyright 1983-2003 Advanced Engineering Software (aes)
            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: LU49010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.050
        MOUNTAIN                           0.800
        VALLEY(UNDEVELOPED)/DESERT         0.140
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1048.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU48010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3461.64    Tc(MIN.) =  70.53
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.45
  TOTAL AREA(ACRES) =    7126.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 35596.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1048.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3461.64    Tc(MIN.) =  70.53
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.45
  TOTAL AREA(ACRES) =    7126.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 35596.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1048.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1750.00  DOWNSTREAM(FEET) =   1670.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2254.00   CHANNEL SLOPE =  0.0355
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3461.64
  FLOW VELOCITY(FEET/SEC.) =  16.09   FLOW DEPTH(FEET) =   6.77
  TRAVEL TIME(MIN.) =   2.33   Tc(MIN.) =  72.86
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 37850.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  72.86
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.875
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       10.20      0.30       1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        2.00      0.30       1.00    72
  NATURAL FAIR COVER
  "WOODLAND"                 B       11.10      0.30       1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      267.80      0.25       1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        3.40      0.25       0.50    69
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C      128.10      0.25       1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  422.60
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.40;30M= 0.68;1H= 0.98;3H= 1.98;6H= 3.09;24H= 5.61
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.4%
           MOUNTAIN= 87.4%;FOOTHILL=  5.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.21; LAG(HR) = 0.97; Fm(INCH/HR) = 0.24; Ybar = 0.45
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.72; 30M = 0.72; 1HR = 0.72;
  3HR = 0.95; 6HR = 0.98; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   7549.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 37850.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0397; Lca/L=0.4,n=.0356; Lca/L=0.5,n=.0327;Lca/L=0.6,n=.0305
  TIME OF PEAK FLOW(HR) = 16.67  RUNOFF VOLUME(AF) =    2011.52
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3621.47
  TOTAL AREA(ACRES) =   7549.50       PEAK FLOW RATE(CFS) =    3621.47

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.37; 30M = 0.66; 1HR = 0.95; 3HR = 1.87; 6HR = 2.88; 24HR = 5.18

****************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  72.86
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.951
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C        4.70      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      391.50      0.20      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D      149.60      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       33.60      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  579.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.39;30M= 0.68;1H= 0.98;3H= 1.98;6H= 3.08;24H= 5.58
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 86.8%;FOOTHILL=  5.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.21; LAG(HR) = 0.97; Fm(INCH/HR) = 0.24; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8128.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 37850.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0397; Lca/L=0.4,n=.0356; Lca/L=0.5,n=.0327;Lca/L=0.6,n=.0305
  TIME OF PEAK FLOW(HR) = 16.67  RUNOFF VOLUME(AF) =    2167.00
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3838.72
  TOTAL AREA(ACRES) =   8128.90       PEAK FLOW RATE(CFS) =    3838.72

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.37; 30M = 0.66; 1HR = 0.95; 3HR = 1.87; 6HR = 2.88; 24HR = 5.18
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   8128.90  TC(MIN.) =     72.86
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.44
  PEAK FLOW RATE(CFS)   =   3838.72
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
 ************************************************************************
             RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
            (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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              Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                          Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

 ----------------------------------------------------------------------------
  FILE NAME: LU50010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
 ============================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
 ============================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.050
        MOUNTAIN                           0.870
        VALLEY(UNDEVELOPED)/DESERT         0.070
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


 ************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1049.00 IS CODE = 15.1
 ----------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
 ============================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU49010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3838.72    Tc(MIN.) =  72.86
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.44
  TOTAL AREA(ACRES) =    8128.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 37850.00 FEET.

 ****************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1049.00 IS CODE = 14.0
 ----------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
 ============================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3838.72    Tc(MIN.) =  72.86
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.44
  TOTAL AREA(ACRES) =    8128.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 37850.00 FEET.

 ****************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1049.00 IS CODE =  12
 ----------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
 ============================================================================

 ****************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1050.00 IS CODE =  51
 ----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
 ============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1670.00  DOWNSTREAM(FEET) =   1665.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   290.00   CHANNEL SLOPE =  0.0172
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3838.72
  FLOW VELOCITY(FEET/SEC.) =  12.85   FLOW DEPTH(FEET) =   8.83
  TRAVEL TIME(MIN.) =   0.38   Tc(MIN.) =  73.24
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 38140.00 FEET.

 ****************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1050.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) =  73.24
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.872
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       41.60      0.40      1.00    40
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       85.70      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C     1084.00      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      175.60      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1386.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.39;30M= 0.68;1H= 0.98;3H= 1.97;6H= 3.06;24H= 5.55
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 86.9%;FOOTHILL=  5.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.22; LAG(HR) = 0.98; Fm(INCH/HR) = 0.24; Ybar = 0.45
```

```
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.68; 30M = 0.68; 1HR = 0.69;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9515.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 38140.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0396; Lca/L=0.4,n=.0355; Lca/L=0.5,n=.0327;Lca/L=0.6,n=.0305
  TIME OF PEAK FLOW(HR) = 16.67  RUNOFF VOLUME(AF) =    2484.41
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4341.93
  TOTAL AREA(ACRES) =   9515.80       PEAK FLOW RATE(CFS) =    4341.93

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.38; 30M = 0.67; 1HR = 0.97; 3HR = 1.93; 6HR = 2.99; 24HR = 5.40
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   9515.80  TC(MIN.) =     73.24
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.45
  PEAK FLOW RATE(CFS)   =   4341.93
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU51010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.050
        MOUNTAIN                           0.870
        VALLEY(UNDEVELOPED)/DESERT         0.070
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1050.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU50010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     4341.93    Tc(MIN.) =  73.24
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.45
  TOTAL AREA(ACRES) =    9515.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 38140.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1050.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     4341.93    Tc(MIN.) =  73.24
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.45
  TOTAL AREA(ACRES) =    9515.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 38140.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1050.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1051.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1665.00  DOWNSTREAM(FEET) =   1630.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2134.00   CHANNEL SLOPE =  0.0164
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   4341.93
  FLOW VELOCITY(FEET/SEC.) =  12.83   FLOW DEPTH(FEET) =   8.74
  TRAVEL TIME(MIN.) =   2.77   Tc(MIN.) =  76.01
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 40274.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1051.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  76.01
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.854
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      297.00      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      163.30      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  460.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.39;30M= 0.67;1H= 0.98;3H= 1.96;6H= 3.05;24H= 5.53
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 86.9%;FOOTHILL=  5.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.27; LAG(HR) = 1.01; Fm(INCH/HR) = 0.24; Ybar = 0.45
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.67; 30M = 0.68; 1HR = 0.68;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =   9976.10
```

```
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 40274.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0392; Lca/L=0.4,n=.0352; Lca/L=0.5,n=.0323;Lca/L=0.6,n=.0302
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    2598.96
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4159.50
  TOTAL AREA(ACRES) =   9976.10       PEAK FLOW RATE(CFS) =    4341.93
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.37; 30M = 0.66; 1HR = 0.94; 3HR = 1.85; 6HR = 2.84; 24HR = 5.11
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   9976.10  TC(MIN.) =     76.01
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.45
  PEAK FLOW RATE(CFS)   =   4341.93
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: LU52010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.050
        MOUNTAIN                           0.870
        VALLEY(UNDEVELOPED)/DESERT         0.070
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1051.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU51010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     4341.93    Tc(MIN.) =  76.01
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.45
  TOTAL AREA(ACRES) =    9976.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 40274.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1051.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     4341.93    Tc(MIN.) =  76.01
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.45
  TOTAL AREA(ACRES) =    9976.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 40274.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1051.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1630.00  DOWNSTREAM(FEET) =   1410.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  5523.00   CHANNEL SLOPE =  0.0398
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   4341.93
  FLOW VELOCITY(FEET/SEC.) =  17.48   FLOW DEPTH(FEET) =   6.76
  TRAVEL TIME(MIN.) =   5.27   Tc(MIN.) =  81.28
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 45797.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  81.28
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.821
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       19.10      0.40      1.00    40
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      198.40      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      507.40      0.20      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       26.70      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  751.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.39;30M= 0.67;1H= 0.97;3H= 1.94;6H= 3.02;24H= 5.46
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 86.9%;FOOTHILL=  5.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.35; LAG(HR) = 1.08; Fm(INCH/HR) = 0.24; Ybar = 0.46
```

```
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.66; 30M = 0.67; 1HR = 0.67;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  10727.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 45797.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0381; Lca/L=0.4,n=.0341; Lca/L=0.5,n=.0314;Lca/L=0.6,n=.0293
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    2746.18
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4352.18
  TOTAL AREA(ACRES) =  10727.70       PEAK FLOW RATE(CFS) =    4352.18

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.34; 30M = 0.64; 1HR = 0.89; 3HR = 1.69; 6HR = 2.53; 24HR = 4.49
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  10727.70  TC(MIN.) =     81.28
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.46
  PEAK FLOW RATE(CFS)   =   4352.18
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: LU53010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.110
        MOUNTAIN                           0.810
        VALLEY(UNDEVELOPED)/DESERT         0.070
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1052.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU52010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     4352.18    Tc(MIN.) =  81.28
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.46
  TOTAL AREA(ACRES) =   10727.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 45797.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1052.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     4352.18    Tc(MIN.) =  81.28
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.46
  TOTAL AREA(ACRES) =   10727.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 45797.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1052.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1410.00  DOWNSTREAM(FEET) =   1297.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2262.00   CHANNEL SLOPE =  0.0500
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   4352.18
  FLOW VELOCITY(FEET/SEC.) =  18.91   FLOW DEPTH(FEET) =   6.34
  TRAVEL TIME(MIN.) =   1.99   Tc(MIN.) =  83.27
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 48059.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  83.27
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.810
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        4.50      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        2.20      0.30      1.00    72
  NATURAL FAIR COVER
  "WOODLAND"                 B       31.40      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      214.70      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C       21.40      0.25      0.50    69
  NATURAL POOR COVER
  "BARREN"                   C        0.70      0.25      1.00    91
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.96
  SUBAREA AREA(ACRES) =  274.90
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.39;30M= 0.67;1H= 0.97;3H= 1.94;6H= 3.02;24H= 5.46
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 86.7%;FOOTHILL=  5.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.39; LAG(HR) = 1.11; Fm(INCH/HR) = 0.24; Ybar = 0.46
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.65; 30M = 0.66; 1HR = 0.67;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  11002.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 48059.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0377; Lca/L=0.4,n=.0338; Lca/L=0.5,n=.0310;Lca/L=0.6,n=.0290
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    2808.58
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4420.01
  TOTAL AREA(ACRES) =  11002.60       PEAK FLOW RATE(CFS) =    4420.01

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.38; 30M = 0.67; 1HR = 0.96; 3HR = 1.93; 6HR = 2.98; 24HR = 5.39

****************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  83.27
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.911
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        7.60      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       35.40      0.25      1.00    77
  PUBLIC PARK                C        0.20      0.25      0.85    69
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       85.00      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C       92.50      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      717.00      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  937.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.39;30M= 0.67;1H= 0.97;3H= 1.94;6H= 3.01;24H= 5.45
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 86.3%;FOOTHILL=  5.7%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.39; LAG(HR) = 1.11; Fm(INCH/HR) = 0.23; Ybar = 0.45
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.64; 30M = 0.65; 1HR = 0.66;
  3HR = 0.93; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  11940.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 48059.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0377; Lca/L=0.4,n=.0338; Lca/L=0.5,n=.0310;Lca/L=0.6,n=.0290
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    3057.77
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4737.54
  TOTAL AREA(ACRES) =  11940.30       PEAK FLOW RATE(CFS) =    4737.54

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.38; 30M = 0.67; 1HR = 0.96; 3HR = 1.93; 6HR = 2.98; 24HR = 5.39

****************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  83.27
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.911
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        2.90      0.20      0.50    75
  NATURAL FAIR COVER
  "GRASS"                    D       10.20      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       44.50      0.20      1.00    83
  PUBLIC PARK                D        0.70      0.20      0.85    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D      674.40      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D      148.30      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  881.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.39;30M= 0.67;1H= 0.97;3H= 1.94;6H= 3.01;24H= 5.45
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 85.9%;FOOTHILL=  6.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.39; LAG(HR) = 1.11; Fm(INCH/HR) = 0.23; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.62; 30M = 0.64; 1HR = 0.64;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  12821.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 48059.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0377; Lca/L=0.4,n=.0338; Lca/L=0.5,n=.0310;Lca/L=0.6,n=.0290
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    3316.44
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5043.18
  TOTAL AREA(ACRES) =  12821.30       PEAK FLOW RATE(CFS) =    5043.18

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.38; 30M = 0.67; 1HR = 0.96; 3HR = 1.93; 6HR = 2.98; 24HR = 5.39
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  12821.30  TC(MIN.) =     83.27
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.44
  PEAK FLOW RATE(CFS)   =   5043.18
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU54010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.060
        MOUNTAIN                           0.860
        VALLEY(UNDEVELOPED)/DESERT         0.070
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1053.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU53010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5043.18    Tc(MIN.) =  83.27
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.44
  TOTAL AREA(ACRES) =   12821.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 48059.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1053.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5043.18    Tc(MIN.) =  83.27
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.44
  TOTAL AREA(ACRES) =   12821.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 48059.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1053.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1297.00  DOWNSTREAM(FEET) =   1235.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  3488.00   CHANNEL SLOPE =  0.0178
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   5043.18
  FLOW VELOCITY(FEET/SEC.) =  16.14   FLOW DEPTH(FEET) =   8.18
  TRAVEL TIME(MIN.) =   3.60   Tc(MIN.) =  86.87
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 51547.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  86.87
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.791
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      435.00      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        7.80      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       36.00      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C       10.20      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      271.30      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       26.90      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  787.20
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.38;30M= 0.67;1H= 0.97;3H= 1.93;6H= 2.99;24H= 5.40
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 85.9%;FOOTHILL=  6.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.45; LAG(HR) = 1.16; Fm(INCH/HR) = 0.23; Ybar = 0.45
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.61; 30M = 0.63; 1HR = 0.63;
  3HR = 0.92; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  13608.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 51547.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0370; Lca/L=0.4,n=.0332; Lca/L=0.5,n=.0305;Lca/L=0.6,n=.0284
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    3466.55
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5170.61
  TOTAL AREA(ACRES) =  13608.50       PEAK FLOW RATE(CFS) =    5170.61

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.34; 30M = 0.64; 1HR = 0.90; 3HR = 1.72; 6HR = 2.59; 24HR = 4.60

****************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  86.87
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.897
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        5.30      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       13.70      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   19.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.38;30M= 0.67;1H= 0.97;3H= 1.93;6H= 2.99;24H= 5.40
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 85.9%;FOOTHILL=  6.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.45; LAG(HR) = 1.16; Fm(INCH/HR) = 0.23; Ybar = 0.45
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.61; 30M = 0.63; 1HR = 0.63;
  3HR = 0.92; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  13627.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 51547.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0370; Lca/L=0.4,n=.0332; Lca/L=0.5,n=.0305;Lca/L=0.6,n=.0284
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    3470.63
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5175.67
  TOTAL AREA(ACRES) =  13627.50       PEAK FLOW RATE(CFS) =    5175.67

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.34; 30M = 0.64; 1HR = 0.90; 3HR = 1.72; 6HR = 2.59; 24HR = 4.60
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  13627.50  TC(MIN.) =     86.87
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.45
  PEAK FLOW RATE(CFS)   =   5175.67
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU55010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.060
        MOUNTAIN                           0.860
        VALLEY(UNDEVELOPED)/DESERT         0.070
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1054.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU54010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5175.67    Tc(MIN.) =  86.87
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.45
  TOTAL AREA(ACRES) =   13627.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 51547.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1054.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5175.67    Tc(MIN.) =  86.87
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.45
  TOTAL AREA(ACRES) =   13627.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 51547.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1054.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1235.00  DOWNSTREAM(FEET) =   1115.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  3993.00   CHANNEL SLOPE =  0.0301
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   5175.67
  FLOW VELOCITY(FEET/SEC.) =  19.53   FLOW DEPTH(FEET) =   7.14
  TRAVEL TIME(MIN.) =   3.41   Tc(MIN.) =  90.28
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 55540.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  90.28
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.773
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       43.80      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       21.40      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       35.80      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C       11.10      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      659.60      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      129.70      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  901.40
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.38;30M= 0.67;1H= 0.96;3H= 1.91;6H= 2.95;24H= 5.33
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 85.9%;FOOTHILL=  6.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.50; LAG(HR) = 1.20; Fm(INCH/HR) = 0.23; Ybar = 0.45
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.59; 30M = 0.62; 1HR = 0.62;
  3HR = 0.92; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  14528.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 55540.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0362; Lca/L=0.4,n=.0325; Lca/L=0.5,n=.0298;Lca/L=0.6,n=.0278
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    3640.12
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5293.00
  TOTAL AREA(ACRES) =  14528.90       PEAK FLOW RATE(CFS) =    5293.00

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.32; 30M = 0.63; 1HR = 0.88; 3HR = 1.63; 6HR = 2.42; 24HR = 4.26

****************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  90.28
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.884
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       86.60      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       43.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  130.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.38;30M= 0.67;1H= 0.96;3H= 1.91;6H= 2.95;24H= 5.32
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 85.9%;FOOTHILL=  6.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.50; LAG(HR) = 1.20; Fm(INCH/HR) = 0.23; Ybar = 0.45
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.59; 30M = 0.61; 1HR = 0.62;
  3HR = 0.92; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  14658.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 55540.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0362; Lca/L=0.4,n=.0325; Lca/L=0.5,n=.0298;Lca/L=0.6,n=.0278
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    3666.80
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5324.01
  TOTAL AREA(ACRES) =  14658.90       PEAK FLOW RATE(CFS) =    5324.01

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.32; 30M = 0.63; 1HR = 0.88; 3HR = 1.63; 6HR = 2.42; 24HR = 4.26
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  14658.90  TC(MIN.) =     90.28
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.45
  PEAK FLOW RATE(CFS)   =   5324.01
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU56010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.060
        MOUNTAIN                           0.860
        VALLEY(UNDEVELOPED)/DESERT         0.070
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1055.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU55010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5324.01    Tc(MIN.) =  90.28
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.45
  TOTAL AREA(ACRES) =   14658.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 55540.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1055.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5324.01    Tc(MIN.) =  90.28
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.45
  TOTAL AREA(ACRES) =   14658.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 55540.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1055.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1115.00  DOWNSTREAM(FEET) =    978.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  4363.00   CHANNEL SLOPE =  0.0314
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   5324.01
  FLOW VELOCITY(FEET/SEC.) =  20.01   FLOW DEPTH(FEET) =   7.16
  TRAVEL TIME(MIN.) =   3.63   Tc(MIN.) =  93.91
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 59903.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  93.91
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.756
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       11.50      0.30       1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        2.90      0.30       1.00    72
  NATURAL FAIR COVER
  "WOODLAND"                 B       15.10      0.30       1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      566.60      0.25       1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        9.10      0.25       1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C      601.90      0.25       1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1207.10
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.38;30M= 0.67;1H= 0.96;3H= 1.89;6H= 2.92;24H= 5.26
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 85.9%;FOOTHILL=  6.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.57; LAG(HR) = 1.25; Fm(INCH/HR) = 0.23; Ybar = 0.45
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.57; 30M = 0.60; 1HR = 0.61;
  3HR = 0.91; 6HR = 0.96; 24HR= 0.97
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  15866.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 59903.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0355; Lca/L=0.4,n=.0318; Lca/L=0.5,n=.0292;Lca/L=0.6,n=.0273
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    3890.39
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5457.52
  TOTAL AREA(ACRES) =  15866.00       PEAK FLOW RATE(CFS) =    5457.52

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.34; 30M = 0.64; 1HR = 0.90; 3HR = 1.72; 6HR = 2.59; 24HR = 4.60

****************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  93.91
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.870
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C       84.60      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      433.40      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      116.90      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D      298.40      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       94.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1027.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.37;30M= 0.66;1H= 0.95;3H= 1.88;6H= 2.90;24H= 5.22
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 85.9%;FOOTHILL=  6.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.57; LAG(HR) = 1.25; Fm(INCH/HR) = 0.23; Ybar = 0.45
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.56; 30M = 0.59; 1HR = 0.60;
  3HR = 0.91; 6HR = 0.96; 24HR= 0.97
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  16893.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 59903.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0355; Lca/L=0.4,n=.0318; Lca/L=0.5,n=.0292;Lca/L=0.6,n=.0273
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    4111.43
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5711.93
  TOTAL AREA(ACRES) =  16893.70       PEAK FLOW RATE(CFS) =    5711.93

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.34; 30M = 0.64; 1HR = 0.90; 3HR = 1.72; 6HR = 2.59; 24HR = 4.60
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  16893.70  TC(MIN.) =     93.91
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.45
  PEAK FLOW RATE(CFS)   =   5711.93
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: LU57010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.060
        MOUNTAIN                           0.860
        VALLEY(UNDEVELOPED)/DESERT         0.070
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1056.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU56010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5711.93    Tc(MIN.) =  93.91
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.45
  TOTAL AREA(ACRES) =   16893.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 59903.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1056.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5711.93    Tc(MIN.) =  93.91
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.45
  TOTAL AREA(ACRES) =   16893.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 59903.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1056.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    978.00  DOWNSTREAM(FEET) =    800.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  5201.00   CHANNEL SLOPE =  0.0342
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   5711.93
  FLOW VELOCITY(FEET/SEC.) =  18.02   FLOW DEPTH(FEET) =   8.28
  TRAVEL TIME(MIN.) =   4.81   Tc(MIN.) =  98.72
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 65104.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  98.72
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.735
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        2.00      0.25      1.00    75
  NATURAL FAIR COVER
  "MEADOWS"                  C        0.90      0.25      1.00    80
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       40.20      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        0.30      0.25      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      208.80      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      155.20      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  407.40
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.37;30M= 0.66;1H= 0.95;3H= 1.87;6H= 2.88;24H= 5.18
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 85.9%;FOOTHILL=  6.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.65; LAG(HR) = 1.32; Fm(INCH/HR) = 0.23; Ybar = 0.45
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.56; 30M = 0.58; 1HR = 0.59;
  3HR = 0.90; 6HR = 0.96; 24HR= 0.97
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  17301.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 65104.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0350; Lca/L=0.4,n=.0314; Lca/L=0.5,n=.0288;Lca/L=0.6,n=.0269
  TIME OF PEAK FLOW(HR) = 17.00  RUNOFF VOLUME(AF) =    4159.00
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5692.20
  TOTAL AREA(ACRES) =  17301.10       PEAK FLOW RATE(CFS) =    5711.93
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.27; 30M = 0.60; 1HR = 0.80; 3HR = 1.37; 6HR = 1.92; 24HR = 3.25

****************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  98.72
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.852
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       63.60      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       57.80      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  121.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.37;30M= 0.66;1H= 0.95;3H= 1.87;6H= 2.87;24H= 5.16
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 85.9%;FOOTHILL=  6.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.65; LAG(HR) = 1.32; Fm(INCH/HR) = 0.23; Ybar = 0.45
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.56; 30M = 0.58; 1HR = 0.59;
  3HR = 0.90; 6HR = 0.96; 24HR= 0.97
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  17422.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 65104.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0350; Lca/L=0.4,n=.0314; Lca/L=0.5,n=.0288;Lca/L=0.6,n=.0269
  TIME OF PEAK FLOW(HR) = 17.00  RUNOFF VOLUME(AF) =    4174.22
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5711.75
  TOTAL AREA(ACRES) =  17422.50       PEAK FLOW RATE(CFS) =    5711.93
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.27; 30M = 0.60; 1HR = 0.80; 3HR = 1.37; 6HR = 1.92; 24HR = 3.25
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  17422.50  TC(MIN.) =     98.72
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.45
  PEAK FLOW RATE(CFS)   =   5711.93
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU58010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.100
        MOUNTAIN                           0.780
        VALLEY(UNDEVELOPED)/DESERT         0.110
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1057.00 TO NODE   1057.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU57010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5711.93    Tc(MIN.) =  98.72
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.45
  TOTAL AREA(ACRES) =   17422.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 65104.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1057.00 TO NODE   1057.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5711.93    Tc(MIN.) =  98.72
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.45
  TOTAL AREA(ACRES) =   17422.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 65104.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1057.00 TO NODE   1057.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1057.00 TO NODE   1058.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    800.00  DOWNSTREAM(FEET) =    657.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  5445.00   CHANNEL SLOPE =  0.0263
  CHANNEL BASE(FEET) =   35.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   5711.93
  FLOW VELOCITY(FEET/SEC.) =  16.08   FLOW DEPTH(FEET) =   8.22
  TRAVEL TIME(MIN.) =   5.64   Tc(MIN.) = 104.37
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1058.00 = 70549.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1057.00 TO NODE   1058.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) = 104.37
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.712
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       96.50      0.40       1.00    40
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A        0.70      0.40       0.50    32
  NATURAL FAIR COVER
  "OPEN BRUSH"               A       12.00      0.40       1.00    46
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     A       30.00      0.40       1.00    55
  NATURAL FAIR COVER
  "WOODLAND"                 A       91.00      0.40       1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       37.50      0.30       1.00    63
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.39
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  267.70
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.37;30M= 0.66;1H= 0.95;3H= 1.87;6H= 2.87;24H= 5.16
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.1%
           MOUNTAIN= 85.8%;FOOTHILL=  6.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.74; LAG(HR) = 1.39; Fm(INCH/HR) = 0.23; Ybar = 0.46
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.55; 30M = 0.58; 1HR = 0.59;
  3HR = 0.90; 6HR = 0.95; 24HR= 0.97
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  17690.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1058.00 = 70549.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0347; Lca/L=0.4,n=.0311; Lca/L=0.5,n=.0285;Lca/L=0.6,n=.0266
  TIME OF PEAK FLOW(HR) = 17.00  RUNOFF VOLUME(AF) =    4182.75
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5682.67
  TOTAL AREA(ACRES) =  17690.20       PEAK FLOW RATE(CFS) =    5711.93
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.35; 30M = 0.65; 1HR = 0.91; 3HR = 1.75; 6HR = 2.64; 24HR = 4.71

****************************************************************************
  FLOW PROCESS FROM NODE   1057.00 TO NODE   1058.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 104.37
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.830
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B        1.30      0.30      0.50    56
  NATURAL POOR COVER
  "BARREN"                   B        2.40      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B       17.50      0.30      1.00    69
  COMMERCIAL                 B        2.20      0.30      0.10    56
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B       15.70      0.30      1.00    72
  NATURAL FAIR COVER
  "WOODLAND"                 B      206.30      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  245.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.37;30M= 0.66;1H= 0.95;3H= 1.86;6H= 2.86;24H= 5.15
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.1%
           MOUNTAIN= 85.7%;FOOTHILL=  6.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.74; LAG(HR) = 1.39; Fm(INCH/HR) = 0.23; Ybar = 0.46
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.55; 30M = 0.57; 1HR = 0.59;
  3HR = 0.90; 6HR = 0.95; 24HR= 0.97
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  17935.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1058.00 = 70549.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0347; Lca/L=0.4,n=.0311; Lca/L=0.5,n=.0285;Lca/L=0.6,n=.0266
  TIME OF PEAK FLOW(HR) = 17.00  RUNOFF VOLUME(AF) =    4209.23
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5719.81
  TOTAL AREA(ACRES) =  17935.60       PEAK FLOW RATE(CFS) =    5719.81

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.35; 30M = 0.65; 1HR = 0.91; 3HR = 1.75; 6HR = 2.64; 24HR = 4.71

****************************************************************************
  FLOW PROCESS FROM NODE   1057.00 TO NODE   1058.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 104.37
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.830
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C     1027.50      0.25      1.00    75
  NATURAL FAIR COVER
  "MEADOWS"                  C        2.90      0.25      1.00    80
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        0.40      0.25      0.50    69
  NATURAL FAIR COVER
  "GRASS"                    C       17.00      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      163.50      0.25      1.00    77
  COMMERCIAL                 C        1.10      0.25      0.10    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1212.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.37;30M= 0.66;1H= 0.94;3H= 1.86;6H= 2.85;24H= 5.12
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.4%
           MOUNTAIN= 85.2%;FOOTHILL=  6.4%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.74; LAG(HR) = 1.39; Fm(INCH/HR) = 0.23; Ybar = 0.47
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.54; 30M = 0.56; 1HR = 0.58;
  3HR = 0.89; 6HR = 0.95; 24HR= 0.97
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  19148.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1058.00 = 70549.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0347; Lca/L=0.4,n=.0311; Lca/L=0.5,n=.0285;Lca/L=0.6,n=.0266
  TIME OF PEAK FLOW(HR) = 17.00  RUNOFF VOLUME(AF) =    4423.25
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5960.80
  TOTAL AREA(ACRES) =  19148.00       PEAK FLOW RATE(CFS) =    5960.80

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.35; 30M = 0.65; 1HR = 0.91; 3HR = 1.75; 6HR = 2.64; 24HR = 4.71

****************************************************************************
  FLOW PROCESS FROM NODE   1057.00 TO NODE   1058.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 104.37
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.830
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C      572.50      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C      252.80      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D     1472.40      0.20      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 D      295.00      0.20      1.00    79
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.90      0.20      0.50    75
  NATURAL FAIR COVER
  "GRASS"                    D        2.10      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 2595.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.37;30M= 0.66;1H= 0.94;3H= 1.84;6H= 2.82;24H= 5.07
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.8%
           MOUNTAIN= 84.4%;FOOTHILL=  6.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.74; LAG(HR) = 1.39; Fm(INCH/HR) = 0.23; Ybar = 0.47
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
```

```
  DEPTH-AREA FACTORS: 5M = 0.51; 30M = 0.54; 1HR = 0.55;
  3HR = 0.88; 6HR = 0.95; 24HR= 0.97
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  21743.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1058.00 = 70549.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0347; Lca/L=0.4,n=.0311; Lca/L=0.5,n=.0285;Lca/L=0.6,n=.0266
  TIME OF PEAK FLOW(HR) = 17.00  RUNOFF VOLUME(AF) =    4957.60
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6531.85
  TOTAL AREA(ACRES) =  21743.70       PEAK FLOW RATE(CFS) =    6531.85

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.35; 30M = 0.65; 1HR = 0.91; 3HR = 1.75; 6HR = 2.64; 24HR = 4.71

****************************************************************************
  FLOW PROCESS FROM NODE   1057.00 TO NODE   1058.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 104.37
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.830
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      407.80      0.20      1.00    83
  COMMERCIAL                 D        0.90      0.20      0.10    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D     1735.70      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 2144.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.37;30M= 0.66;1H= 0.94;3H= 1.84;6H= 2.81;24H= 5.04
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.1%
           MOUNTAIN= 83.8%;FOOTHILL=  7.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.74; LAG(HR) = 1.39; Fm(INCH/HR) = 0.23; Ybar = 0.46
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.49; 30M = 0.52; 1HR = 0.54;
  3HR = 0.87; 6HR = 0.94; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  23888.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1058.00 = 70549.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0347; Lca/L=0.4,n=.0311; Lca/L=0.5,n=.0285;Lca/L=0.6,n=.0266
  TIME OF PEAK FLOW(HR) = 17.00  RUNOFF VOLUME(AF) =    5466.90
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7045.88
  TOTAL AREA(ACRES) =  23888.10       PEAK FLOW RATE(CFS) =    7045.88

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.35; 30M = 0.65; 1HR = 0.91; 3HR = 1.75; 6HR = 2.64; 24HR = 4.71
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  23888.10  TC(MIN.) =    104.37
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.46
  PEAK FLOW RATE(CFS)   =   7045.88
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU59010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ======  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.070
        MOUNTAIN                           0.840
        VALLEY(UNDEVELOPED)/DESERT         0.080
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1058.00 TO NODE   1058.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU58010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     7045.88    Tc(MIN.) = 104.37
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.46
  TOTAL AREA(ACRES) =   23888.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1058.00 = 70549.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1058.00 TO NODE   1058.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     7045.88    Tc(MIN.) = 104.37
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.46
  TOTAL AREA(ACRES) =   23888.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1058.00 = 70549.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1058.00 TO NODE   1058.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1058.00 TO NODE   1059.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    657.00  DOWNSTREAM(FEET) =    630.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2185.00   CHANNEL SLOPE =  0.0124
  CHANNEL BASE(FEET) =   50.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   7045.88
  FLOW VELOCITY(FEET/SEC.) =  14.52   FLOW DEPTH(FEET) =   8.32
  TRAVEL TIME(MIN.) =   2.51   Tc(MIN.) = 106.88
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1059.00 = 72734.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1058.00 TO NODE   1059.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) = 106.88
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.702
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       21.30      0.40       1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"               A       15.80      0.40       1.00    46
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     A        8.90      0.40       1.00    55
  NATURAL FAIR COVER
  "WOODLAND"                 A       23.80      0.40       1.00    36
  COMMERCIAL                 B        0.70      0.30       0.10    56
  NATURAL FAIR COVER
  "WOODLAND"                 B        2.50      0.30       1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   73.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.37;30M= 0.66;1H= 0.94;3H= 1.83;6H= 2.80;24H= 5.04
```

```
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.1%
           MOUNTAIN= 83.8%;FOOTHILL=  7.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.78; LAG(HR) = 1.43; Fm(INCH/HR) = 0.23; Ybar = 0.46
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.49; 30M = 0.52; 1HR = 0.54;
  3HR = 0.87; 6HR = 0.94; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  23961.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1059.00 = 72734.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0345; Lca/L=0.4,n=.0310; Lca/L=0.5,n=.0284;Lca/L=0.6,n=.0265
  TIME OF PEAK FLOW(HR) = 17.00  RUNOFF VOLUME(AF) =    5463.59
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7003.62
  TOTAL AREA(ACRES) =  23961.10       PEAK FLOW RATE(CFS) =    7045.88
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.29; 30M = 0.61; 1HR = 0.83; 3HR = 1.48; 6HR = 2.13; 24HR = 3.67

****************************************************************************
  FLOW PROCESS FROM NODE   1058.00 TO NODE   1059.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 106.88
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.820
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      403.90      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        3.80      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C        7.00      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      145.40      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C      167.50      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C       36.90      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  764.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.36;30M= 0.66;1H= 0.93;3H= 1.82;6H= 2.78;24H= 4.99
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.1%
           MOUNTAIN= 83.8%;FOOTHILL=  7.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.78; LAG(HR) = 1.43; Fm(INCH/HR) = 0.23; Ybar = 0.46
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.48; 30M = 0.52; 1HR = 0.54;
  3HR = 0.87; 6HR = 0.94; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  24725.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1059.00 = 72734.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0345; Lca/L=0.4,n=.0310; Lca/L=0.5,n=.0284;Lca/L=0.6,n=.0265
  TIME OF PEAK FLOW(HR) = 17.00  RUNOFF VOLUME(AF) =    5545.94
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7095.23
  TOTAL AREA(ACRES) =  24725.60       PEAK FLOW RATE(CFS) =    7095.23

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.29; 30M = 0.61; 1HR = 0.83; 3HR = 1.48; 6HR = 2.13; 24HR = 3.67

****************************************************************************
  FLOW PROCESS FROM NODE   1058.00 TO NODE   1059.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 106.88
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.820
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      289.70      0.20      1.00    81
  NATURAL FAIR COVER
  "MEADOWS"                  D        0.20      0.20      1.00    84
  NATURAL FAIR COVER
  "GRASS"                    D        0.10      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      117.70      0.20      1.00    83
  COMMERCIAL                 D        3.40      0.20      0.10    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D      287.30      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  698.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.36;30M= 0.66;1H= 0.93;3H= 1.81;6H= 2.77;24H= 4.96
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.1%
           MOUNTAIN= 83.8%;FOOTHILL=  7.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.78; LAG(HR) = 1.43; Fm(INCH/HR) = 0.23; Ybar = 0.46
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.48; 30M = 0.51; 1HR = 0.53;
  3HR = 0.87; 6HR = 0.94; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  25424.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1059.00 = 72734.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0345; Lca/L=0.4,n=.0310; Lca/L=0.5,n=.0284;Lca/L=0.6,n=.0265
  TIME OF PEAK FLOW(HR) = 17.00  RUNOFF VOLUME(AF) =    5652.82
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7205.70
  TOTAL AREA(ACRES) =  25424.00       PEAK FLOW RATE(CFS) =    7205.70

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.29; 30M = 0.61; 1HR = 0.83; 3HR = 1.48; 6HR = 2.13; 24HR = 3.67

****************************************************************************
  FLOW PROCESS FROM NODE   1058.00 TO NODE   1059.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 106.88
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.820
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 D       45.00      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   45.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.36;30M= 0.66;1H= 0.93;3H= 1.81;6H= 2.76;24H= 4.96
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.1%
           MOUNTAIN= 83.8%;FOOTHILL=  7.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.78; LAG(HR) = 1.43; Fm(INCH/HR) = 0.23; Ybar = 0.46
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.48; 30M = 0.51; 1HR = 0.53;
  3HR = 0.87; 6HR = 0.94; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  25469.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1059.00 = 72734.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0345; Lca/L=0.4,n=.0310; Lca/L=0.5,n=.0284;Lca/L=0.6,n=.0265
  TIME OF PEAK FLOW(HR) = 17.00  RUNOFF VOLUME(AF) =    5658.58
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7212.17
  TOTAL AREA(ACRES) =  25469.00       PEAK FLOW RATE(CFS) =    7212.17
```

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  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.29; 30M = 0.61; 1HR = 0.83; 3HR = 1.48; 6HR = 2.13; 24HR = 3.67
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  25469.00  TC(MIN.) =    106.88
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.46
  PEAK FLOW RATE(CFS)   =   7212.17
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU60010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ======  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.070
        MOUNTAIN                           0.840
        VALLEY(UNDEVELOPED)/DESERT         0.080
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1059.00 TO NODE   1059.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU59010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     7212.17    Tc(MIN.) = 106.88
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.46
  TOTAL AREA(ACRES) =   25469.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1059.00 = 72734.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1059.00 TO NODE   1059.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     7212.17    Tc(MIN.) = 106.88
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.46
  TOTAL AREA(ACRES) =   25469.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1059.00 = 72734.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1059.00 TO NODE   1059.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1059.00 TO NODE   1060.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    630.00  DOWNSTREAM(FEET) =    518.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  7828.00   CHANNEL SLOPE =  0.0143
  CHANNEL BASE(FEET) =   50.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   7212.17
  FLOW VELOCITY(FEET/SEC.) =  15.38   FLOW DEPTH(FEET) =   8.07
  TRAVEL TIME(MIN.) =   8.48   Tc(MIN.) = 115.36
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1060.00 = 80562.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1059.00 TO NODE   1060.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) = 115.36
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.672
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       37.80      0.40      1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"               A      124.10      0.40      1.00    46
  COMMERCIAL                 A        3.70      0.40      0.10    32
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     A        0.20      0.40      1.00    55
  NATURAL FAIR COVER
  "WOODLAND"                 A       68.90      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       17.60      0.30      1.00    63
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.39
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  252.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.36;30M= 0.65;1H= 0.93;3H= 1.81;6H= 2.76;24H= 4.94
```

```
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.1%
           MOUNTAIN= 83.8%;FOOTHILL=  7.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.92; LAG(HR) = 1.54; Fm(INCH/HR) = 0.23; Ybar = 0.47
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.47; 30M = 0.51; 1HR = 0.53;
  3HR = 0.86; 6HR = 0.94; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  25721.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1060.00 = 80562.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0341; Lca/L=0.4,n=.0306; Lca/L=0.5,n=.0281;Lca/L=0.6,n=.0262
  TIME OF PEAK FLOW(HR) = 17.25  RUNOFF VOLUME(AF) =    5615.81
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6850.90
  TOTAL AREA(ACRES) =  25721.30       PEAK FLOW RATE(CFS) =    7212.17
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1059.00 TO NODE   1060.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 115.36
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.788
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B        1.30      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       11.80      0.30      1.00    66
  COMMERCIAL                 B        5.10      0.30      0.10    56
  NATURAL FAIR COVER
  "WOODLAND"                 B       18.00      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      209.70      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        2.50      0.25      1.00    91
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  248.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.36;30M= 0.65;1H= 0.93;3H= 1.80;6H= 2.75;24H= 4.92
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.1%
           MOUNTAIN= 83.8%;FOOTHILL=  7.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.92; LAG(HR) = 1.54; Fm(INCH/HR) = 0.23; Ybar = 0.47
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.47; 30M = 0.51; 1HR = 0.53;
  3HR = 0.86; 6HR = 0.94; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  25969.71
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1060.00 = 80562.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0341; Lca/L=0.4,n=.0306; Lca/L=0.5,n=.0281;Lca/L=0.6,n=.0262
  TIME OF PEAK FLOW(HR) = 17.25  RUNOFF VOLUME(AF) =    5628.67
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6867.78
  TOTAL AREA(ACRES) =  25969.71       PEAK FLOW RATE(CFS) =    7212.17
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1059.00 TO NODE   1060.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 115.36
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.788
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C       28.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      502.60      0.25      1.00    77
  COMMERCIAL                 C        1.30      0.25      0.10    69
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        6.10      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C        9.90      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       46.10      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  594.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.36;30M= 0.65;1H= 0.92;3H= 1.79;6H= 2.73;24H= 4.88
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.1%
           MOUNTAIN= 83.8%;FOOTHILL=  7.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.92; LAG(HR) = 1.54; Fm(INCH/HR) = 0.23; Ybar = 0.47
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.47; 30M = 0.50; 1HR = 0.52;
  3HR = 0.86; 6HR = 0.94; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  26564.11
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1060.00 = 80562.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0341; Lca/L=0.4,n=.0306; Lca/L=0.5,n=.0281;Lca/L=0.6,n=.0262
  TIME OF PEAK FLOW(HR) = 17.25  RUNOFF VOLUME(AF) =    5669.87
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6915.44
  TOTAL AREA(ACRES) =  26564.11       PEAK FLOW RATE(CFS) =    7212.17
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1059.00 TO NODE   1060.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 115.36
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.788
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D       30.10      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      129.80      0.20      1.00    83
  COMMERCIAL                 D        1.70      0.20      0.10    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       38.00      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       91.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  290.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.36;30M= 0.65;1H= 0.92;3H= 1.79;6H= 2.72;24H= 4.86
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.1%
           MOUNTAIN= 83.8%;FOOTHILL=  7.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.92; LAG(HR) = 1.54; Fm(INCH/HR) = 0.23; Ybar = 0.47
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.47; 30M = 0.50; 1HR = 0.52;
  3HR = 0.86; 6HR = 0.94; 24HR= 0.96
```

```
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  26854.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1060.00 = 80562.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0341; Lca/L=0.4,n=.0306; Lca/L=0.5,n=.0281;Lca/L=0.6,n=.0262
  TIME OF PEAK FLOW(HR) = 17.25  RUNOFF VOLUME(AF) =    5700.16
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6948.80
  TOTAL AREA(ACRES) =  26854.80       PEAK FLOW RATE(CFS) =    7212.17
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  26854.80  TC(MIN.) =    115.36
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.47
  PEAK FLOW RATE(CFS)   =   7212.17
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
        (c) Copyright 1983-2003 Advanced Engineering Software (aes)
            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: LU61010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.130
        MOUNTAIN                           0.660
        VALLEY(UNDEVELOPED)/DESERT         0.200
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1060.00 TO NODE   1060.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU60010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     7212.17    Tc(MIN.) = 115.36
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.47
  TOTAL AREA(ACRES) =   26854.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1060.00 = 80562.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1060.00 TO NODE   1060.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     7212.17    Tc(MIN.) = 115.36
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.47
  TOTAL AREA(ACRES) =   26854.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1060.00 = 80562.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1060.00 TO NODE   1060.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1060.00 TO NODE   1061.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    518.00  DOWNSTREAM(FEET) =    435.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  8004.00   CHANNEL SLOPE =  0.0104
  CHANNEL BASE(FEET) =   55.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   7212.17
  FLOW VELOCITY(FEET/SEC.) =  13.53   FLOW DEPTH(FEET) =   8.40
  TRAVEL TIME(MIN.) =   9.86   Tc(MIN.) = 125.22
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1061.00 = 88566.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1060.00 TO NODE   1061.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) = 125.22
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.641
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       72.70      0.40       1.00    40
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A        9.10      0.40       0.50    32
  NATURAL POOR COVER
  "BARREN"                   A        0.20      0.40       1.00    78
  NATURAL FAIR COVER
  "GRASS"                    A        4.00      0.40       1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A       97.50      0.40       1.00    46
  COMMERCIAL                 A        8.10      0.40       0.10    32
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.94
  SUBAREA AREA(ACRES) =  191.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.35;30M= 0.65;1H= 0.92;3H= 1.79;6H= 2.71;24H= 4.85
```

```
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.2%
           MOUNTAIN= 83.7%;FOOTHILL=  7.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.09; LAG(HR) = 1.67; Fm(INCH/HR) = 0.23; Ybar = 0.48
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.46; 30M = 0.50; 1HR = 0.52;
  3HR = 0.86; 6HR = 0.94; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  27046.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1061.00 = 88566.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0340; Lca/L=0.4,n=.0305; Lca/L=0.5,n=.0280;Lca/L=0.6,n=.0262
  TIME OF PEAK FLOW(HR) = 17.25  RUNOFF VOLUME(AF) =    5697.81
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6823.82
  TOTAL AREA(ACRES) =  27046.40       PEAK FLOW RATE(CFS) =    7212.17
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.30; 30M = 0.62; 1HR = 0.84; 3HR = 1.52; 6HR = 2.22; 24HR = 3.85

****************************************************************************
  FLOW PROCESS FROM NODE   1060.00 TO NODE   1061.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 125.22
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     A        8.70      0.40      1.00    55
  NATURAL FAIR COVER
  "WOODLAND"                 A       70.50      0.40      1.00    36
  NATURAL FAIR COVER
  "GRASS"                    B        0.80      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       18.30      0.30      1.00    66
  COMMERCIAL                 B        2.90      0.30      0.10    56
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        1.60      0.30      1.00    72
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.38
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =  102.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.35;30M= 0.65;1H= 0.92;3H= 1.78;6H= 2.71;24H= 4.85
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.2%
           MOUNTAIN= 83.6%;FOOTHILL=  7.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.09; LAG(HR) = 1.67; Fm(INCH/HR) = 0.23; Ybar = 0.48
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.46; 30M = 0.50; 1HR = 0.52;
  3HR = 0.86; 6HR = 0.94; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  27149.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1061.00 = 88566.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0340; Lca/L=0.4,n=.0305; Lca/L=0.5,n=.0280;Lca/L=0.6,n=.0262
  TIME OF PEAK FLOW(HR) = 17.25  RUNOFF VOLUME(AF) =    5696.65
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6824.19
  TOTAL AREA(ACRES) =  27149.20       PEAK FLOW RATE(CFS) =    7212.17
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.30; 30M = 0.62; 1HR = 0.84; 3HR = 1.52; 6HR = 2.22; 24HR = 3.85

****************************************************************************
  FLOW PROCESS FROM NODE   1060.00 TO NODE   1061.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 125.22
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 B       16.20      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C     1119.80      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C       17.10      0.25      0.50    69
  NATURAL POOR COVER
  "BARREN"                   C       18.20      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C      128.60      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      739.90      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 2039.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.35;30M= 0.65;1H= 0.92;3H= 1.77;6H= 2.68;24H= 4.78
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  9.0%
           MOUNTAIN= 82.4%;FOOTHILL=  7.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.09; LAG(HR) = 1.67; Fm(INCH/HR) = 0.23; Ybar = 0.48
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.45; 30M = 0.49; 1HR = 0.51;
  3HR = 0.85; 6HR = 0.93; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  29189.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1061.00 = 88566.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0340; Lca/L=0.4,n=.0305; Lca/L=0.5,n=.0280;Lca/L=0.6,n=.0262
  TIME OF PEAK FLOW(HR) = 17.25  RUNOFF VOLUME(AF) =    5934.99
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7061.22
  TOTAL AREA(ACRES) =  29189.00       PEAK FLOW RATE(CFS) =    7212.17
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.30; 30M = 0.62; 1HR = 0.84; 3HR = 1.52; 6HR = 2.22; 24HR = 3.85

****************************************************************************
  FLOW PROCESS FROM NODE   1060.00 TO NODE   1061.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 125.22
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 C        0.10      0.25      0.10    69
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C      195.30      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C      132.20      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D     1067.40      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D       23.60      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D       34.20      0.20      1.00    93
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) = 1452.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.35;30M= 0.65;1H= 0.91;3H= 1.75;6H= 2.65;24H= 4.73
```

```
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  9.5%
           MOUNTAIN= 81.6%;FOOTHILL=  7.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.09; LAG(HR) = 1.67; Fm(INCH/HR) = 0.23; Ybar = 0.49
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.44; 30M = 0.48; 1HR = 0.50;
  3HR = 0.85; 6HR = 0.93; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  30641.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1061.00 = 88566.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0340; Lca/L=0.4,n=.0305; Lca/L=0.5,n=.0280;Lca/L=0.6,n=.0262
  TIME OF PEAK FLOW(HR) = 17.25  RUNOFF VOLUME(AF) =    6148.28
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7266.02
  TOTAL AREA(ACRES) =  30641.80       PEAK FLOW RATE(CFS) =    7266.02

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.30; 30M = 0.62; 1HR = 0.84; 3HR = 1.52; 6HR = 2.22; 24HR = 3.85

****************************************************************************
  FLOW PROCESS FROM NODE   1060.00 TO NODE   1061.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 125.22
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D       99.70      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      651.20      0.20      1.00    83
  COMMERCIAL                 D        3.60      0.20      0.10    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D      574.70      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D      210.30      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1539.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.35;30M= 0.65;1H= 0.91;3H= 1.74;6H= 2.63;24H= 4.69
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT= 10.0%
           MOUNTAIN= 80.9%;FOOTHILL=  8.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.09; LAG(HR) = 1.67; Fm(INCH/HR) = 0.23; Ybar = 0.48
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.43; 30M = 0.47; 1HR = 0.49;
  3HR = 0.84; 6HR = 0.93; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  32181.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1061.00 = 88566.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0340; Lca/L=0.4,n=.0305; Lca/L=0.5,n=.0280;Lca/L=0.6,n=.0262
  TIME OF PEAK FLOW(HR) = 17.25  RUNOFF VOLUME(AF) =    6400.70
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7499.40
  TOTAL AREA(ACRES) =  32181.30       PEAK FLOW RATE(CFS) =    7499.40

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.30; 30M = 0.62; 1HR = 0.84; 3HR = 1.52; 6HR = 2.22; 24HR = 3.85
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  32181.30  TC(MIN.) =    125.22
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.48
  PEAK FLOW RATE(CFS)   =   7499.40
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
 ************************************************************************
             RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
            (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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              Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                          Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

 ----------------------------------------------------------------------------
  FILE NAME: LU62010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
 ============================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
 ============================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.310
        MOUNTAIN                           0.260
        VALLEY(UNDEVELOPED)/DESERT         0.420
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


 ************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1061.00 IS CODE = 15.1
 ----------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
 ============================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU61010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     7499.40    Tc(MIN.) = 125.22
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.48
  TOTAL AREA(ACRES) =   32181.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1061.00 = 88566.00 FEET.

 ************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1061.00 IS CODE = 14.0
 ----------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
 ============================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     7499.40    Tc(MIN.) = 125.22
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.48
  TOTAL AREA(ACRES) =   32181.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1061.00 = 88566.00 FEET.

 ************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1061.00 IS CODE =  12
 ----------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
 ============================================================================

 ************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1062.00 IS CODE =  51
 ----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
 ============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    435.00  DOWNSTREAM(FEET) =    345.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  8275.00   CHANNEL SLOPE =  0.0109
  CHANNEL BASE(FEET) =   60.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   7499.40
  FLOW VELOCITY(FEET/SEC.) =  13.67   FLOW DEPTH(FEET) =   8.06
  TRAVEL TIME(MIN.) =  10.09   Tc(MIN.) = 135.31
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.

 ************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1062.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) = 135.31
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.613
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       36.50      0.40       1.00    40
  NATURAL FAIR COVER
  "WOODLAND"                 A      444.40      0.40       1.00    36
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A        1.00      0.40       0.50    32
  NATURAL POOR COVER
  "BARREN"                   A        6.90      0.40       1.00    78
  NATURAL FAIR COVER
  "GRASS"                    A       60.30      0.40       1.00    50
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 A        2.20      0.40       1.00    44
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  551.30
  UNIT-HYDROGRAPH DATA:
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  RAINFALL(INCH): 5M= 0.35;30M= 0.65;1H= 0.91;3H= 1.74;6H= 2.63;24H= 4.67
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT= 10.6%
           MOUNTAIN= 79.9%;FOOTHILL=  8.5%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.26; LAG(HR) = 1.80; Fm(INCH/HR) = 0.23; Ybar = 0.49
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.43; 30M = 0.46; 1HR = 0.49;
  3HR = 0.84; 6HR = 0.93; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  32732.61
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0340; Lca/L=0.4,n=.0305; Lca/L=0.5,n=.0280;Lca/L=0.6,n=.0261
  TIME OF PEAK FLOW(HR) = 17.25  RUNOFF VOLUME(AF) =    6375.14
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7278.44
  TOTAL AREA(ACRES) =  32732.61       PEAK FLOW RATE(CFS) =    7499.40
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.29; 30M = 0.61; 1HR = 0.83; 3HR = 1.48; 6HR = 2.14; 24HR = 3.69

****************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1062.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 135.31
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  URBAN FAIR COVER
  "TURF"                     A        1.30      0.40      1.00    44
  NATURAL FAIR COVER
  "OPEN BRUSH"               A      138.50      0.40      1.00    46
  COMMERCIAL                 A        5.60      0.40      0.10    32
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     A        1.80      0.40      1.00    55
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       13.80      0.30      1.00    63
  AGRICULTURAL POOR COVER
  "FALLOW"                   B        2.70      0.30      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.39
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =  163.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.34;30M= 0.65;1H= 0.91;3H= 1.74;6H= 2.62;24H= 4.67
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT= 10.7%
           MOUNTAIN= 79.7%;FOOTHILL=  8.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.26; LAG(HR) = 1.80; Fm(INCH/HR) = 0.23; Ybar = 0.49
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.42; 30M = 0.46; 1HR = 0.49;
  3HR = 0.84; 6HR = 0.93; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  32896.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0340; Lca/L=0.4,n=.0305; Lca/L=0.5,n=.0280;Lca/L=0.6,n=.0261
  TIME OF PEAK FLOW(HR) = 17.25  RUNOFF VOLUME(AF) =    6372.72
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7276.97
  TOTAL AREA(ACRES) =  32896.30       PEAK FLOW RATE(CFS) =    7499.40
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.29; 30M = 0.61; 1HR = 0.83; 3HR = 1.48; 6HR = 2.14; 24HR = 3.69

****************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1062.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
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============================================================================
  MAINLINE Tc(MIN) = 135.31
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B        2.30      0.30      0.50    56
  NATURAL POOR COVER
  "BARREN"                   B        5.00      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B       51.10      0.30      1.00    69
  URBAN FAIR COVER
  "TURF"                     B       10.00      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B      258.20      0.30      1.00    66
  COMMERCIAL                 B       64.50      0.30      0.10    56
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.85
  SUBAREA AREA(ACRES) =  391.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.34;30M= 0.65;1H= 0.91;3H= 1.73;6H= 2.62;24H= 4.66
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT= 11.1%
           MOUNTAIN= 79.0%;FOOTHILL=  8.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.26; LAG(HR) = 1.80; Fm(INCH/HR) = 0.23; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.42; 30M = 0.46; 1HR = 0.49;
  3HR = 0.84; 6HR = 0.93; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  33287.41
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0340; Lca/L=0.4,n=.0305; Lca/L=0.5,n=.0280;Lca/L=0.6,n=.0261
  TIME OF PEAK FLOW(HR) = 17.25  RUNOFF VOLUME(AF) =    6406.40
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7310.99
  TOTAL AREA(ACRES) =  33287.41       PEAK FLOW RATE(CFS) =    7499.40
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.29; 30M = 0.61; 1HR = 0.83; 3HR = 1.48; 6HR = 2.14; 24HR = 3.69

****************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1062.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 135.31
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  PUBLIC PARK                B        6.20      0.30      0.85    56
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B       17.10      0.30      1.00    72
  NATURAL FAIR COVER
  "WOODLAND"                 B       74.10      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C     1292.00      0.25      1.00    75
  NATURAL FAIR COVER
  "WOODLAND"                 C      636.80      0.25      1.00    73
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        6.90      0.25      0.50    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 2033.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.34;30M= 0.64;1H= 0.90;3H= 1.72;6H= 2.59;24H= 4.60
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  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT= 12.9%
           MOUNTAIN= 76.0%;FOOTHILL= 10.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.26; LAG(HR) = 1.80; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.41; 30M = 0.45; 1HR = 0.48;
  3HR = 0.83; 6HR = 0.92; 24HR= 0.95
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  35320.51
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0340; Lca/L=0.4,n=.0305; Lca/L=0.5,n=.0280;Lca/L=0.6,n=.0261
  TIME OF PEAK FLOW(HR) = 17.25  RUNOFF VOLUME(AF) =    6593.59
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7492.01
  TOTAL AREA(ACRES) =  35320.51       PEAK FLOW RATE(CFS) =    7499.40
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.29; 30M = 0.61; 1HR = 0.83; 3HR = 1.48; 6HR = 2.14; 24HR = 3.69

****************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1062.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 135.31
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   C       40.70      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C      190.10      0.25      1.00    79
  URBAN FAIR COVER
  "TURF"                     C       87.00      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"               C     2310.80      0.25      1.00    77
  COMMERCIAL                 C      161.30      0.25      0.10    69
  PUBLIC PARK                C        8.70      0.25      0.85    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.95
  SUBAREA AREA(ACRES) = 2798.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.34;30M= 0.64;1H= 0.90;3H= 1.70;6H= 2.56;24H= 4.53
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT= 15.0%
           MOUNTAIN= 72.3%;FOOTHILL= 11.7%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.26; LAG(HR) = 1.80; Fm(INCH/HR) = 0.24; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.40; 30M = 0.44; 1HR = 0.47;
  3HR = 0.82; 6HR = 0.92; 24HR= 0.95
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  38119.11
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0340; Lca/L=0.4,n=.0305; Lca/L=0.5,n=.0280;Lca/L=0.6,n=.0261
  TIME OF PEAK FLOW(HR) = 17.25  RUNOFF VOLUME(AF) =    6920.82
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7793.51
  TOTAL AREA(ACRES) =  38119.11       PEAK FLOW RATE(CFS) =    7793.51

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.29; 30M = 0.61; 1HR = 0.83; 3HR = 1.48; 6HR = 2.14; 24HR = 3.69

****************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1062.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 135.31
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C      389.30      0.25      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D     1418.60      0.20      1.00    81
  NATURAL FAIR COVER
  "MEADOWS"                  D        3.10      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                 D      963.30      0.20      1.00    79
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.80      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D       84.90      0.20      1.00    93
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 2860.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.33;30M= 0.64;1H= 0.89;3H= 1.69;6H= 2.53;24H= 4.48
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT= 16.9%
           MOUNTAIN= 69.1%;FOOTHILL= 13.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.26; LAG(HR) = 1.80; Fm(INCH/HR) = 0.23; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.38; 30M = 0.43; 1HR = 0.46;
  3HR = 0.81; 6HR = 0.92; 24HR= 0.95
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  40979.11
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0340; Lca/L=0.4,n=.0305; Lca/L=0.5,n=.0280;Lca/L=0.6,n=.0261
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =    7296.49
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8192.21
  TOTAL AREA(ACRES) =  40979.11       PEAK FLOW RATE(CFS) =    8192.21

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.29; 30M = 0.61; 1HR = 0.83; 3HR = 1.48; 6HR = 2.14; 24HR = 3.69

****************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1062.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 135.31
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D      865.20      0.20      1.00    84
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 D        0.20      0.20      1.00    82
  URBAN FAIR COVER
  "TURF"                     D       57.80      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D     2760.50      0.20      1.00    83
  COMMERCIAL                 D      225.30      0.20      0.10    75
  PUBLIC PARK                D        2.90      0.20      0.85    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.95
  SUBAREA AREA(ACRES) = 3911.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.33;30M= 0.64;1H= 0.89;3H= 1.67;6H= 2.49;24H= 4.41
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT= 19.1%
           MOUNTAIN= 65.3%;FOOTHILL= 14.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.26; LAG(HR) = 1.80; Fm(INCH/HR) = 0.23; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
```

```
  DEPTH-AREA FACTORS: 5M = 0.36; 30M = 0.41; 1HR = 0.45;
  3HR = 0.80; 6HR = 0.91; 24HR= 0.95
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  44891.01
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0340; Lca/L=0.4,n=.0305; Lca/L=0.5,n=.0280;Lca/L=0.6,n=.0261
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =    7893.82
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8796.26
  TOTAL AREA(ACRES) =  44891.01       PEAK FLOW RATE(CFS) =    8796.26

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.29; 30M = 0.61; 1HR = 0.83; 3HR = 1.48; 6HR = 2.14; 24HR = 3.69

****************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1062.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 135.31
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL GOOD COVER
  "MEADOWS"                  D        0.20      0.20      1.00    78
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D     1546.10      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1546.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.33;30M= 0.64;1H= 0.88;3H= 1.66;6H= 2.48;24H= 4.38
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT= 19.9%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.26; LAG(HR) = 1.80; Fm(INCH/HR) = 0.23; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.36; 30M = 0.41; 1HR = 0.44;
  3HR = 0.79; 6HR = 0.91; 24HR= 0.95
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  46437.31
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0340; Lca/L=0.4,n=.0305; Lca/L=0.5,n=.0280;Lca/L=0.6,n=.0261
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =    8143.72
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9034.05
  TOTAL AREA(ACRES) =  46437.31       PEAK FLOW RATE(CFS) =    9034.05

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.29; 30M = 0.61; 1HR = 0.83; 3HR = 1.48; 6HR = 2.14; 24HR = 3.69
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  46437.31  TC(MIN.) =    135.31
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.50
  PEAK FLOW RATE(CFS)   =   9034.05
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

TECHNICAL APPENDIX I-A
HYDROLOGIC ANALYSIS
UPSTREAM AREAS
100-YEAR EXPECTED VALUE

```
******************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
        (c) Copyright 1983-2003 Advanced Engineering Software (aes)
            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

------------------------------------------------------------------------------
  FILE NAME: LU35100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
==============================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==============================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.030
        MOUNTAIN                           0.920
        VALLEY(UNDEVELOPED)/DESERT         0.050
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


******************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1001.00 IS CODE =  21
------------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
==============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   330.00
  ELEVATION DATA: UPSTREAM(FEET) =   3210.00  DOWNSTREAM(FEET) =   3190.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   12.581
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.647
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        1.30      0.25      1.00    75   12.58
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      3.97
  TOTAL AREA(ACRES) =      1.30   PEAK FLOW RATE(CFS) =      3.97

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

******************************************************************************
  FLOW PROCESS FROM NODE   1001.00 TO NODE   1002.00 IS CODE =  51
------------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3190.00  DOWNSTREAM(FEET) =   3175.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   154.00   CHANNEL SLOPE =  0.0974
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      3.97
  FLOW VELOCITY(FEET/SEC.) =   4.53   FLOW DEPTH(FEET) =   0.56
  TRAVEL TIME(MIN.) =   0.57   Tc(MIN.) =  13.15
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1002.00 =   484.00 FEET.

******************************************************************************
  FLOW PROCESS FROM NODE   1001.00 TO NODE   1002.00 IS CODE =  81
------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==============================================================================
  MAINLINE Tc(MIN) =  13.15
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.871
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        1.20      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.20      SUBAREA RUNOFF(CFS) =    3.91
  EFFECTIVE AREA(ACRES) =      2.50   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      2.50       PEAK FLOW RATE(CFS) =       8.15

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

******************************************************************************
  FLOW PROCESS FROM NODE   1002.00 TO NODE   1003.00 IS CODE =  51
------------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3175.00  DOWNSTREAM(FEET) =   3160.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   136.00   CHANNEL SLOPE =  0.1103
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
```

```
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      8.15
  FLOW VELOCITY(FEET/SEC.) =   5.69   FLOW DEPTH(FEET) =   0.80
  TRAVEL TIME(MIN.) =   0.40   Tc(MIN.) =  13.55
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1003.00 =   620.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1002.00 TO NODE   1003.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  13.55
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.791
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.30      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        2.10      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    2.40      SUBAREA RUNOFF(CFS) =    7.63
  EFFECTIVE AREA(ACRES) =      4.90   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      4.90       PEAK FLOW RATE(CFS) =      15.60

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1003.00 TO NODE   1004.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3160.00  DOWNSTREAM(FEET) =   3120.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   357.00   CHANNEL SLOPE =  0.1120
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     15.60
  FLOW VELOCITY(FEET/SEC.) =   6.60   FLOW DEPTH(FEET) =   0.83
  TRAVEL TIME(MIN.) =   0.90   Tc(MIN.) =  14.45
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1004.00 =   977.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1003.00 TO NODE   1004.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  14.45
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.611
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.10      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        3.20      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.30      SUBAREA RUNOFF(CFS) =    9.98
  EFFECTIVE AREA(ACRES) =      8.20   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      8.20       PEAK FLOW RATE(CFS) =      24.78

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1004.00 TO NODE   1005.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3120.00  DOWNSTREAM(FEET) =   3100.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   332.00   CHANNEL SLOPE =  0.0602
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     24.78
  FLOW VELOCITY(FEET/SEC.) =   5.97   FLOW DEPTH(FEET) =   1.27
  TRAVEL TIME(MIN.) =   0.93   Tc(MIN.) =  15.37
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1005.00 =  1309.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1004.00 TO NODE   1005.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  15.37
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.444
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        5.50      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    5.50      SUBAREA RUNOFF(CFS) =   15.81
  EFFECTIVE AREA(ACRES) =     13.70   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     13.70       PEAK FLOW RATE(CFS) =      39.36

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1005.00 TO NODE   1006.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3100.00  DOWNSTREAM(FEET) =   3080.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   195.00   CHANNEL SLOPE =  0.1026
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     39.36
  FLOW VELOCITY(FEET/SEC.) =   8.21   FLOW DEPTH(FEET) =   1.41
  TRAVEL TIME(MIN.) =   0.40   Tc(MIN.) =  15.77
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1006.00 =  1504.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1005.00 TO NODE   1006.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  15.77
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.385
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        7.80      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    7.80      SUBAREA RUNOFF(CFS) =   22.00
```

```
  EFFECTIVE AREA(ACRES) =     21.50   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     21.50       PEAK FLOW RATE(CFS) =      60.64

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1006.00 TO NODE   1007.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3080.00  DOWNSTREAM(FEET) =   3075.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   220.00   CHANNEL SLOPE =  0.0227
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     60.64
  FLOW VELOCITY(FEET/SEC.) =   5.20   FLOW DEPTH(FEET) =   2.23
  TRAVEL TIME(MIN.) =   0.71   Tc(MIN.) =  16.48
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1007.00 =  1724.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1006.00 TO NODE   1007.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.48
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.279
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       10.10      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   10.10      SUBAREA RUNOFF(CFS) =   27.53
  EFFECTIVE AREA(ACRES) =     31.60   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     31.60       PEAK FLOW RATE(CFS) =      86.12

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1007.00 TO NODE   1008.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3075.00  DOWNSTREAM(FEET) =   3060.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   340.00   CHANNEL SLOPE =  0.0441
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     86.12
  FLOW VELOCITY(FEET/SEC.) =   7.30   FLOW DEPTH(FEET) =   2.25
  TRAVEL TIME(MIN.) =   0.78   Tc(MIN.) =  17.25
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1008.00 =  2064.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1007.00 TO NODE   1008.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.25
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.162
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
```

```
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       14.60      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        4.60      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   19.20      SUBAREA RUNOFF(CFS) =   49.67
  EFFECTIVE AREA(ACRES) =     50.80   AREA-AVERAGED Fm(INCH/HR) =  0.26
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     50.80       PEAK FLOW RATE(CFS) =     132.48

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1008.00 TO NODE   1009.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3060.00  DOWNSTREAM(FEET) =   3040.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   409.00   CHANNEL SLOPE =  0.0489
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    132.48
  FLOW VELOCITY(FEET/SEC.) =   8.40   FLOW DEPTH(FEET) =   2.45
  TRAVEL TIME(MIN.) =   0.81   Tc(MIN.) =  18.06
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1009.00 =  2473.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1008.00 TO NODE   1009.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.06
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.041
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        9.60      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       22.90      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   32.50      SUBAREA RUNOFF(CFS) =   81.19
  EFFECTIVE AREA(ACRES) =     83.30   AREA-AVERAGED Fm(INCH/HR) =  0.26
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     83.30       PEAK FLOW RATE(CFS) =     208.10

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1009.00 TO NODE   1010.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3040.00  DOWNSTREAM(FEET) =   3000.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1354.00   CHANNEL SLOPE =  0.0295
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    208.10
  FLOW VELOCITY(FEET/SEC.) =   7.80   FLOW DEPTH(FEET) =   3.24
  TRAVEL TIME(MIN.) =   2.89   Tc(MIN.) =  20.96
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1010.00 =  3827.00 FEET.
```

```
****************************************************************************
  FLOW PROCESS FROM NODE   1009.00 TO NODE   1010.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  20.96
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.688
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       22.50      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       20.80      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   43.30      SUBAREA RUNOFF(CFS) =   93.99
  EFFECTIVE AREA(ACRES) =    126.60   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    126.60       PEAK FLOW RATE(CFS) =     275.64

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1010.00 TO NODE   1011.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3000.00  DOWNSTREAM(FEET) =   2960.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1293.00   CHANNEL SLOPE =  0.0309
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    275.64
  FLOW VELOCITY(FEET/SEC.) =   8.53   FLOW DEPTH(FEET) =   3.71
  TRAVEL TIME(MIN.) =   2.53   Tc(MIN.) =  23.48
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1011.00 =  5120.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1010.00 TO NODE   1011.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  23.48
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.524
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       24.80      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       52.80      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   77.60      SUBAREA RUNOFF(CFS) =  157.67
  EFFECTIVE AREA(ACRES) =    204.20   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    204.20       PEAK FLOW RATE(CFS) =     414.59

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1011.00 TO NODE   1012.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2960.00  DOWNSTREAM(FEET) =   2940.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   900.00   CHANNEL SLOPE =  0.0222
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    414.59
  FLOW VELOCITY(FEET/SEC.) =   8.35   FLOW DEPTH(FEET) =   4.66
  TRAVEL TIME(MIN.) =   1.80   Tc(MIN.) =  25.28
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1012.00 =  6020.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1011.00 TO NODE   1012.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  25.28
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.407
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       10.90      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       15.10      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   26.00      SUBAREA RUNOFF(CFS) =   49.98
  EFFECTIVE AREA(ACRES) =    230.20   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    230.20       PEAK FLOW RATE(CFS) =     443.12

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1012.00 TO NODE   1013.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2940.00  DOWNSTREAM(FEET) =   2920.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   830.00   CHANNEL SLOPE =  0.0241
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    443.12
  FLOW VELOCITY(FEET/SEC.) =   8.76   FLOW DEPTH(FEET) =   4.72
  TRAVEL TIME(MIN.) =   1.58   Tc(MIN.) =  26.86
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1013.00 =  6850.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1012.00 TO NODE   1013.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  26.86
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.304
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        3.20      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       21.50      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   24.70      SUBAREA RUNOFF(CFS) =   45.52
  EFFECTIVE AREA(ACRES) =    254.90   AREA-AVERAGED Fm(INCH/HR) =  0.27
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  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    254.90       PEAK FLOW RATE(CFS) =     467.37

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1013.00 TO NODE   1014.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2920.00  DOWNSTREAM(FEET) =   2905.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   564.00   CHANNEL SLOPE =  0.0266
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    467.37
  FLOW VELOCITY(FEET/SEC.) =   9.22   FLOW DEPTH(FEET) =   4.73
  TRAVEL TIME(MIN.) =   1.02   Tc(MIN.) =  27.88
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1014.00 =  7414.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1013.00 TO NODE   1014.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  27.88
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.238
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       79.00      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        2.90      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   81.90      SUBAREA RUNOFF(CFS) =  142.97
  EFFECTIVE AREA(ACRES) =    336.80   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    336.80       PEAK FLOW RATE(CFS) =     595.13

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1014.00 TO NODE   1015.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2905.00  DOWNSTREAM(FEET) =   2880.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   901.00   CHANNEL SLOPE =  0.0277
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    595.13
  FLOW VELOCITY(FEET/SEC.) =   9.92   FLOW DEPTH(FEET) =   5.00
  TRAVEL TIME(MIN.) =   1.51   Tc(MIN.) =  29.39
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1015.00 =  8315.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1014.00 TO NODE   1015.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  29.39
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.139
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        1.80      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       14.10      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   15.90      SUBAREA RUNOFF(CFS) =   26.96
  EFFECTIVE AREA(ACRES) =    352.70   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    352.70       PEAK FLOW RATE(CFS) =     595.13
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1015.00 TO NODE   1035.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2880.00  DOWNSTREAM(FEET) =   2840.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1895.00   CHANNEL SLOPE =  0.0211
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    595.13
  FLOW VELOCITY(FEET/SEC.) =   8.97   FLOW DEPTH(FEET) =   5.37
  TRAVEL TIME(MIN.) =   3.52   Tc(MIN.) =  32.92
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1035.00 = 10210.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1015.00 TO NODE   1035.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  32.92
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.044
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        8.00      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       28.80      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   36.80      SUBAREA RUNOFF(CFS) =   59.05
  EFFECTIVE AREA(ACRES) =    389.50   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    389.50       PEAK FLOW RATE(CFS) =     620.89

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1035.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  32.92
  RAINFALL INTENSITY(INCH/HR) =   2.04
  AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27
  AREA-AVERAGED Ap =  1.00
```

```
  EFFECTIVE STREAM AREA(ACRES) =   389.50
  TOTAL STREAM AREA(ACRES) =   389.50
  PEAK FLOW RATE(CFS) AT CONFLUENCE =    620.89

****************************************************************************
  FLOW PROCESS FROM NODE   1020.00 TO NODE   1021.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   330.00
  ELEVATION DATA: UPSTREAM(FEET) =   3525.00  DOWNSTREAM(FEET) =   3485.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   10.952
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.310
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.70      0.30      1.00    63   10.95
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.30      0.20      1.00    81   10.95
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      3.64
  TOTAL AREA(ACRES) =      1.00   PEAK FLOW RATE(CFS) =      3.64

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1021.00 TO NODE   1022.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3485.00  DOWNSTREAM(FEET) =   3440.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   191.00   CHANNEL SLOPE =  0.2356
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      3.64
  FLOW VELOCITY(FEET/SEC.) =   6.05   FLOW DEPTH(FEET) =   0.42
  TRAVEL TIME(MIN.) =   0.53   Tc(MIN.) =  11.48
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1022.00 =   521.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1021.00 TO NODE   1022.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.48
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.204
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.10      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.80      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.90      SUBAREA RUNOFF(CFS) =    3.23
  EFFECTIVE AREA(ACRES) =      1.90   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.90       PEAK FLOW RATE(CFS) =       6.78

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1022.00 TO NODE   1023.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3440.00  DOWNSTREAM(FEET) =   3400.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   227.00   CHANNEL SLOPE =  0.1762
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      6.78
  FLOW VELOCITY(FEET/SEC.) =   6.48   FLOW DEPTH(FEET) =   0.64
  TRAVEL TIME(MIN.) =   0.58   Tc(MIN.) =  12.06
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1023.00 =   748.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1022.00 TO NODE   1023.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.06
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.088
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.20      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.20      SUBAREA RUNOFF(CFS) =    4.20
  EFFECTIVE AREA(ACRES) =      3.10   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      3.10       PEAK FLOW RATE(CFS) =      10.77

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1023.00 TO NODE   1024.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3400.00  DOWNSTREAM(FEET) =   3280.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   160.00   CHANNEL SLOPE =  0.7500
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     10.77
  FLOW VELOCITY(FEET/SEC.) =  12.51   FLOW DEPTH(FEET) =   0.55
  TRAVEL TIME(MIN.) =   0.21   Tc(MIN.) =  12.28
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1024.00 =   908.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1023.00 TO NODE   1024.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.28
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.045
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        0.10      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.60      0.20      1.00    81
```

```
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.70      SUBAREA RUNOFF(CFS) =    2.42
  EFFECTIVE AREA(ACRES) =      3.80   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      3.80       PEAK FLOW RATE(CFS) =      13.07

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1024.00 TO NODE   1025.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3280.00  DOWNSTREAM(FEET) =   3240.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   138.00   CHANNEL SLOPE =  0.2899
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     13.07
  FLOW VELOCITY(FEET/SEC.) =   9.23   FLOW DEPTH(FEET) =   0.79
  TRAVEL TIME(MIN.) =   0.25   Tc(MIN.) =  12.52
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1025.00 =  1046.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1024.00 TO NODE   1025.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.52
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.995
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        2.80      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.30      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.10      SUBAREA RUNOFF(CFS) =   10.46
  EFFECTIVE AREA(ACRES) =      6.90   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      6.90       PEAK FLOW RATE(CFS) =      23.37

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1025.00 TO NODE   1026.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3240.00  DOWNSTREAM(FEET) =   3200.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   200.00   CHANNEL SLOPE =  0.2000
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     23.37
  FLOW VELOCITY(FEET/SEC.) =   9.11   FLOW DEPTH(FEET) =   0.89
  TRAVEL TIME(MIN.) =   0.37   Tc(MIN.) =  12.89
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1026.00 =  1246.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1025.00 TO NODE   1026.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.89
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.922
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        1.50      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.80      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.30      SUBAREA RUNOFF(CFS) =   10.99
  EFFECTIVE AREA(ACRES) =     10.20   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     10.20       PEAK FLOW RATE(CFS) =      33.90

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1026.00 TO NODE   1027.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3200.00  DOWNSTREAM(FEET) =   3120.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   477.00   CHANNEL SLOPE =  0.1677
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     33.90
  FLOW VELOCITY(FEET/SEC.) =   9.45   FLOW DEPTH(FEET) =   1.14
  TRAVEL TIME(MIN.) =   0.84   Tc(MIN.) =  13.73
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1027.00 =  1723.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1026.00 TO NODE   1027.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  13.73
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.754
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        3.90      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        3.10      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    7.00      SUBAREA RUNOFF(CFS) =   22.21
  EFFECTIVE AREA(ACRES) =     17.20   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     17.20       PEAK FLOW RATE(CFS) =      54.57

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1027.00 TO NODE   1028.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3120.00  DOWNSTREAM(FEET) =   3100.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   273.00   CHANNEL SLOPE =  0.0733
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
```

```
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     54.57
  FLOW VELOCITY(FEET/SEC.) =   7.78   FLOW DEPTH(FEET) =   1.54
  TRAVEL TIME(MIN.) =   0.59   Tc(MIN.) =  14.32
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1028.00 =  1996.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1027.00 TO NODE   1028.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  14.32
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.637
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        2.70      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.50      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.20      SUBAREA RUNOFF(CFS) =    9.78
  EFFECTIVE AREA(ACRES) =     20.40   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     20.40       PEAK FLOW RATE(CFS) =      62.53

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1028.00 TO NODE   1029.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3100.00  DOWNSTREAM(FEET) =   3080.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   212.00   CHANNEL SLOPE =  0.0943
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     62.53
  FLOW VELOCITY(FEET/SEC.) =   8.85   FLOW DEPTH(FEET) =   1.55
  TRAVEL TIME(MIN.) =   0.40   Tc(MIN.) =  14.72
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1029.00 =  2208.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1028.00 TO NODE   1029.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  14.72
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.557
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        4.60      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        4.40      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        8.70      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   17.70      SUBAREA RUNOFF(CFS) =   52.86
  EFFECTIVE AREA(ACRES) =     38.10   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     38.10       PEAK FLOW RATE(CFS) =     113.93

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1029.00 TO NODE   1030.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3080.00  DOWNSTREAM(FEET) =   3000.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   781.00   CHANNEL SLOPE =  0.1024
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    113.93
  FLOW VELOCITY(FEET/SEC.) =  10.69   FLOW DEPTH(FEET) =   2.09
  TRAVEL TIME(MIN.) =   1.22   Tc(MIN.) =  15.93
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1030.00 =  2989.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1029.00 TO NODE   1030.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  15.93
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.360
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       24.90      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        6.60      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   31.50      SUBAREA RUNOFF(CFS) =   88.47
  EFFECTIVE AREA(ACRES) =     69.60   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     69.60       PEAK FLOW RATE(CFS) =     195.64

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1030.00 TO NODE   1031.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3000.00  DOWNSTREAM(FEET) =   2980.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   392.00   CHANNEL SLOPE =  0.0510
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    195.64
  FLOW VELOCITY(FEET/SEC.) =   9.45   FLOW DEPTH(FEET) =   2.97
  TRAVEL TIME(MIN.) =   0.69   Tc(MIN.) =  16.62
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1031.00 =  3381.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1030.00 TO NODE   1031.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.62
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.256
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
```

```
  "CHAPARRAL,BROADLEAF"      C       53.50      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        2.40      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   55.90      SUBAREA RUNOFF(CFS) =  151.35
  EFFECTIVE AREA(ACRES) =    125.50   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    125.50       PEAK FLOW RATE(CFS) =     340.50

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

 ****************************************************************************
  FLOW PROCESS FROM NODE   1031.00 TO NODE   1032.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2980.00  DOWNSTREAM(FEET) =   2920.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1552.00   CHANNEL SLOPE =  0.0387
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    340.50
  FLOW VELOCITY(FEET/SEC.) =   9.80   FLOW DEPTH(FEET) =   3.90
  TRAVEL TIME(MIN.) =   2.64   Tc(MIN.) =  19.26
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1032.00 =  4933.00 FEET.

 ****************************************************************************
  FLOW PROCESS FROM NODE   1031.00 TO NODE   1032.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.26
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.860
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       65.60      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       44.00      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  109.60      SUBAREA RUNOFF(CFS) =  259.46
  EFFECTIVE AREA(ACRES) =    235.10   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    235.10       PEAK FLOW RATE(CFS) =     555.23

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

 ****************************************************************************
  FLOW PROCESS FROM NODE   1032.00 TO NODE   1033.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2920.00  DOWNSTREAM(FEET) =   2900.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   976.00   CHANNEL SLOPE =  0.0205
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    555.23
  FLOW VELOCITY(FEET/SEC.) =   8.71   FLOW DEPTH(FEET) =   5.22
  TRAVEL TIME(MIN.) =   1.87   Tc(MIN.) =  21.13
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1033.00 =  5909.00 FEET.

 ****************************************************************************
```

```
  FLOW PROCESS FROM NODE   1032.00 TO NODE   1033.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  21.13
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.676
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       35.60      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.60      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   36.20      SUBAREA RUNOFF(CFS) =   79.08
  EFFECTIVE AREA(ACRES) =    271.30   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    271.30       PEAK FLOW RATE(CFS) =     595.42

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

 ****************************************************************************
  FLOW PROCESS FROM NODE   1033.00 TO NODE   1034.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2900.00  DOWNSTREAM(FEET) =   2880.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   942.00   CHANNEL SLOPE =  0.0212
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    595.42
  FLOW VELOCITY(FEET/SEC.) =   8.99   FLOW DEPTH(FEET) =   5.36
  TRAVEL TIME(MIN.) =   1.75   Tc(MIN.) =  22.88
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1034.00 =  6851.00 FEET.

 ****************************************************************************
  FLOW PROCESS FROM NODE   1033.00 TO NODE   1034.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  22.88
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.563
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       30.50      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.20      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   31.70      SUBAREA RUNOFF(CFS) =   66.04
  EFFECTIVE AREA(ACRES) =    303.00   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    303.00       PEAK FLOW RATE(CFS) =     633.73

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

 ****************************************************************************
  FLOW PROCESS FROM NODE   1034.00 TO NODE   1035.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
```

```
  ELEVATION DATA: UPSTREAM(FEET) =   2880.00  DOWNSTREAM(FEET) =   2840.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1097.00   CHANNEL SLOPE =  0.0365
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    633.73
  FLOW VELOCITY(FEET/SEC.) =  11.16   FLOW DEPTH(FEET) =   4.81
  TRAVEL TIME(MIN.) =   1.64   Tc(MIN.) =  24.52
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1035.00 =  7948.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1034.00 TO NODE   1035.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  24.52
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.456
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        1.20      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      113.90      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       18.60      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  133.70      SUBAREA RUNOFF(CFS) =  266.28
  EFFECTIVE AREA(ACRES) =    436.70   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    436.70       PEAK FLOW RATE(CFS) =     870.96

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1035.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  24.52
  RAINFALL INTENSITY(INCH/HR) =   2.46
  AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =   436.70
  TOTAL STREAM AREA(ACRES) =   436.70
  PEAK FLOW RATE(CFS) AT CONFLUENCE =    870.96

  ** CONFLUENCE DATA **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1    620.89  32.92    2.044  0.27( 0.27) 1.00   389.5    1000.00
      2    870.96  24.52    2.456  0.24( 0.24) 1.00   436.7    1020.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1   1441.21  24.52    2.456  0.25( 0.25) 1.00   726.8    1020.00
      2   1329.63  32.92    2.044  0.26( 0.26) 1.00   826.2    1000.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
```

```
  PEAK FLOW RATE(CFS) =   1441.21    Tc(MIN.) =    24.52
  EFFECTIVE AREA(ACRES) =   726.82   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    826.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1035.00 = 10210.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1035.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>PEAK FLOW RATE ESTIMATOR CHANGED TO UNIT-HYDROGRAPH METHOD<<<<<
  >>>>>USING TIME-OF-CONCENTRATION OF LONGEST FLOWPATH<<<<<
============================================================================
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.63;30M= 1.04;1H= 1.51;3H= 3.08;6H= 4.81;24H= 8.76
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  5.0%
           MOUNTAIN= 92.0%;FOOTHILL=  3.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.55; LAG(HR) = 0.44; Fm(INCH/HR) = 0.26; Ybar = 0.37
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.96; 30M = 0.96; 1HR = 0.96;
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =    826.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1035.00 = 10210.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0475; Lca/L=0.4,n=.0426; Lca/L=0.5,n=.0391;Lca/L=0.6,n=.0365
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     403.23
  UNIT-HYDROGRAPH METHOD PEAK FLOW RATE(CFS) =   1321.11
  TOTAL PEAK FLOW RATE(CFS) =   1321.11 (SOURCE FLOW INCLUDED)
  RATIONAL METHOD PEAK FLOW RATE(CFS) =   1441.21
   (UPSTREAM NODE PEAK FLOW RATE(CFS) =   1441.21)
  PEAK FLOW RATE(CFS) USED =   1441.21
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =    826.20  TC(MIN.) =     32.92
  AREA-AVERAGED Fm(INCH/HR)=  0.26   Ybar =  0.37
  PEAK FLOW RATE(CFS)   =   1441.21
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                         Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU36100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.170
        FOOTHILL                           0.030
        MOUNTAIN                           0.750
        VALLEY(UNDEVELOPED)/DESERT         0.050
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1035.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU35100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1441.21    Tc(MIN.) =  32.92
  AREA-AVERAGED Fm(INCH/HR) =  0.26    Ybar = 0.37
  TOTAL AREA(ACRES) =     826.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1035.00 = 10210.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1035.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1441.21    Tc(MIN.) =  32.92
  AREA-AVERAGED Fm(INCH/HR) =  0.26    Ybar = 0.37
  TOTAL AREA(ACRES) =     826.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1035.00 = 10210.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1035.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1036.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2840.00  DOWNSTREAM(FEET) =   2800.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1878.00   CHANNEL SLOPE =  0.0213
  CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1441.21
  FLOW VELOCITY(FEET/SEC.) =  13.23   FLOW DEPTH(FEET) =   6.57
  TRAVEL TIME(MIN.) =   2.37   Tc(MIN.) =  35.28
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1036.00 = 12088.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1036.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  35.28
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.020
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       31.30      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       21.90      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   53.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.63;30M= 1.04;1H= 1.51;3H= 3.08;6H= 4.81;24H= 8.76
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  5.0%
           MOUNTAIN= 91.0%;FOOTHILL=  3.0%;DESERT(UNDEV.)=  1.0%
  Tc(HR) = 0.59; LAG(HR) = 0.47; Fm(INCH/HR) = 0.26; Ybar = 0.38
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.96; 30M = 0.96; 1HR = 0.96;
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =    879.40
```

```
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1036.00 = 12088.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0442; Lca/L=0.4,n=.0396; Lca/L=0.5,n=.0364;Lca/L=0.6,n=.0340
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     427.01
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1331.13
  TOTAL AREA(ACRES) =    879.40       PEAK FLOW RATE(CFS) =    1441.21
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =    879.40  TC(MIN.) =     35.28
  AREA-AVERAGED Fm(INCH/HR)=  0.26   Ybar =  0.38
  PEAK FLOW RATE(CFS)   =   1441.21
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: LU37100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.130
        MOUNTAIN                           0.710
        VALLEY(UNDEVELOPED)/DESERT         0.150
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1036.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU36100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1441.21    Tc(MIN.) =  35.28
  AREA-AVERAGED Fm(INCH/HR) =  0.26    Ybar = 0.38
  TOTAL AREA(ACRES) =     879.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1036.00 = 12088.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1036.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1441.21    Tc(MIN.) =  35.28
  AREA-AVERAGED Fm(INCH/HR) =  0.26    Ybar = 0.38
  TOTAL AREA(ACRES) =     879.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1036.00 = 12088.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1036.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1037.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2800.00  DOWNSTREAM(FEET) =   2760.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1959.00   CHANNEL SLOPE =  0.0204
  CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1441.21
  FLOW VELOCITY(FEET/SEC.) =  13.02   FLOW DEPTH(FEET) =   6.65
  TRAVEL TIME(MIN.) =   2.51   Tc(MIN.) =  37.79
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1037.00 = 14047.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1037.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  37.79
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.942
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       40.40      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       56.40      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   96.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.63;30M= 1.04;1H= 1.51;3H= 3.08;6H= 4.81;24H= 8.76
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.63; LAG(HR) = 0.50; Fm(INCH/HR) = 0.26; Ybar = 0.38
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.96; 30M = 0.96; 1HR = 0.96;
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =    976.20
```

```
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1037.00 = 14047.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0418; Lca/L=0.4,n=.0375; Lca/L=0.5,n=.0344;Lca/L=0.6,n=.0321
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     471.77
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1378.88
  TOTAL AREA(ACRES) =    976.20       PEAK FLOW RATE(CFS) =    1441.21
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =    976.20  TC(MIN.) =     37.79
  AREA-AVERAGED Fm(INCH/HR)=  0.26   Ybar =  0.38
  PEAK FLOW RATE(CFS)   =   1441.21
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: LU38100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.040
        MOUNTAIN                           0.890
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1037.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU37100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1441.21    Tc(MIN.) =  37.79
  AREA-AVERAGED Fm(INCH/HR) =  0.26    Ybar = 0.38
  TOTAL AREA(ACRES) =     976.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1037.00 = 14047.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1037.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1441.21    Tc(MIN.) =  37.79
  AREA-AVERAGED Fm(INCH/HR) =  0.26    Ybar = 0.38
  TOTAL AREA(ACRES) =     976.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1037.00 = 14047.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1037.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1038.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2760.00  DOWNSTREAM(FEET) =   2700.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2116.00   CHANNEL SLOPE =  0.0284
  CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1441.21
  FLOW VELOCITY(FEET/SEC.) =  14.70   FLOW DEPTH(FEET) =   6.09
  TRAVEL TIME(MIN.) =   2.40   Tc(MIN.) =  40.19
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1038.00 = 16163.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1038.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  40.19
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.874
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       17.10      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      137.10      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       11.50      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  165.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.63;30M= 1.04;1H= 1.51;3H= 3.08;6H= 4.81;24H= 8.76
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.67; LAG(HR) = 0.54; Fm(INCH/HR) = 0.26; Ybar = 0.38
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.95; 30M = 0.95; 1HR = 0.95;
```

```
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1141.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1038.00 = 16163.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0398; Lca/L=0.4,n=.0357; Lca/L=0.5,n=.0328;Lca/L=0.6,n=.0306
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =     553.69
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1561.52
  TOTAL AREA(ACRES) =   1141.90       PEAK FLOW RATE(CFS) =    1561.52

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   1141.90  TC(MIN.) =     40.19
  AREA-AVERAGED Fm(INCH/HR)=  0.26   Ybar =  0.38
  PEAK FLOW RATE(CFS)   =   1561.52
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU39100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.040
        MOUNTAIN                           0.890
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1938.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU38100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1561.52    Tc(MIN.) =  40.19
  AREA-AVERAGED Fm(INCH/HR) =  0.26    Ybar = 0.38
  TOTAL AREA(ACRES) =    1141.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1938.00 = 16163.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1038.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1561.52    Tc(MIN.) =  40.19
  AREA-AVERAGED Fm(INCH/HR) =  0.26    Ybar = 0.38
  TOTAL AREA(ACRES) =    1141.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1038.00 = 16163.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1038.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1039.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2700.00  DOWNSTREAM(FEET) =   2600.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2298.00   CHANNEL SLOPE =  0.0435
  CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1561.52
  FLOW VELOCITY(FEET/SEC.) =  17.57   FLOW DEPTH(FEET) =   5.67
  TRAVEL TIME(MIN.) =   2.18   Tc(MIN.) =  42.37
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1039.00 = 18461.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1039.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  42.37
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.819
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        3.20      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       10.50      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       88.80      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  102.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.63;30M= 1.04;1H= 1.51;3H= 3.08;6H= 4.81;24H= 8.76
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.71; LAG(HR) = 0.56; Fm(INCH/HR) = 0.25; Ybar = 0.37
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.94; 30M = 0.94; 1HR = 0.94;
```

```
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1244.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1039.00 = 18461.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0383; Lca/L=0.4,n=.0343; Lca/L=0.5,n=.0315;Lca/L=0.6,n=.0294
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =     609.25
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1684.82
  TOTAL AREA(ACRES) =   1244.40       PEAK FLOW RATE(CFS) =    1684.82

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   1244.40  TC(MIN.) =     42.37
  AREA-AVERAGED Fm(INCH/HR)=  0.25   Ybar =  0.37
  PEAK FLOW RATE(CFS)   =   1684.82
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU40100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.040
        MOUNTAIN                           0.890
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1039.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU39100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1684.82    Tc(MIN.) =  42.37
  AREA-AVERAGED Fm(INCH/HR) =  0.25    Ybar = 0.37
  TOTAL AREA(ACRES) =    1244.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1039.00 = 18461.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1039.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1684.82    Tc(MIN.) =  42.37
  AREA-AVERAGED Fm(INCH/HR) =  0.25    Ybar = 0.37
  TOTAL AREA(ACRES) =    1244.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1039.00 = 18461.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1039.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1040.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2600.00  DOWNSTREAM(FEET) =   2400.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  3287.00   CHANNEL SLOPE =  0.0608
  CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1684.82
  FLOW VELOCITY(FEET/SEC.) =  20.27   FLOW DEPTH(FEET) =   5.40
  TRAVEL TIME(MIN.) =   2.70   Tc(MIN.) =  45.07
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1040.00 = 21748.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1040.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  45.07
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.755
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      115.00      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  115.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.63;30M= 1.04;1H= 1.51;3H= 3.08;6H= 4.81;24H= 8.76
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.75; LAG(HR) = 0.60; Fm(INCH/HR) = 0.25; Ybar = 0.36
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.94; 30M = 0.94; 1HR = 0.94;
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1359.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1040.00 = 21748.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
```

```
 Lca/L=0.3,n=.0368; Lca/L=0.4,n=.0330; Lca/L=0.5,n=.0303;Lca/L=0.6,n=.0283
 TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =     672.69
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1777.88
 TOTAL AREA(ACRES) =   1359.40       PEAK FLOW RATE(CFS) =    1777.88

 SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
 5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76
================================================================================
 END OF STUDY SUMMARY:
 TOTAL AREA(ACRES)     =   1359.40  TC(MIN.) =     45.07
 AREA-AVERAGED Fm(INCH/HR)=  0.25   Ybar =  0.36
 PEAK FLOW RATE(CFS)   =   1777.88
================================================================================
================================================================================
 END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU41100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.040
        MOUNTAIN                           0.890
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1040.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU40100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1777.88    Tc(MIN.) =  45.07
  AREA-AVERAGED Fm(INCH/HR) =  0.25    Ybar = 0.36
  TOTAL AREA(ACRES) =    1359.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1040.00 = 21748.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1040.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1777.88    Tc(MIN.) =  45.07
  AREA-AVERAGED Fm(INCH/HR) =  0.25    Ybar = 0.36
  TOTAL AREA(ACRES) =    1359.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1040.00 = 21748.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1040.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1041.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2400.00  DOWNSTREAM(FEET) =   2200.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2212.00   CHANNEL SLOPE =  0.0904
  CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1777.88
  FLOW VELOCITY(FEET/SEC.) =  20.19   FLOW DEPTH(FEET) =   5.63
  TRAVEL TIME(MIN.) =   1.83   Tc(MIN.) =  46.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1041.00 = 23960.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1041.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  46.90
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.716
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       61.20      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      156.90      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  218.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.63;30M= 1.04;1H= 1.51;3H= 3.08;6H= 4.81;24H= 8.76
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.78; LAG(HR) = 0.63; Fm(INCH/HR) = 0.24; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.93; 30M = 0.93; 1HR = 0.93;
  3HR = 0.99; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1577.50
```

```
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1041.00 = 23960.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0364; Lca/L=0.4,n=.0327; Lca/L=0.5,n=.0300;Lca/L=0.6,n=.0280
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =     789.69
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1988.74
  TOTAL AREA(ACRES) =   1577.50       PEAK FLOW RATE(CFS) =    1988.74

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   1577.50  TC(MIN.) =     46.90
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.35
  PEAK FLOW RATE(CFS)   =   1988.74
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU42100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ======  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.040
        MOUNTAIN                           0.890
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1041.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU41100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1988.74    Tc(MIN.) =  46.90
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.35
  TOTAL AREA(ACRES) =    1577.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1041.00 = 23960.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1041.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1988.74    Tc(MIN.) =  46.90
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.35
  TOTAL AREA(ACRES) =    1577.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1041.00 = 23960.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1041.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1042.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2200.00  DOWNSTREAM(FEET) =   2000.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1708.00   CHANNEL SLOPE =  0.1171
  CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1988.74
  FLOW VELOCITY(FEET/SEC.) =  22.88   FLOW DEPTH(FEET) =   5.58
  TRAVEL TIME(MIN.) =   1.24   Tc(MIN.) =  48.14
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1042.00 = 25668.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1042.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  48.14
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.690
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      169.60      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       24.80      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  194.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.63;30M= 1.04;1H= 1.51;3H= 3.08;6H= 4.81;24H= 8.76
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.80; LAG(HR) = 0.64; Fm(INCH/HR) = 0.24; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.92; 30M = 0.92; 1HR = 0.92;
  3HR = 0.99; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1771.90
```

```
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1042.00 = 25668.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0362; Lca/L=0.4,n=.0325; Lca/L=0.5,n=.0299;Lca/L=0.6,n=.0279
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =     887.86
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2165.96
  TOTAL AREA(ACRES) =   1771.90       PEAK FLOW RATE(CFS) =    2165.96

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   1771.90  TC(MIN.) =     48.14
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.35
  PEAK FLOW RATE(CFS)   =   2165.96
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU43100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  =====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.040
        MOUNTAIN                           0.890
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1042.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU42100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2165.96    Tc(MIN.) =  48.14
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.35
  TOTAL AREA(ACRES) =    1771.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1042.00 = 25668.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1042.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2165.96    Tc(MIN.) =  48.14
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.35
  TOTAL AREA(ACRES) =    1771.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1042.00 = 25668.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1042.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1043.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2000.00  DOWNSTREAM(FEET) =   1990.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1322.00   CHANNEL SLOPE =  0.0076
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2165.96
  FLOW VELOCITY(FEET/SEC.) =   9.74   FLOW DEPTH(FEET) =   7.95
  TRAVEL TIME(MIN.) =   2.26   Tc(MIN.) =  50.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1043.00 = 26990.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1043.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  50.40
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.646
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        7.40      0.40      1.00    40
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       42.50      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      106.00      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  155.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.63;30M= 1.04;1H= 1.51;3H= 3.08;6H= 4.80;24H= 8.75
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.84; LAG(HR) = 0.67; Fm(INCH/HR) = 0.24; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.91; 30M = 0.91; 1HR = 0.91;
```

```
  3HR = 0.99; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1927.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1043.00 = 26990.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0362; Lca/L=0.4,n=.0325; Lca/L=0.5,n=.0298;Lca/L=0.6,n=.0278
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =     967.26
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2278.33
  TOTAL AREA(ACRES) =   1927.80       PEAK FLOW RATE(CFS) =    2278.33

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.62; 30M = 1.03; 1HR = 1.50; 3HR = 3.04; 6HR = 4.74; 24HR = 8.61
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   1927.80  TC(MIN.) =     50.40
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.35
  PEAK FLOW RATE(CFS)   =   2278.33
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU44100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  =====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.040
        MOUNTAIN                           0.890
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1043.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU43100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2278.33    Tc(MIN.) =  50.40
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.35
  TOTAL AREA(ACRES) =    1927.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1043.00 = 26990.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1043.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2278.33    Tc(MIN.) =  50.40
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.35
  TOTAL AREA(ACRES) =    1927.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1043.00 = 26990.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1043.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1044.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1990.00  DOWNSTREAM(FEET) =   1980.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1681.00   CHANNEL SLOPE =  0.0059
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2278.33
  FLOW VELOCITY(FEET/SEC.) =   8.87   FLOW DEPTH(FEET) =   7.82
  TRAVEL TIME(MIN.) =   3.16   Tc(MIN.) =  53.56
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1044.00 = 28671.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1044.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  53.56
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.590
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        2.20      0.40      1.00    40
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       27.60      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       59.80      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   89.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.63;30M= 1.04;1H= 1.51;3H= 3.07;6H= 4.80;24H= 8.73
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.89; LAG(HR) = 0.71; Fm(INCH/HR) = 0.24; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.91; 30M = 0.91; 1HR = 0.91;
```

```
  3HR = 0.99; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   2017.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1044.00 = 28671.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0364; Lca/L=0.4,n=.0326; Lca/L=0.5,n=.0300;Lca/L=0.6,n=.0280
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    1011.72
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2355.23
  TOTAL AREA(ACRES) =   2017.40       PEAK FLOW RATE(CFS) =    2355.23

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.61; 30M = 1.02; 1HR = 1.48; 3HR = 2.98; 6HR = 4.62; 24HR = 8.37
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   2017.40  TC(MIN.) =     53.56
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.35
  PEAK FLOW RATE(CFS)   =   2355.23
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
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                         Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU45100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.040
        MOUNTAIN                           0.890
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1044.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU44100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2355.23    Tc(MIN.) =  53.56
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.35
  TOTAL AREA(ACRES) =    2017.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1044.00 = 28671.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1044.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2355.23    Tc(MIN.) =  53.56
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.35
  TOTAL AREA(ACRES) =    2017.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1044.00 = 28671.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1044.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1045.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1980.00  DOWNSTREAM(FEET) =   1960.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2360.00   CHANNEL SLOPE =  0.0085
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2355.23
  FLOW VELOCITY(FEET/SEC.) =  10.15   FLOW DEPTH(FEET) =   7.21
  TRAVEL TIME(MIN.) =   3.88   Tc(MIN.) =  57.44
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1045.00 = 31031.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1045.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  57.44
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.528
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       40.90      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      179.40      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       97.70      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  318.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.62;30M= 1.04;1H= 1.50;3H= 3.05;6H= 4.76;24H= 8.65
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.96; LAG(HR) = 0.77; Fm(INCH/HR) = 0.24; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.90; 30M = 0.90; 1HR = 0.90;
```

```
  3HR = 0.98; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   2335.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1045.00 = 31031.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0363; Lca/L=0.4,n=.0326; Lca/L=0.5,n=.0299;Lca/L=0.6,n=.0279
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    1155.75
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2557.50
  TOTAL AREA(ACRES) =   2335.40       PEAK FLOW RATE(CFS) =    2557.50

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.60; 30M = 1.02; 1HR = 1.46; 3HR = 2.91; 6HR = 4.50; 24HR = 8.13
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   2335.40  TC(MIN.) =     57.44
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.35
  PEAK FLOW RATE(CFS)   =   2557.50
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: LU46100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.040
        MOUNTAIN                           0.890
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1045.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU45100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2557.50    Tc(MIN.) =  57.44
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.35
  TOTAL AREA(ACRES) =    2335.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1045.00 = 31031.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1045.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2557.50    Tc(MIN.) =  57.44
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.35
  TOTAL AREA(ACRES) =    2335.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1045.00 = 31031.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1045.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1046.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1960.00  DOWNSTREAM(FEET) =   1915.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2743.00   CHANNEL SLOPE =  0.0164
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2557.50
  FLOW VELOCITY(FEET/SEC.) =  13.11   FLOW DEPTH(FEET) =   6.24
  TRAVEL TIME(MIN.) =   3.49   Tc(MIN.) =  60.92
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1046.00 = 33774.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1046.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  60.92
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.477
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       30.70      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       79.90      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  110.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.62;30M= 1.03;1H= 1.49;3H= 3.03;6H= 4.71;24H= 8.56
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.02; LAG(HR) = 0.81; Fm(INCH/HR) = 0.24; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.89; 30M = 0.89; 1HR = 0.89;
  3HR = 0.98; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   2446.00
```

```
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1046.00 = 33774.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0358; Lca/L=0.4,n=.0321; Lca/L=0.5,n=.0295;Lca/L=0.6,n=.0275
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    1191.13
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2534.28
  TOTAL AREA(ACRES) =   2446.00       PEAK FLOW RATE(CFS) =    2557.50
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 0.96; 1HR = 1.34; 3HR = 2.55; 6HR = 3.83; 24HR = 6.77
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   2446.00  TC(MIN.) =     60.92
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.35
  PEAK FLOW RATE(CFS)   =   2557.50
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU47100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.040
        MOUNTAIN                           0.890
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1046.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU46100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2557.50    Tc(MIN.) =  60.92
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.35
  TOTAL AREA(ACRES) =    2446.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1046.00 = 33774.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1046.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2557.50    Tc(MIN.) =  60.92
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.35
  TOTAL AREA(ACRES) =    2446.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1046.00 = 33774.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1046.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1047.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1915.00  DOWNSTREAM(FEET) =   1910.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   221.00   CHANNEL SLOPE =  0.0226
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2557.50
  FLOW VELOCITY(FEET/SEC.) =  14.66   FLOW DEPTH(FEET) =   5.69
  TRAVEL TIME(MIN.) =   0.25   Tc(MIN.) =  61.18
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1047.00 = 33995.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1047.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  61.18
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.473
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B      146.30      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C     1591.10      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      118.40      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1855.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.62;30M= 1.04;1H= 1.50;3H= 3.04;6H= 4.73;24H= 8.61
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.02; LAG(HR) = 0.82; Fm(INCH/HR) = 0.25; Ybar = 0.36
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.81; 30M = 0.81; 1HR = 0.81;
```

```
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4301.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1047.00 = 33995.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0358; Lca/L=0.4,n=.0320; Lca/L=0.5,n=.0294;Lca/L=0.6,n=.0275
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    2086.43
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4126.08
  TOTAL AREA(ACRES) =   4301.80       PEAK FLOW RATE(CFS) =    4126.08

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.50; 3HR = 3.06; 6HR = 4.76; 24HR = 8.67
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   4301.80  TC(MIN.) =     61.18
  AREA-AVERAGED Fm(INCH/HR)=  0.25   Ybar =  0.36
  PEAK FLOW RATE(CFS)   =   4126.08
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU48100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.070
        MOUNTAIN                           0.860
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1047.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU47100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     4126.08    Tc(MIN.) =  61.18
  AREA-AVERAGED Fm(INCH/HR) =  0.25    Ybar = 0.36
  TOTAL AREA(ACRES) =    4301.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1047.00 = 33995.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1047.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     4126.08    Tc(MIN.) =  61.18
  AREA-AVERAGED Fm(INCH/HR) =  0.25    Ybar = 0.36
  TOTAL AREA(ACRES) =    4301.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1047.00 = 33995.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1047.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1048.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1910.00  DOWNSTREAM(FEET) =   1750.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1601.00   CHANNEL SLOPE =  0.0999
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   4126.08
  FLOW VELOCITY(FEET/SEC.) =  24.33   FLOW DEPTH(FEET) =   5.55
  TRAVEL TIME(MIN.) =   1.10   Tc(MIN.) =  62.27
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 35596.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1048.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  62.27
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.458
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        3.60      0.40       1.00    40
  NATURAL FAIR COVER
  "WOODLAND"                 A        3.30      0.40       1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       59.50      0.30       1.00    63
  NATURAL POOR COVER
  "BARREN"                   B        0.40      0.30       1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B        0.10      0.30       1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B       16.70      0.30       1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.31
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   83.60
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.62;30M= 1.04;1H= 1.50;3H= 3.04;6H= 4.73;24H= 8.61
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 88.9%;FOOTHILL=  4.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.04; LAG(HR) = 0.83; Fm(INCH/HR) = 0.25; Ybar = 0.36
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.80; 30M = 0.80; 1HR = 0.80;
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4385.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 35596.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0356; Lca/L=0.4,n=.0319; Lca/L=0.5,n=.0293;Lca/L=0.6,n=.0274
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    2117.80
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4189.70
  TOTAL AREA(ACRES) =   4385.40       PEAK FLOW RATE(CFS) =    4189.70

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.50; 3HR = 3.06; 6HR = 4.78; 24HR = 8.69

****************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1048.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  62.27
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.508
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      926.70      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        0.50      0.25      0.50    69
  NATURAL POOR COVER
  "BARREN"                   C       10.50      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C       10.70      0.25      1.00    79
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C      299.20      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C       40.40      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1288.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.63;30M= 1.04;1H= 1.50;3H= 3.05;6H= 4.74;24H= 8.63
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 88.3%;FOOTHILL=  4.7%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.04; LAG(HR) = 0.83; Fm(INCH/HR) = 0.25; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.77; 30M = 0.77; 1HR = 0.77;
  3HR = 0.96; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   5673.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 35596.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0356; Lca/L=0.4,n=.0319; Lca/L=0.5,n=.0293;Lca/L=0.6,n=.0274
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    2753.77
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5238.23
  TOTAL AREA(ACRES) =   5673.40       PEAK FLOW RATE(CFS) =    5238.23

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.50; 3HR = 3.06; 6HR = 4.78; 24HR = 8.69

****************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1048.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  62.27
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.508
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      805.90      0.20      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 D       51.50      0.20      1.00    79
  NATURAL POOR COVER
  "BARREN"                   D        2.40      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D        3.10      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       23.30      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D      567.30      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1453.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.63;30M= 1.04;1H= 1.50;3H= 3.05;6H= 4.75;24H= 8.64
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 87.8%;FOOTHILL=  5.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.04; LAG(HR) = 0.83; Fm(INCH/HR) = 0.24; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.73; 30M = 0.73; 1HR = 0.73;
  3HR = 0.96; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   7126.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 35596.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0356; Lca/L=0.4,n=.0319; Lca/L=0.5,n=.0293;Lca/L=0.6,n=.0274
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    3546.72
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6407.52
  TOTAL AREA(ACRES) =   7126.90       PEAK FLOW RATE(CFS) =    6407.52

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.50; 3HR = 3.06; 6HR = 4.78; 24HR = 8.69
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   7126.90  TC(MIN.) =     62.27
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.33
  PEAK FLOW RATE(CFS)   =   6407.52
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU49100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.050
        MOUNTAIN                           0.800
        VALLEY(UNDEVELOPED)/DESERT         0.140
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1048.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU48100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     6407.52    Tc(MIN.) =  62.27
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.33
  TOTAL AREA(ACRES) =    7126.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 35596.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1048.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     6407.52    Tc(MIN.) =  62.27
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.33
  TOTAL AREA(ACRES) =    7126.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 35596.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1048.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1750.00  DOWNSTREAM(FEET) =   1670.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2254.00   CHANNEL SLOPE =  0.0355
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   6407.52
  FLOW VELOCITY(FEET/SEC.) =  19.25   FLOW DEPTH(FEET) =   9.62
  TRAVEL TIME(MIN.) =   1.95   Tc(MIN.) =  64.22
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 37850.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  64.22
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.433
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       10.20      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        2.00      0.30      1.00    72
  NATURAL FAIR COVER
  "WOODLAND"                 B       11.10      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      267.80      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        3.40      0.25      0.50    69
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C      128.10      0.25      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  422.60
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.62;30M= 1.04;1H= 1.49;3H= 3.04;6H= 4.73;24H= 8.60
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.4%
           MOUNTAIN= 87.4%;FOOTHILL=  5.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.07; LAG(HR) = 0.86; Fm(INCH/HR) = 0.24; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.72; 30M = 0.72; 1HR = 0.72;
  3HR = 0.95; 6HR = 0.98; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   7549.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 37850.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0350; Lca/L=0.4,n=.0314; Lca/L=0.5,n=.0288;Lca/L=0.6,n=.0269
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    3727.40
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6649.30
  TOTAL AREA(ACRES) =   7549.50       PEAK FLOW RATE(CFS) =    6649.30

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.58; 30M = 1.01; 1HR = 1.44; 3HR = 2.86; 6HR = 4.40; 24HR = 7.92

****************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  64.22
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.497
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C        4.70      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      391.50      0.20      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D      149.60      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       33.60      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  579.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.62;30M= 1.03;1H= 1.49;3H= 3.03;6H= 4.71;24H= 8.55
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 86.8%;FOOTHILL=  5.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.07; LAG(HR) = 0.86; Fm(INCH/HR) = 0.24; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8128.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 37850.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0350; Lca/L=0.4,n=.0314; Lca/L=0.5,n=.0288;Lca/L=0.6,n=.0269
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    4004.39
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7035.20
  TOTAL AREA(ACRES) =   8128.90       PEAK FLOW RATE(CFS) =    7035.20

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.58; 30M = 1.01; 1HR = 1.44; 3HR = 2.86; 6HR = 4.40; 24HR = 7.92
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   8128.90  TC(MIN.) =     64.22
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.33
  PEAK FLOW RATE(CFS)   =   7035.20
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
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 ************************************************************************
             RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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                          Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

 ------------------------------------------------------------------------
   FILE NAME: LU50100E.DAT
   TIME/DATE OF STUDY: 09:31 02/17/2004
 ========================================================================
   USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
 ========================================================================
                     --*TIME-OF-CONCENTRATION MODEL*--

   USER SPECIFIED STORM EVENT(YEAR) =  100.00
   SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
   SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
   *USER-DEFINED TABLED RAINFALL USED*
   NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
    1)   5.000;  7.600
    2)  10.000;  4.500
    3)  15.000;  3.500
    4)  20.000;  2.750
    5)  30.000;  2.100
    6)  60.000;  1.520
    7) 120.000;  1.200
   *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

   *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
      HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
      WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
 NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
 ===  =====  =========  =================  ======  =====  ======  =====  =======
   1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

   GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
     1. Relative Flow-Depth =  0.00 FEET
        as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
     2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
   *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
    OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
   *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

   UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
     WATERSHED LAG = 0.80 * Tc
           S-GRAPH TYPE                PERCENTAGE(DECIMAL)
         VALLEY(DEVELOPED)                  0.010
         FOOTHILL                           0.050
         MOUNTAIN                           0.870
         VALLEY(UNDEVELOPED)/DESERT         0.070
         DESERT(UNDEVELOPED)                0.000
     PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
     SIERRA MADRE DEPTH-AREA FACTORS USED.
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


 ************************************************************************
   FLOW PROCESS FROM NODE   1049.00 TO NODE   1049.00 IS CODE = 15.1
 ------------------------------------------------------------------------
   >>>>>DEFINE MEMORY BANK # 1 <<<<<
 ========================================================================
   PEAK FLOWRATE TABLE FILE NAME: LU49100E.DNA
   MEMORY BANK #  1 DEFINED AS FOLLOWS:
   PEAK FLOW RATE(CFS) =     7035.20    Tc(MIN.) =  64.22
   AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.33
   TOTAL AREA(ACRES) =    8128.90
   LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 37850.00 FEET.

 ************************************************************************
   FLOW PROCESS FROM NODE   1049.00 TO NODE   1049.00 IS CODE = 14.0
 ------------------------------------------------------------------------
   >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
 ========================================================================

   MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
   PEAK FLOW RATE(CFS) =     7035.20    Tc(MIN.) =  64.22
   AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.33
   TOTAL AREA(ACRES) =    8128.90
   LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 37850.00 FEET.

 ************************************************************************
   FLOW PROCESS FROM NODE   1049.00 TO NODE   1049.00 IS CODE =  12
 ------------------------------------------------------------------------
   >>>>>CLEAR MEMORY BANK # 1 <<<<<
 ========================================================================

 ************************************************************************
   FLOW PROCESS FROM NODE   1049.00 TO NODE   1050.00 IS CODE =  51
 ------------------------------------------------------------------------
   >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
   >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
 ========================================================================
   ELEVATION DATA: UPSTREAM(FEET) =   1670.00  DOWNSTREAM(FEET) =   1665.00
   CHANNEL LENGTH THRU SUBAREA(FEET) =   290.00   CHANNEL SLOPE =  0.0172
   CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
   MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =  15.00
   CHANNEL FLOW THRU SUBAREA(CFS) =   7035.20
   FLOW VELOCITY(FEET/SEC.) =  15.23   FLOW DEPTH(FEET) =  12.36
   TRAVEL TIME(MIN.) =   0.32   Tc(MIN.) =  64.54
   LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 38140.00 FEET.

 ************************************************************************
   FLOW PROCESS FROM NODE   1049.00 TO NODE   1050.00 IS CODE =  81
 ------------------------------------------------------------------------
   >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ========================================================================
   MAINLINE Tc(MIN) =  64.54
   * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.429
   SUBAREA LOSS RATE DATA(AMC  II):
    DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
   NATURAL FAIR COVER
   "CHAPARRAL,BROADLEAF"      A       41.60      0.40      1.00    40
   NATURAL FAIR COVER
   "CHAPARRAL,BROADLEAF"      B       85.70      0.30      1.00    63
   NATURAL FAIR COVER
   "CHAPARRAL,BROADLEAF"      C     1084.00      0.25      1.00    75
   NATURAL FAIR COVER
   "CHAPARRAL,BROADLEAF"      D      175.60      0.20      1.00    81
   SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
   SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
   SUBAREA AREA(ACRES) = 1386.90
   UNIT-HYDROGRAPH DATA:
   RAINFALL(INCH): 5M= 0.62;30M= 1.03;1H= 1.49;3H= 3.01;6H= 4.69;24H= 8.51
   S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
            MOUNTAIN= 86.9%;FOOTHILL=  5.1%;DESERT(UNDEV.)=  0.0%
   Tc(HR) = 1.08; LAG(HR) = 0.86; Fm(INCH/HR) = 0.24; Ybar = 0.34
```

```
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.68; 30M = 0.68; 1HR = 0.69;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9515.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 38140.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0349; Lca/L=0.4,n=.0313; Lca/L=0.5,n=.0288;Lca/L=0.6,n=.0269
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    4611.48
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7967.78
  TOTAL AREA(ACRES) =   9515.80       PEAK FLOW RATE(CFS) =    7967.78

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.60; 30M = 1.02; 1HR = 1.47; 3HR = 2.95; 6HR = 4.57; 24HR = 8.27
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   9515.80  TC(MIN.) =     64.54
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.34
  PEAK FLOW RATE(CFS)   =   7967.78
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
 ************************************************************************
             RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
            (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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              Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                          Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

 ------------------------------------------------------------------------
   FILE NAME: LU51100E.DAT
   TIME/DATE OF STUDY: 09:31 02/17/2004
 ========================================================================
   USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
 ========================================================================
                     --*TIME-OF-CONCENTRATION MODEL*--

   USER SPECIFIED STORM EVENT(YEAR) =  100.00
   SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
   SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
   *USER-DEFINED TABLED RAINFALL USED*
   NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
    1)   5.000;  7.600
    2)  10.000;  4.500
    3)  15.000;  3.500
    4)  20.000;  2.750
    5)  30.000;  2.100
    6)  60.000;  1.520
    7) 120.000;  1.200
   *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

   *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
      HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
      WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
 NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
 ===  =====  =========  =================  ======  =====  ====  =====  =======
   1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

   GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
     1. Relative Flow-Depth =  0.00 FEET
        as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
     2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
   *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
    OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
   *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

   UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
     WATERSHED LAG = 0.80 * Tc
           S-GRAPH TYPE                PERCENTAGE(DECIMAL)
         VALLEY(DEVELOPED)                  0.010
         FOOTHILL                           0.050
         MOUNTAIN                           0.870
         VALLEY(UNDEVELOPED)/DESERT         0.070
         DESERT(UNDEVELOPED)                0.000
     PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
     SIERRA MADRE DEPTH-AREA FACTORS USED.
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


 ************************************************************************
   FLOW PROCESS FROM NODE   1050.00 TO NODE   1050.00 IS CODE = 15.1
 ------------------------------------------------------------------------
   >>>>>DEFINE MEMORY BANK # 1 <<<<<
 ========================================================================
   PEAK FLOWRATE TABLE FILE NAME: LU50100E.DNA
   MEMORY BANK #  1 DEFINED AS FOLLOWS:
   PEAK FLOW RATE(CFS) =     7967.78    Tc(MIN.) =  64.54
   AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.34
   TOTAL AREA(ACRES) =    9515.80
   LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 38140.00 FEET.

 ************************************************************************
   FLOW PROCESS FROM NODE   1050.00 TO NODE   1050.00 IS CODE = 14.0
 ------------------------------------------------------------------------
   >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
 ========================================================================

   MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
   PEAK FLOW RATE(CFS) =     7967.78    Tc(MIN.) =  64.54
   AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.34
   TOTAL AREA(ACRES) =    9515.80
   LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 38140.00 FEET.

 ************************************************************************
   FLOW PROCESS FROM NODE   1050.00 TO NODE   1050.00 IS CODE =  12
 ------------------------------------------------------------------------
   >>>>>CLEAR MEMORY BANK # 1 <<<<<
 ========================================================================

 ************************************************************************
   FLOW PROCESS FROM NODE   1050.00 TO NODE   1051.00 IS CODE =  51
 ------------------------------------------------------------------------
   >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
   >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
 ========================================================================
   ELEVATION DATA: UPSTREAM(FEET) =   1665.00  DOWNSTREAM(FEET) =   1630.00
   CHANNEL LENGTH THRU SUBAREA(FEET) =  2134.00   CHANNEL SLOPE =  0.0164
   CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
   MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =  15.00
   CHANNEL FLOW THRU SUBAREA(CFS) =   7967.78
   FLOW VELOCITY(FEET/SEC.) =  15.28   FLOW DEPTH(FEET) =  12.32
   TRAVEL TIME(MIN.) =   2.33   Tc(MIN.) =  66.87
   LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 40274.00 FEET.

 ************************************************************************
   FLOW PROCESS FROM NODE   1050.00 TO NODE   1051.00 IS CODE =  81
 ------------------------------------------------------------------------
   >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ========================================================================
   MAINLINE Tc(MIN) =  66.87
   * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.400
   SUBAREA LOSS RATE DATA(AMC  II):
    DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
   NATURAL FAIR COVER
   "CHAPARRAL,BROADLEAF"      C      297.00      0.25      1.00    75
   NATURAL FAIR COVER
   "CHAPARRAL,BROADLEAF"      D      163.30      0.20      1.00    81
   SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
   SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
   SUBAREA AREA(ACRES) =  460.30
   UNIT-HYDROGRAPH DATA:
   RAINFALL(INCH): 5M= 0.62;30M= 1.03;1H= 1.49;3H= 3.01;6H= 4.67;24H= 8.48
   S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
            MOUNTAIN= 86.9%;FOOTHILL=  5.1%;DESERT(UNDEV.)=  0.0%
   Tc(HR) = 1.11; LAG(HR) = 0.89; Fm(INCH/HR) = 0.24; Ybar = 0.34
   USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
   DEPTH-AREA FACTORS: 5M = 0.67; 30M = 0.68; 1HR = 0.68;
   3HR = 0.94; 6HR = 0.97; 24HR= 0.98
   UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9976.10
```

```
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 40274.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0345; Lca/L=0.4,n=.0309; Lca/L=0.5,n=.0284;Lca/L=0.6,n=.0265
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    4801.99
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8128.89
  TOTAL AREA(ACRES) =   9976.10       PEAK FLOW RATE(CFS) =    8128.89

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.58; 30M = 1.00; 1HR = 1.43; 3HR = 2.82; 6HR = 4.34; 24HR = 7.80
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   9976.10  TC(MIN.) =     66.87
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.34
  PEAK FLOW RATE(CFS)   =   8128.89
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: LU52100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.050
        MOUNTAIN                           0.870
        VALLEY(UNDEVELOPED)/DESERT         0.070
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1051.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU51100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     8128.89    Tc(MIN.) =  66.87
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.34
  TOTAL AREA(ACRES) =    9976.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 40274.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1051.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     8128.89    Tc(MIN.) =  66.87
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.34
  TOTAL AREA(ACRES) =    9976.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 40274.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1051.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1630.00  DOWNSTREAM(FEET) =   1410.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  5523.00   CHANNEL SLOPE =  0.0398
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   8128.89
  FLOW VELOCITY(FEET/SEC.) =  21.10   FLOW DEPTH(FEET) =   9.70
  TRAVEL TIME(MIN.) =   4.36   Tc(MIN.) =  71.23
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 45797.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  71.23
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.350
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       19.10      0.40      1.00    40
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      198.40      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      507.40      0.20      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       26.70      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  751.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.61;30M= 1.03;1H= 1.48;3H= 2.97;6H= 4.61;24H= 8.36
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 86.9%;FOOTHILL=  5.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.19; LAG(HR) = 0.95; Fm(INCH/HR) = 0.24; Ybar = 0.34
```

```
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.66; 30M = 0.67; 1HR = 0.67;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  10727.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 45797.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0334; Lca/L=0.4,n=.0299; Lca/L=0.5,n=.0275;Lca/L=0.6,n=.0256
  TIME OF PEAK FLOW(HR) = 16.67  RUNOFF VOLUME(AF) =    5061.90
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8214.01
  TOTAL AREA(ACRES) =  10727.70       PEAK FLOW RATE(CFS) =    8214.01

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.53; 30M = 0.96; 1HR = 1.35; 3HR = 2.56; 6HR = 3.85; 24HR = 6.82
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  10727.70  TC(MIN.) =     71.23
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.34
  PEAK FLOW RATE(CFS)   =   8214.01
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: LU53100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.110
        MOUNTAIN                           0.810
        VALLEY(UNDEVELOPED)/DESERT         0.070
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1052.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU52100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     8214.01    Tc(MIN.) =  71.23
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.34
  TOTAL AREA(ACRES) =   10727.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 45797.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1052.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     8214.01    Tc(MIN.) =  71.23
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.34
  TOTAL AREA(ACRES) =   10727.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 45797.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1052.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1410.00  DOWNSTREAM(FEET) =   1297.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2262.00   CHANNEL SLOPE =  0.0500
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   8214.01
  FLOW VELOCITY(FEET/SEC.) =  22.93   FLOW DEPTH(FEET) =   9.15
  TRAVEL TIME(MIN.) =   1.64   Tc(MIN.) =  72.88
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 48059.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  72.88
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.333
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        4.50      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        2.20      0.30      1.00    72
  NATURAL FAIR COVER
  "WOODLAND"                 B       31.40      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      214.70      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C       21.40      0.25      0.50    69
  NATURAL POOR COVER
  "BARREN"                   C        0.70      0.25      1.00    91
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.96
  SUBAREA AREA(ACRES) =  274.90
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.61;30M= 1.03;1H= 1.48;3H= 2.97;6H= 4.61;24H= 8.36
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 86.7%;FOOTHILL=  5.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.21; LAG(HR) = 0.97; Fm(INCH/HR) = 0.24; Ybar = 0.34
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.65; 30M = 0.66; 1HR = 0.67;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  11002.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 48059.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0330; Lca/L=0.4,n=.0296; Lca/L=0.5,n=.0272;Lca/L=0.6,n=.0253
  TIME OF PEAK FLOW(HR) = 16.67  RUNOFF VOLUME(AF) =    5174.84
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8405.65
  TOTAL AREA(ACRES) =  11002.60       PEAK FLOW RATE(CFS) =    8405.65

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.60; 30M = 1.02; 1HR = 1.47; 3HR = 2.94; 6HR = 4.56; 24HR = 8.25

****************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  72.88
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.451
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        7.60      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       35.40      0.25      1.00    77
  PUBLIC PARK                C        0.20      0.25      0.85    69
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       85.00      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C       92.50      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      717.00      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  937.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.61;30M= 1.02;1H= 1.48;3H= 2.97;6H= 4.61;24H= 8.35
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 86.3%;FOOTHILL=  5.7%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.21; LAG(HR) = 0.97; Fm(INCH/HR) = 0.23; Ybar = 0.34
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.64; 30M = 0.65; 1HR = 0.66;
  3HR = 0.93; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  11940.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 48059.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0330; Lca/L=0.4,n=.0296; Lca/L=0.5,n=.0272;Lca/L=0.6,n=.0253
  TIME OF PEAK FLOW(HR) = 16.67  RUNOFF VOLUME(AF) =    5624.04
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8997.42
  TOTAL AREA(ACRES) =  11940.30       PEAK FLOW RATE(CFS) =    8997.42

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.60; 30M = 1.02; 1HR = 1.47; 3HR = 2.94; 6HR = 4.56; 24HR = 8.25

****************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  72.88
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.451
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        2.90      0.20      0.50    75
  NATURAL FAIR COVER
  "GRASS"                    D       10.20      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       44.50      0.20      1.00    83
  PUBLIC PARK                D        0.70      0.20      0.85    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D      674.40      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D      148.30      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  881.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.61;30M= 1.02;1H= 1.47;3H= 2.97;6H= 4.61;24H= 8.34
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 85.9%;FOOTHILL=  6.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.21; LAG(HR) = 0.97; Fm(INCH/HR) = 0.23; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.62; 30M = 0.64; 1HR = 0.64;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12821.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 48059.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0330; Lca/L=0.4,n=.0296; Lca/L=0.5,n=.0272;Lca/L=0.6,n=.0253
  TIME OF PEAK FLOW(HR) = 16.67  RUNOFF VOLUME(AF) =    6075.00
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9556.33
  TOTAL AREA(ACRES) =  12821.30       PEAK FLOW RATE(CFS) =    9556.33

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.60; 30M = 1.02; 1HR = 1.47; 3HR = 2.94; 6HR = 4.56; 24HR = 8.25
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  12821.30  TC(MIN.) =     72.88
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.33
  PEAK FLOW RATE(CFS)   =   9556.33
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU54100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.060
        MOUNTAIN                           0.860
        VALLEY(UNDEVELOPED)/DESERT         0.070
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1053.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU53100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9556.33    Tc(MIN.) =  72.88
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.33
  TOTAL AREA(ACRES) =   12821.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 48059.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1053.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9556.33    Tc(MIN.) =  72.88
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.33
  TOTAL AREA(ACRES) =   12821.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 48059.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1053.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1297.00  DOWNSTREAM(FEET) =   1235.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  3488.00   CHANNEL SLOPE =  0.0178
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   9556.33
  FLOW VELOCITY(FEET/SEC.) =  19.43   FLOW DEPTH(FEET) =  11.78
  TRAVEL TIME(MIN.) =   2.99   Tc(MIN.) =  75.87
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 51547.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  75.87
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.302
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      435.00      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        7.80      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       36.00      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C       10.20      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      271.30      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       26.90      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  787.20
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.60;30M= 1.02;1H= 1.47;3H= 2.95;6H= 4.57;24H= 8.27
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 85.9%;FOOTHILL=  6.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.26; LAG(HR) = 1.01; Fm(INCH/HR) = 0.23; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.61; 30M = 0.63; 1HR = 0.63;
  3HR = 0.92; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  13608.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 51547.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0323; Lca/L=0.4,n=.0290; Lca/L=0.5,n=.0266;Lca/L=0.6,n=.0248
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    6386.77
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9357.70
  TOTAL AREA(ACRES) =  13608.50       PEAK FLOW RATE(CFS) =    9556.33
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.53; 30M = 0.97; 1HR = 1.36; 3HR = 2.61; 6HR = 3.94; 24HR = 6.99

****************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  75.87
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.435
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        5.30      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       13.70      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   19.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.60;30M= 1.02;1H= 1.47;3H= 2.95;6H= 4.57;24H= 8.26
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 85.9%;FOOTHILL=  6.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.26; LAG(HR) = 1.01; Fm(INCH/HR) = 0.23; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.61; 30M = 0.63; 1HR = 0.63;
  3HR = 0.92; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  13627.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 51547.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0323; Lca/L=0.4,n=.0290; Lca/L=0.5,n=.0266;Lca/L=0.6,n=.0248
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    6394.21
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9366.96
  TOTAL AREA(ACRES) =  13627.50       PEAK FLOW RATE(CFS) =    9556.33
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.53; 30M = 0.97; 1HR = 1.36; 3HR = 2.61; 6HR = 3.94; 24HR = 6.99
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  13627.50  TC(MIN.) =     75.87
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.33
  PEAK FLOW RATE(CFS)   =   9556.33
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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************************************************************************
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: LU55100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.060
        MOUNTAIN                           0.860
        VALLEY(UNDEVELOPED)/DESERT         0.070
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1054.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU54100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9556.33    Tc(MIN.) =  75.87
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.33
  TOTAL AREA(ACRES) =   13627.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 51547.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1054.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9556.33    Tc(MIN.) =  75.87
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.33
  TOTAL AREA(ACRES) =   13627.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 51547.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1054.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1235.00  DOWNSTREAM(FEET) =   1115.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  3993.00   CHANNEL SLOPE =  0.0301
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   9556.33
  FLOW VELOCITY(FEET/SEC.) =  23.44   FLOW DEPTH(FEET) =  10.15
  TRAVEL TIME(MIN.) =   2.84   Tc(MIN.) =  78.71
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 55540.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  78.71
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.275
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       43.80      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       21.40      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       35.80      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C       11.10      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      659.60      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      129.70      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  901.40
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.60;30M= 1.02;1H= 1.46;3H= 2.92;6H= 4.51;24H= 8.15
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 85.9%;FOOTHILL=  6.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.31; LAG(HR) = 1.05; Fm(INCH/HR) = 0.23; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.59; 30M = 0.62; 1HR = 0.62;
  3HR = 0.92; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  14528.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 55540.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0316; Lca/L=0.4,n=.0283; Lca/L=0.5,n=.0260;Lca/L=0.6,n=.0243
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    6707.83
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9727.61
  TOTAL AREA(ACRES) =  14528.90       PEAK FLOW RATE(CFS) =    9727.61

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.51; 30M = 0.95; 1HR = 1.31; 3HR = 2.46; 6HR = 3.67; 24HR = 6.45

****************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  78.71
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.420
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       86.60      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       43.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  130.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.60;30M= 1.02;1H= 1.46;3H= 2.91;6H= 4.50;24H= 8.14
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 85.9%;FOOTHILL=  6.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.31; LAG(HR) = 1.05; Fm(INCH/HR) = 0.23; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.59; 30M = 0.61; 1HR = 0.62;
  3HR = 0.92; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  14658.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 55540.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0316; Lca/L=0.4,n=.0283; Lca/L=0.5,n=.0260;Lca/L=0.6,n=.0243
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    6755.68
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9784.74
  TOTAL AREA(ACRES) =  14658.90       PEAK FLOW RATE(CFS) =    9784.74

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.51; 30M = 0.95; 1HR = 1.31; 3HR = 2.46; 6HR = 3.67; 24HR = 6.45
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  14658.90  TC(MIN.) =     78.71
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.33
  PEAK FLOW RATE(CFS)   =   9784.74
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
        (c) Copyright 1983-2003 Advanced Engineering Software (aes)
            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: LU56100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.060
        MOUNTAIN                           0.860
        VALLEY(UNDEVELOPED)/DESERT         0.070
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1055.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU55100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9784.74    Tc(MIN.) =  78.71
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.33
  TOTAL AREA(ACRES) =   14658.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 55540.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1055.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9784.74    Tc(MIN.) =  78.71
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.33
  TOTAL AREA(ACRES) =   14658.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 55540.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1055.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1115.00  DOWNSTREAM(FEET) =    978.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  4363.00   CHANNEL SLOPE =  0.0314
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   9784.74
  FLOW VELOCITY(FEET/SEC.) =  23.97   FLOW DEPTH(FEET) =  10.17
  TRAVEL TIME(MIN.) =   3.03   Tc(MIN.) =  81.74
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 59903.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  81.74
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.248
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       11.50      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        2.90      0.30      1.00    72
  NATURAL FAIR COVER
  "WOODLAND"                 B       15.10      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      566.60      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        9.10      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C      601.90      0.25      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1207.10
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.59;30M= 1.01;1H= 1.45;3H= 2.89;6H= 4.46;24H= 8.05
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 85.9%;FOOTHILL=  6.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.36; LAG(HR) = 1.09; Fm(INCH/HR) = 0.23; Ybar = 0.34
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.57; 30M = 0.60; 1HR = 0.61;
  3HR = 0.91; 6HR = 0.96; 24HR= 0.97
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  15866.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 59903.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0309; Lca/L=0.4,n=.0277; Lca/L=0.5,n=.0255;Lca/L=0.6,n=.0237
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    7186.58
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  10241.00
  TOTAL AREA(ACRES) =  15866.00       PEAK FLOW RATE(CFS) =   10241.00

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.54; 30M = 0.97; 1HR = 1.36; 3HR = 2.61; 6HR = 3.94; 24HR = 7.00

****************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  81.74
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.404
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C       84.60      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      433.40      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      116.90      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D      298.40      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       94.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1027.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.59;30M= 1.01;1H= 1.44;3H= 2.87;6H= 4.43;24H= 7.99
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 85.9%;FOOTHILL=  6.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.36; LAG(HR) = 1.09; Fm(INCH/HR) = 0.23; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.56; 30M = 0.59; 1HR = 0.60;
  3HR = 0.91; 6HR = 0.96; 24HR= 0.97
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  16893.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 59903.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0309; Lca/L=0.4,n=.0277; Lca/L=0.5,n=.0255;Lca/L=0.6,n=.0237
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    7589.05
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  10720.72
  TOTAL AREA(ACRES) =  16893.70       PEAK FLOW RATE(CFS) =   10720.72

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.54; 30M = 0.97; 1HR = 1.36; 3HR = 2.61; 6HR = 3.94; 24HR = 7.00
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  16893.70  TC(MIN.) =     81.74
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.33
  PEAK FLOW RATE(CFS)   =  10720.72
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
        (c) Copyright 1983-2003 Advanced Engineering Software (aes)
            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU57100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.060
        MOUNTAIN                           0.860
        VALLEY(UNDEVELOPED)/DESERT         0.070
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1056.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU56100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    10720.72    Tc(MIN.) =  81.74
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.33
  TOTAL AREA(ACRES) =   16893.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 59903.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1056.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    10720.72    Tc(MIN.) =  81.74
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.33
  TOTAL AREA(ACRES) =   16893.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 59903.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1056.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    978.00  DOWNSTREAM(FEET) =    800.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  5201.00   CHANNEL SLOPE =  0.0342
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  10720.72
  FLOW VELOCITY(FEET/SEC.) =  21.63   FLOW DEPTH(FEET) =  11.84
  TRAVEL TIME(MIN.) =   4.01   Tc(MIN.) =  85.75
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 65104.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  85.75
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.214
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        2.00      0.25      1.00    75
  NATURAL FAIR COVER
  "MEADOWS"                  C        0.90      0.25      1.00    80
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       40.20      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        0.30      0.25      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      208.80      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      155.20      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  407.40
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.59;30M= 1.01;1H= 1.44;3H= 2.85;6H= 4.39;24H= 7.91
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 85.9%;FOOTHILL=  6.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.43; LAG(HR) = 1.14; Fm(INCH/HR) = 0.23; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.56; 30M = 0.58; 1HR = 0.59;
  3HR = 0.90; 6HR = 0.96; 24HR= 0.97
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  17301.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 65104.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0304; Lca/L=0.4,n=.0272; Lca/L=0.5,n=.0250;Lca/L=0.6,n=.0234
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    7681.00
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  10726.26
  TOTAL AREA(ACRES) =  17301.10       PEAK FLOW RATE(CFS) =   10726.26

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.42; 30M = 0.88; 1HR = 1.18; 3HR = 2.03; 6HR = 2.88; 24HR = 4.84

****************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  85.75
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.383
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       63.60      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       57.80      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  121.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.58;30M= 1.01;1H= 1.44;3H= 2.85;6H= 4.38;24H= 7.89
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 85.9%;FOOTHILL=  6.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.43; LAG(HR) = 1.14; Fm(INCH/HR) = 0.23; Ybar = 0.34
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.56; 30M = 0.58; 1HR = 0.59;
  3HR = 0.90; 6HR = 0.96; 24HR= 0.97
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  17422.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 65104.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0304; Lca/L=0.4,n=.0272; Lca/L=0.5,n=.0250;Lca/L=0.6,n=.0234
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    7709.60
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  10764.18
  TOTAL AREA(ACRES) =  17422.50       PEAK FLOW RATE(CFS) =   10764.18

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.42; 30M = 0.88; 1HR = 1.18; 3HR = 2.03; 6HR = 2.88; 24HR = 4.84
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  17422.50  TC(MIN.) =     85.75
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.34
  PEAK FLOW RATE(CFS)   =  10764.18
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU58100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.100
        MOUNTAIN                           0.780
        VALLEY(UNDEVELOPED)/DESERT         0.110
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1057.00 TO NODE   1057.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU57100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    10764.18    Tc(MIN.) =  85.75
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.34
  TOTAL AREA(ACRES) =   17422.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 65104.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1057.00 TO NODE   1057.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    10764.18    Tc(MIN.) =  85.75
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.34
  TOTAL AREA(ACRES) =   17422.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 65104.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1057.00 TO NODE   1057.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1057.00 TO NODE   1058.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    800.00  DOWNSTREAM(FEET) =    657.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  5445.00   CHANNEL SLOPE =  0.0263
  CHANNEL BASE(FEET) =   35.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  10764.18
  FLOW VELOCITY(FEET/SEC.) =  19.42   FLOW DEPTH(FEET) =  11.84
  TRAVEL TIME(MIN.) =   4.67   Tc(MIN.) =  90.42
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1058.00 = 70549.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1057.00 TO NODE   1058.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  90.42
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.178
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       96.50      0.40       1.00    40
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A        0.70      0.40       0.50    32
  NATURAL FAIR COVER
  "OPEN BRUSH"               A       12.00      0.40       1.00    46
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     A       30.00      0.40       1.00    55
  NATURAL FAIR COVER
  "WOODLAND"                 A       91.00      0.40       1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       37.50      0.30       1.00    63
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.39
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  267.70
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.58;30M= 1.01;1H= 1.44;3H= 2.84;6H= 4.38;24H= 7.88
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.1%
           MOUNTAIN= 85.8%;FOOTHILL=  6.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.51; LAG(HR) = 1.21; Fm(INCH/HR) = 0.23; Ybar = 0.34
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.55; 30M = 0.58; 1HR = 0.59;
  3HR = 0.90; 6HR = 0.95; 24HR= 0.97
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  17690.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1058.00 = 70549.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0300; Lca/L=0.4,n=.0269; Lca/L=0.5,n=.0247;Lca/L=0.6,n=.0231
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    7744.06
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  10601.21
  TOTAL AREA(ACRES) =  17690.20       PEAK FLOW RATE(CFS) =   10764.18
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.54; 30M = 0.98; 1HR = 1.38; 3HR = 2.65; 6HR = 4.03; 24HR = 7.16

****************************************************************************
  FLOW PROCESS FROM NODE   1057.00 TO NODE   1058.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  90.42
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.358
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B        1.30      0.30      0.50    56
  NATURAL POOR COVER
  "BARREN"                   B        2.40      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B       17.50      0.30      1.00    69
  COMMERCIAL                 B        2.20      0.30      0.10    56
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B       15.70      0.30      1.00    72
  NATURAL FAIR COVER
  "WOODLAND"                 B      206.30      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  245.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.58;30M= 1.01;1H= 1.43;3H= 2.84;6H= 4.37;24H= 7.87
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.1%
           MOUNTAIN= 85.7%;FOOTHILL=  6.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.51; LAG(HR) = 1.21; Fm(INCH/HR) = 0.23; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.55; 30M = 0.57; 1HR = 0.59;
  3HR = 0.90; 6HR = 0.95; 24HR= 0.97
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  17935.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1058.00 = 70549.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0300; Lca/L=0.4,n=.0269; Lca/L=0.5,n=.0247;Lca/L=0.6,n=.0231
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    7805.96
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  10683.56
  TOTAL AREA(ACRES) =  17935.60       PEAK FLOW RATE(CFS) =   10764.18
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.54; 30M = 0.98; 1HR = 1.38; 3HR = 2.65; 6HR = 4.03; 24HR = 7.16

****************************************************************************
  FLOW PROCESS FROM NODE   1057.00 TO NODE   1058.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  90.42
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.358
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C     1027.50      0.25      1.00    75
  NATURAL FAIR COVER
  "MEADOWS"                  C        2.90      0.25      1.00    80
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        0.40      0.25      0.50    69
  NATURAL FAIR COVER
  "GRASS"                    C       17.00      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      163.50      0.25      1.00    77
  COMMERCIAL                 C        1.10      0.25      0.10    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1212.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.58;30M= 1.00;1H= 1.43;3H= 2.83;6H= 4.35;24H= 7.82
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.4%
           MOUNTAIN= 85.2%;FOOTHILL=  6.4%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.51; LAG(HR) = 1.21; Fm(INCH/HR) = 0.23; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.54; 30M = 0.56; 1HR = 0.58;
  3HR = 0.89; 6HR = 0.95; 24HR= 0.97
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  19148.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1058.00 = 70549.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0300; Lca/L=0.4,n=.0269; Lca/L=0.5,n=.0247;Lca/L=0.6,n=.0231
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    8226.46
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  11159.51
  TOTAL AREA(ACRES) =  19148.00       PEAK FLOW RATE(CFS) =   11159.51

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.54; 30M = 0.98; 1HR = 1.38; 3HR = 2.65; 6HR = 4.03; 24HR = 7.16

****************************************************************************
  FLOW PROCESS FROM NODE   1057.00 TO NODE   1058.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  90.42
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.358
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C      572.50      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C      252.80      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D     1472.40      0.20      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 D      295.00      0.20      1.00    79
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.90      0.20      0.50    75
  NATURAL FAIR COVER
  "GRASS"                    D        2.10      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 2595.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.58;30M= 1.00;1H= 1.42;3H= 2.81;6H= 4.31;24H= 7.75
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.8%
           MOUNTAIN= 84.4%;FOOTHILL=  6.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.51; LAG(HR) = 1.21; Fm(INCH/HR) = 0.23; Ybar = 0.35
```

```
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.51; 30M = 0.54; 1HR = 0.55;
  3HR = 0.88; 6HR = 0.95; 24HR= 0.97
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  21743.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1058.00 = 70549.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0300; Lca/L=0.4,n=.0269; Lca/L=0.5,n=.0247;Lca/L=0.6,n=.0231
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    9218.58
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  12231.33
  TOTAL AREA(ACRES) =  21743.70       PEAK FLOW RATE(CFS) =   12231.33

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.54; 30M = 0.98; 1HR = 1.38; 3HR = 2.65; 6HR = 4.03; 24HR = 7.16

****************************************************************************
  FLOW PROCESS FROM NODE   1057.00 TO NODE   1058.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  90.42
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.358
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      407.80      0.20      1.00    83
  COMMERCIAL                 D        0.90      0.20      0.10    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D     1735.70      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 2144.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.57;30M= 1.00;1H= 1.42;3H= 2.79;6H= 4.29;24H= 7.69
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.1%
           MOUNTAIN= 83.8%;FOOTHILL=  7.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.51; LAG(HR) = 1.21; Fm(INCH/HR) = 0.23; Ybar = 0.34
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.49; 30M = 0.52; 1HR = 0.54;
  3HR = 0.87; 6HR = 0.94; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  23888.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1058.00 = 70549.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0300; Lca/L=0.4,n=.0269; Lca/L=0.5,n=.0247;Lca/L=0.6,n=.0231
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =   10119.33
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  13167.55
  TOTAL AREA(ACRES) =  23888.10       PEAK FLOW RATE(CFS) =   13167.55

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.54; 30M = 0.98; 1HR = 1.38; 3HR = 2.65; 6HR = 4.03; 24HR = 7.16
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  23888.10  TC(MIN.) =     90.42
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.34
  PEAK FLOW RATE(CFS)   =  13167.55
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU59100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ======  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.070
        MOUNTAIN                           0.840
        VALLEY(UNDEVELOPED)/DESERT         0.080
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1058.00 TO NODE   1058.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU58100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    13167.55    Tc(MIN.) =  90.42
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.34
  TOTAL AREA(ACRES) =   23888.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1058.00 = 70549.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1058.00 TO NODE   1058.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    13167.55    Tc(MIN.) =  90.42
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.34
  TOTAL AREA(ACRES) =   23888.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1058.00 = 70549.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1058.00 TO NODE   1058.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1058.00 TO NODE   1059.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    657.00  DOWNSTREAM(FEET) =    630.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2185.00   CHANNEL SLOPE =  0.0124
  CHANNEL BASE(FEET) =   50.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  13167.55
  FLOW VELOCITY(FEET/SEC.) =  17.69   FLOW DEPTH(FEET) =  12.00
  TRAVEL TIME(MIN.) =   2.06   Tc(MIN.) =  92.48
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1059.00 = 72734.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1058.00 TO NODE   1059.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  92.48
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.163
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       21.30      0.40       1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"               A       15.80      0.40       1.00    46
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     A        8.90      0.40       1.00    55
  NATURAL FAIR COVER
  "WOODLAND"                 A       23.80      0.40       1.00    36
  COMMERCIAL                 B        0.70      0.30       0.10    56
  NATURAL FAIR COVER
  "WOODLAND"                 B        2.50      0.30       1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   73.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.57;30M= 1.00;1H= 1.42;3H= 2.79;6H= 4.28;24H= 7.69
```

```
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.1%
           MOUNTAIN= 83.8%;FOOTHILL=  7.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.54; LAG(HR) = 1.23; Fm(INCH/HR) = 0.23; Ybar = 0.34
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.49; 30M = 0.52; 1HR = 0.54;
  3HR = 0.87; 6HR = 0.94; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  23961.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1059.00 = 72734.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0299; Lca/L=0.4,n=.0268; Lca/L=0.5,n=.0246;Lca/L=0.6,n=.0230
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =   10119.20
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  13033.89
  TOTAL AREA(ACRES) =  23961.10       PEAK FLOW RATE(CFS) =   13167.55
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.45; 30M = 0.91; 1HR = 1.24; 3HR = 2.21; 6HR = 3.21; 24HR = 5.51

****************************************************************************
  FLOW PROCESS FROM NODE   1058.00 TO NODE   1059.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  92.48
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.347
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      403.90      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        3.80      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C        7.00      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      145.40      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C      167.50      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C       36.90      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  764.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.57;30M= 1.00;1H= 1.41;3H= 2.77;6H= 4.25;24H= 7.62
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.1%
           MOUNTAIN= 83.8%;FOOTHILL=  7.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.54; LAG(HR) = 1.23; Fm(INCH/HR) = 0.23; Ybar = 0.34
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.48; 30M = 0.52; 1HR = 0.54;
  3HR = 0.87; 6HR = 0.94; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  24725.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1059.00 = 72734.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0299; Lca/L=0.4,n=.0268; Lca/L=0.5,n=.0246;Lca/L=0.6,n=.0230
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =   10293.78
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  13235.89
  TOTAL AREA(ACRES) =  24725.60       PEAK FLOW RATE(CFS) =   13235.89

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.45; 30M = 0.91; 1HR = 1.24; 3HR = 2.21; 6HR = 3.21; 24HR = 5.51

****************************************************************************
  FLOW PROCESS FROM NODE   1058.00 TO NODE   1059.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  92.48
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.347
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      289.70      0.20      1.00    81
  NATURAL FAIR COVER
  "MEADOWS"                  D        0.20      0.20      1.00    84
  NATURAL FAIR COVER
  "GRASS"                    D        0.10      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      117.70      0.20      1.00    83
  COMMERCIAL                 D        3.40      0.20      0.10    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D      287.30      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  698.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.56;30M= 0.99;1H= 1.41;3H= 2.76;6H= 4.22;24H= 7.56
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.1%
           MOUNTAIN= 83.8%;FOOTHILL=  7.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.54; LAG(HR) = 1.23; Fm(INCH/HR) = 0.23; Ybar = 0.34
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.48; 30M = 0.51; 1HR = 0.53;
  3HR = 0.87; 6HR = 0.94; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  25424.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1059.00 = 72734.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0299; Lca/L=0.4,n=.0268; Lca/L=0.5,n=.0246;Lca/L=0.6,n=.0230
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =   10491.20
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  13448.81
  TOTAL AREA(ACRES) =  25424.00       PEAK FLOW RATE(CFS) =   13448.81

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.45; 30M = 0.91; 1HR = 1.24; 3HR = 2.21; 6HR = 3.21; 24HR = 5.51

****************************************************************************
  FLOW PROCESS FROM NODE   1058.00 TO NODE   1059.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  92.48
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.347
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 D       45.00      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   45.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.56;30M= 0.99;1H= 1.41;3H= 2.76;6H= 4.22;24H= 7.56
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.1%
           MOUNTAIN= 83.8%;FOOTHILL=  7.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.54; LAG(HR) = 1.23; Fm(INCH/HR) = 0.23; Ybar = 0.34
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.48; 30M = 0.51; 1HR = 0.53;
  3HR = 0.87; 6HR = 0.94; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  25469.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1059.00 = 72734.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0299; Lca/L=0.4,n=.0268; Lca/L=0.5,n=.0246;Lca/L=0.6,n=.0230
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =   10502.53
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  13461.68
  TOTAL AREA(ACRES) =  25469.00       PEAK FLOW RATE(CFS) =   13461.68
```

```
  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.45; 30M = 0.91; 1HR = 1.24; 3HR = 2.21; 6HR = 3.21; 24HR = 5.51
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  25469.00  TC(MIN.) =     92.48
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.34
  PEAK FLOW RATE(CFS)   =  13461.68
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU60100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.070
        MOUNTAIN                           0.840
        VALLEY(UNDEVELOPED)/DESERT         0.080
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1059.00 TO NODE   1059.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU59100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    13461.68    Tc(MIN.) =  92.48
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.34
  TOTAL AREA(ACRES) =   25469.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1059.00 = 72734.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1059.00 TO NODE   1059.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    13461.68    Tc(MIN.) =  92.48
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.34
  TOTAL AREA(ACRES) =   25469.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1059.00 = 72734.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1059.00 TO NODE   1059.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1059.00 TO NODE   1060.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    630.00  DOWNSTREAM(FEET) =    518.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  7828.00   CHANNEL SLOPE =  0.0143
  CHANNEL BASE(FEET) =   50.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  13461.68
  FLOW VELOCITY(FEET/SEC.) =  18.74   FLOW DEPTH(FEET) =  11.65
  TRAVEL TIME(MIN.) =   6.96   Tc(MIN.) =  99.44
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1060.00 = 80562.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1059.00 TO NODE   1060.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  99.44
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.115
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       37.80      0.40      1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"               A      124.10      0.40      1.00    46
  COMMERCIAL                 A        3.70      0.40      0.10    32
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     A        0.20      0.40      1.00    55
  NATURAL FAIR COVER
  "WOODLAND"                 A       68.90      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       17.60      0.30      1.00    63
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.39
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  252.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.56;30M= 0.99;1H= 1.41;3H= 2.75;6H= 4.20;24H= 7.53
```

```
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.1%
           MOUNTAIN= 83.8%;FOOTHILL=  7.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.66; LAG(HR) = 1.33; Fm(INCH/HR) = 0.23; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.47; 30M = 0.51; 1HR = 0.53;
  3HR = 0.86; 6HR = 0.94; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  25721.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1060.00 = 80562.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0294; Lca/L=0.4,n=.0264; Lca/L=0.5,n=.0242;Lca/L=0.6,n=.0226
  TIME OF PEAK FLOW(HR) = 17.00  RUNOFF VOLUME(AF) =   10486.17
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  13282.04
  TOTAL AREA(ACRES) =  25721.30       PEAK FLOW RATE(CFS) =   13461.68
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1059.00 TO NODE   1060.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  99.44
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.310
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B        1.30      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       11.80      0.30      1.00    66
  COMMERCIAL                 B        5.10      0.30      0.10    56
  NATURAL FAIR COVER
  "WOODLAND"                 B       18.00      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      209.70      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        2.50      0.25      1.00    91
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  248.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.56;30M= 0.99;1H= 1.40;3H= 2.74;6H= 4.19;24H= 7.50
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.1%
           MOUNTAIN= 83.8%;FOOTHILL=  7.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.66; LAG(HR) = 1.33; Fm(INCH/HR) = 0.23; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.47; 30M = 0.51; 1HR = 0.53;
  3HR = 0.86; 6HR = 0.94; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  25969.71
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1060.00 = 80562.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0294; Lca/L=0.4,n=.0264; Lca/L=0.5,n=.0242;Lca/L=0.6,n=.0226
  TIME OF PEAK FLOW(HR) = 17.00  RUNOFF VOLUME(AF) =   10520.47
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  13329.42
  TOTAL AREA(ACRES) =  25969.71       PEAK FLOW RATE(CFS) =   13461.68
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1059.00 TO NODE   1060.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  99.44
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.310
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C       28.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      502.60      0.25      1.00    77
  COMMERCIAL                 C        1.30      0.25      0.10    69
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        6.10      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C        9.90      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       46.10      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  594.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.56;30M= 0.99;1H= 1.40;3H= 2.72;6H= 4.16;24H= 7.43
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.1%
           MOUNTAIN= 83.8%;FOOTHILL=  7.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.66; LAG(HR) = 1.33; Fm(INCH/HR) = 0.23; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.47; 30M = 0.50; 1HR = 0.52;
  3HR = 0.86; 6HR = 0.94; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  26564.11
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1060.00 = 80562.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0294; Lca/L=0.4,n=.0264; Lca/L=0.5,n=.0242;Lca/L=0.6,n=.0226
  TIME OF PEAK FLOW(HR) = 17.00  RUNOFF VOLUME(AF) =   10616.16
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  13449.27
  TOTAL AREA(ACRES) =  26564.11       PEAK FLOW RATE(CFS) =   13461.68
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1059.00 TO NODE   1060.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  99.44
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.310
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D       30.10      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      129.80      0.20      1.00    83
  COMMERCIAL                 D        1.70      0.20      0.10    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       38.00      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       91.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  290.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.56;30M= 0.99;1H= 1.40;3H= 2.72;6H= 4.14;24H= 7.40
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.1%
           MOUNTAIN= 83.8%;FOOTHILL=  7.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.66; LAG(HR) = 1.33; Fm(INCH/HR) = 0.23; Ybar = 0.36
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.47; 30M = 0.50; 1HR = 0.52;
  3HR = 0.86; 6HR = 0.94; 24HR= 0.96
```

```
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  26854.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1060.00 = 80562.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0294; Lca/L=0.4,n=.0264; Lca/L=0.5,n=.0242;Lca/L=0.6,n=.0226
  TIME OF PEAK FLOW(HR) = 17.00  RUNOFF VOLUME(AF) =   10674.95
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  13518.31
  TOTAL AREA(ACRES) =  26854.80       PEAK FLOW RATE(CFS) =   13518.31

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  26854.80  TC(MIN.) =     99.44
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.36
  PEAK FLOW RATE(CFS)   =  13518.31
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: LU61100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.130
        MOUNTAIN                           0.660
        VALLEY(UNDEVELOPED)/DESERT         0.200
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1060.00 TO NODE   1060.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU60100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    13518.31    Tc(MIN.) =  99.44
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.36
  TOTAL AREA(ACRES) =   26854.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1060.00 = 80562.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1060.00 TO NODE   1060.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    13518.31    Tc(MIN.) =  99.44
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.36
  TOTAL AREA(ACRES) =   26854.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1060.00 = 80562.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1060.00 TO NODE   1060.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1060.00 TO NODE   1061.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    518.00  DOWNSTREAM(FEET) =    435.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  8004.00   CHANNEL SLOPE =  0.0104
  CHANNEL BASE(FEET) =   55.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  13518.31
  FLOW VELOCITY(FEET/SEC.) =  16.54   FLOW DEPTH(FEET) =  12.17
  TRAVEL TIME(MIN.) =   8.06   Tc(MIN.) = 107.51
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1061.00 = 88566.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1060.00 TO NODE   1061.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) = 107.51
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.067
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       72.70      0.40       1.00    40
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A        9.10      0.40       0.50    32
  NATURAL POOR COVER
  "BARREN"                   A        0.20      0.40       1.00    78
  NATURAL FAIR COVER
  "GRASS"                    A        4.00      0.40       1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A       97.50      0.40       1.00    46
  COMMERCIAL                 A        8.10      0.40       0.10    32
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.94
  SUBAREA AREA(ACRES) =  191.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.56;30M= 0.99;1H= 1.40;3H= 2.71;6H= 4.14;24H= 7.39
```

```
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.2%
           MOUNTAIN= 83.7%;FOOTHILL=  7.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.79; LAG(HR) = 1.43; Fm(INCH/HR) = 0.23; Ybar = 0.36
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.46; 30M = 0.50; 1HR = 0.52;
  3HR = 0.86; 6HR = 0.94; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  27046.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1061.00 = 88566.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0292; Lca/L=0.4,n=.0262; Lca/L=0.5,n=.0241;Lca/L=0.6,n=.0225
  TIME OF PEAK FLOW(HR) = 17.00  RUNOFF VOLUME(AF) =   10684.73
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  13323.75
  TOTAL AREA(ACRES) =  27046.40       PEAK FLOW RATE(CFS) =   13518.31
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.47; 30M = 0.92; 1HR = 1.26; 3HR = 2.29; 6HR = 3.35; 24HR = 5.79

****************************************************************************
  FLOW PROCESS FROM NODE   1060.00 TO NODE   1061.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 107.51
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.267
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     A        8.70      0.40      1.00    55
  NATURAL FAIR COVER
  "WOODLAND"                 A       70.50      0.40      1.00    36
  NATURAL FAIR COVER
  "GRASS"                    B        0.80      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       18.30      0.30      1.00    66
  COMMERCIAL                 B        2.90      0.30      0.10    56
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        1.60      0.30      1.00    72
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.38
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =  102.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.56;30M= 0.99;1H= 1.39;3H= 2.71;6H= 4.13;24H= 7.38
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.2%
           MOUNTAIN= 83.6%;FOOTHILL=  7.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.79; LAG(HR) = 1.43; Fm(INCH/HR) = 0.23; Ybar = 0.36
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.46; 30M = 0.50; 1HR = 0.52;
  3HR = 0.86; 6HR = 0.94; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  27149.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1061.00 = 88566.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0292; Lca/L=0.4,n=.0262; Lca/L=0.5,n=.0241;Lca/L=0.6,n=.0225
  TIME OF PEAK FLOW(HR) = 17.00  RUNOFF VOLUME(AF) =   10689.75
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  13336.43
  TOTAL AREA(ACRES) =  27149.20       PEAK FLOW RATE(CFS) =   13518.31
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.47; 30M = 0.92; 1HR = 1.26; 3HR = 2.29; 6HR = 3.35; 24HR = 5.79

****************************************************************************
  FLOW PROCESS FROM NODE   1060.00 TO NODE   1061.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 107.51
```

```
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.267
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 B       16.20      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C     1119.80      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C       17.10      0.25      0.50    69
  NATURAL POOR COVER
  "BARREN"                   C       18.20      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C      128.60      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      739.90      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 2039.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.55;30M= 0.98;1H= 1.39;3H= 2.68;6H= 4.08;24H= 7.27
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  9.0%
           MOUNTAIN= 82.4%;FOOTHILL=  7.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.79; LAG(HR) = 1.43; Fm(INCH/HR) = 0.23; Ybar = 0.37
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.45; 30M = 0.49; 1HR = 0.51;
  3HR = 0.85; 6HR = 0.93; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  29189.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1061.00 = 88566.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0292; Lca/L=0.4,n=.0262; Lca/L=0.5,n=.0241;Lca/L=0.6,n=.0225
  TIME OF PEAK FLOW(HR) = 17.00  RUNOFF VOLUME(AF) =   11188.29
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  13862.52
  TOTAL AREA(ACRES) =  29189.00       PEAK FLOW RATE(CFS) =   13862.52

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.47; 30M = 0.92; 1HR = 1.26; 3HR = 2.29; 6HR = 3.35; 24HR = 5.79

****************************************************************************
  FLOW PROCESS FROM NODE   1060.00 TO NODE   1061.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 107.51
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.267
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 C        0.10      0.25      0.10    69
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C      195.30      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C      132.20      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D     1067.40      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D       23.60      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D       34.20      0.20      1.00    93
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) = 1452.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.55;30M= 0.98;1H= 1.38;3H= 2.66;6H= 4.04;24H= 7.20
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  9.5%
           MOUNTAIN= 81.6%;FOOTHILL=  7.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.79; LAG(HR) = 1.43; Fm(INCH/HR) = 0.23; Ybar = 0.37
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
```

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  DEPTH-AREA FACTORS: 5M = 0.44; 30M = 0.48; 1HR = 0.50;
  3HR = 0.85; 6HR = 0.93; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  30641.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1061.00 = 88566.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0292; Lca/L=0.4,n=.0262; Lca/L=0.5,n=.0241;Lca/L=0.6,n=.0225
  TIME OF PEAK FLOW(HR) = 17.00  RUNOFF VOLUME(AF) =   11595.00
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  14268.09
  TOTAL AREA(ACRES) =  30641.80       PEAK FLOW RATE(CFS) =   14268.09

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.47; 30M = 0.92; 1HR = 1.26; 3HR = 2.29; 6HR = 3.35; 24HR = 5.79

****************************************************************************
  FLOW PROCESS FROM NODE   1060.00 TO NODE   1061.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 107.51
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.267
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D       99.70      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      651.20      0.20      1.00    83
  COMMERCIAL                 D        3.60      0.20      0.10    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D      574.70      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D      210.30      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1539.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.54;30M= 0.98;1H= 1.37;3H= 2.65;6H= 4.01;24H= 7.13
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT= 10.0%
           MOUNTAIN= 80.9%;FOOTHILL=  8.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.79; LAG(HR) = 1.43; Fm(INCH/HR) = 0.23; Ybar = 0.37
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.43; 30M = 0.47; 1HR = 0.49;
  3HR = 0.84; 6HR = 0.93; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  32181.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1061.00 = 88566.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0292; Lca/L=0.4,n=.0262; Lca/L=0.5,n=.0241;Lca/L=0.6,n=.0225
  TIME OF PEAK FLOW(HR) = 17.00  RUNOFF VOLUME(AF) =   12056.77
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  14708.45
  TOTAL AREA(ACRES) =  32181.30       PEAK FLOW RATE(CFS) =   14708.45

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.47; 30M = 0.92; 1HR = 1.26; 3HR = 2.29; 6HR = 3.35; 24HR = 5.79
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  32181.30  TC(MIN.) =    107.51
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.37
  PEAK FLOW RATE(CFS)   =  14708.45
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU62100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.310
        MOUNTAIN                           0.260
        VALLEY(UNDEVELOPED)/DESERT         0.420
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1061.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU61100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    14708.45    Tc(MIN.) = 107.51
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.37
  TOTAL AREA(ACRES) =   32181.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1061.00 = 88566.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1061.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    14708.45    Tc(MIN.) = 107.51
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.37
  TOTAL AREA(ACRES) =   32181.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1061.00 = 88566.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1061.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1062.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    435.00  DOWNSTREAM(FEET) =    345.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  8275.00   CHANNEL SLOPE =  0.0109
  CHANNEL BASE(FEET) =   60.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  14708.45
  FLOW VELOCITY(FEET/SEC.) =  17.01   FLOW DEPTH(FEET) =  12.01
  TRAVEL TIME(MIN.) =   8.11   Tc(MIN.) = 115.61
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1062.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) = 115.61
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.023
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       36.50      0.40       1.00    40
  NATURAL FAIR COVER
  "WOODLAND"                 A      444.40      0.40       1.00    36
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A        1.00      0.40       0.50    32
  NATURAL POOR COVER
  "BARREN"                   A        6.90      0.40       1.00    78
  NATURAL FAIR COVER
  "GRASS"                    A       60.30      0.40       1.00    50
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 A        2.20      0.40       1.00    44
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  551.30
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.54;30M= 0.98;1H= 1.37;3H= 2.64;6H= 4.00;24H= 7.11
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT= 10.6%
           MOUNTAIN= 79.9%;FOOTHILL=  8.5%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.93; LAG(HR) = 1.54; Fm(INCH/HR) = 0.23; Ybar = 0.38
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.43; 30M = 0.46; 1HR = 0.49;
  3HR = 0.84; 6HR = 0.93; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  32732.61
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0290; Lca/L=0.4,n=.0260; Lca/L=0.5,n=.0239;Lca/L=0.6,n=.0223
  TIME OF PEAK FLOW(HR) = 17.25  RUNOFF VOLUME(AF) =   11998.96
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  14205.60
  TOTAL AREA(ACRES) =  32732.61       PEAK FLOW RATE(CFS) =   14708.45
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.46; 30M = 0.91; 1HR = 1.24; 3HR = 2.22; 6HR = 3.23; 24HR = 5.54

****************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1062.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 115.61
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.223
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  URBAN FAIR COVER
  "TURF"                     A        1.30      0.40      1.00    44
  NATURAL FAIR COVER
  "OPEN BRUSH"               A      138.50      0.40      1.00    46
  COMMERCIAL                 A        5.60      0.40      0.10    32
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     A        1.80      0.40      1.00    55
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       13.80      0.30      1.00    63
  AGRICULTURAL POOR COVER
  "FALLOW"                   B        2.70      0.30      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.39
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =  163.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.54;30M= 0.97;1H= 1.37;3H= 2.64;6H= 3.99;24H= 7.10
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT= 10.7%
           MOUNTAIN= 79.7%;FOOTHILL=  8.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.93; LAG(HR) = 1.54; Fm(INCH/HR) = 0.23; Ybar = 0.38
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.42; 30M = 0.46; 1HR = 0.49;
  3HR = 0.84; 6HR = 0.93; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  32896.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0290; Lca/L=0.4,n=.0260; Lca/L=0.5,n=.0239;Lca/L=0.6,n=.0223
  TIME OF PEAK FLOW(HR) = 17.25  RUNOFF VOLUME(AF) =   12006.43
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  14221.10
  TOTAL AREA(ACRES) =  32896.30       PEAK FLOW RATE(CFS) =   14708.45
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.46; 30M = 0.91; 1HR = 1.24; 3HR = 2.22; 6HR = 3.23; 24HR = 5.54

****************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1062.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) = 115.61
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.223
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B        2.30      0.30      0.50    56
  NATURAL POOR COVER
  "BARREN"                   B        5.00      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B       51.10      0.30      1.00    69
  URBAN FAIR COVER
  "TURF"                     B       10.00      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B      258.20      0.30      1.00    66
  COMMERCIAL                 B       64.50      0.30      0.10    56
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.85
  SUBAREA AREA(ACRES) =  391.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.54;30M= 0.97;1H= 1.37;3H= 2.63;6H= 3.98;24H= 7.08
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT= 11.1%
           MOUNTAIN= 79.0%;FOOTHILL=  8.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.93; LAG(HR) = 1.54; Fm(INCH/HR) = 0.23; Ybar = 0.38
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.42; 30M = 0.46; 1HR = 0.49;
  3HR = 0.84; 6HR = 0.93; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  33287.41
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0290; Lca/L=0.4,n=.0260; Lca/L=0.5,n=.0239;Lca/L=0.6,n=.0223
  TIME OF PEAK FLOW(HR) = 17.25  RUNOFF VOLUME(AF) =   12081.80
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  14306.09
  TOTAL AREA(ACRES) =  33287.41       PEAK FLOW RATE(CFS) =   14708.45
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.46; 30M = 0.91; 1HR = 1.24; 3HR = 2.22; 6HR = 3.23; 24HR = 5.54

****************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1062.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 115.61
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.223
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  PUBLIC PARK                B        6.20      0.30      0.85    56
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B       17.10      0.30      1.00    72
  NATURAL FAIR COVER
  "WOODLAND"                 B       74.10      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C     1292.00      0.25      1.00    75
  NATURAL FAIR COVER
  "WOODLAND"                 C      636.80      0.25      1.00    73
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        6.90      0.25      0.50    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 2033.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 0.97;1H= 1.36;3H= 2.61;6H= 3.94;24H= 6.99
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT= 12.9%
           MOUNTAIN= 76.0%;FOOTHILL= 10.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.93; LAG(HR) = 1.54; Fm(INCH/HR) = 0.24; Ybar = 0.39
```

```
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.41; 30M = 0.45; 1HR = 0.48;
  3HR = 0.83; 6HR = 0.92; 24HR= 0.95
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  35320.51
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0290; Lca/L=0.4,n=.0260; Lca/L=0.5,n=.0239;Lca/L=0.6,n=.0223
  TIME OF PEAK FLOW(HR) = 17.25  RUNOFF VOLUME(AF) =   12500.31
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  14753.56
  TOTAL AREA(ACRES) =  35320.51       PEAK FLOW RATE(CFS) =   14753.56

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.46; 30M = 0.91; 1HR = 1.24; 3HR = 2.22; 6HR = 3.23; 24HR = 5.54

****************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1062.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 115.61
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.223
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   C       40.70      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C      190.10      0.25      1.00    79
  URBAN FAIR COVER
  "TURF"                     C       87.00      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"               C     2310.80      0.25      1.00    77
  COMMERCIAL                 C      161.30      0.25      0.10    69
  PUBLIC PARK                C        8.70      0.25      0.85    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.95
  SUBAREA AREA(ACRES) = 2798.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 0.97;1H= 1.35;3H= 2.58;6H= 3.89;24H= 6.88
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT= 15.0%
           MOUNTAIN= 72.3%;FOOTHILL= 11.7%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.93; LAG(HR) = 1.54; Fm(INCH/HR) = 0.24; Ybar = 0.39
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.40; 30M = 0.44; 1HR = 0.47;
  3HR = 0.82; 6HR = 0.92; 24HR= 0.95
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  38119.11
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0290; Lca/L=0.4,n=.0260; Lca/L=0.5,n=.0239;Lca/L=0.6,n=.0223
  TIME OF PEAK FLOW(HR) = 17.50  RUNOFF VOLUME(AF) =   13162.02
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  15488.28
  TOTAL AREA(ACRES) =  38119.11       PEAK FLOW RATE(CFS) =   15488.28

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.46; 30M = 0.91; 1HR = 1.24; 3HR = 2.22; 6HR = 3.23; 24HR = 5.54

****************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1062.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 115.61
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.223
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C      389.30      0.25      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D     1418.60      0.20      1.00    81
  NATURAL FAIR COVER
  "MEADOWS"                  D        3.10      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                 D      963.30      0.20      1.00    79
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.80      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D       84.90      0.20      1.00    93
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 2860.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.52;30M= 0.96;1H= 1.34;3H= 2.55;6H= 3.84;24H= 6.79
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT= 16.9%
           MOUNTAIN= 69.1%;FOOTHILL= 13.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.93; LAG(HR) = 1.54; Fm(INCH/HR) = 0.23; Ybar = 0.39
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.38; 30M = 0.43; 1HR = 0.46;
  3HR = 0.81; 6HR = 0.92; 24HR= 0.95
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  40979.11
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0290; Lca/L=0.4,n=.0260; Lca/L=0.5,n=.0239;Lca/L=0.6,n=.0223
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   13890.64
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  16300.31
  TOTAL AREA(ACRES) =  40979.11       PEAK FLOW RATE(CFS) =   16300.31

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.46; 30M = 0.91; 1HR = 1.24; 3HR = 2.22; 6HR = 3.23; 24HR = 5.54

****************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1062.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 115.61
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.223
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D      865.20      0.20      1.00    84
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 D        0.20      0.20      1.00    82
  URBAN FAIR COVER
  "TURF"                     D       57.80      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D     2760.50      0.20      1.00    83
  COMMERCIAL                 D      225.30      0.20      0.10    75
  PUBLIC PARK                D        2.90      0.20      0.85    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.95
  SUBAREA AREA(ACRES) = 3911.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.52;30M= 0.96;1H= 1.34;3H= 2.52;6H= 3.79;24H= 6.68
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT= 19.1%
           MOUNTAIN= 65.3%;FOOTHILL= 14.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.93; LAG(HR) = 1.54; Fm(INCH/HR) = 0.23; Ybar = 0.39
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.36; 30M = 0.41; 1HR = 0.45;
  3HR = 0.80; 6HR = 0.91; 24HR= 0.95
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  44891.01
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0290; Lca/L=0.4,n=.0260; Lca/L=0.5,n=.0239;Lca/L=0.6,n=.0223
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   14986.95
```

```
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  17507.32
  TOTAL AREA(ACRES) =  44891.01       PEAK FLOW RATE(CFS) =   17507.32

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.46; 30M = 0.91; 1HR = 1.24; 3HR = 2.22; 6HR = 3.23; 24HR = 5.54

****************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1062.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 115.61
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.223
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL GOOD COVER
  "MEADOWS"                  D        0.20      0.20      1.00    78
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D     1546.10      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1546.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.52;30M= 0.96;1H= 1.33;3H= 2.51;6H= 3.77;24H= 6.64
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT= 19.9%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.93; LAG(HR) = 1.54; Fm(INCH/HR) = 0.23; Ybar = 0.38
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.36; 30M = 0.41; 1HR = 0.44;
  3HR = 0.79; 6HR = 0.91; 24HR= 0.95
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  46437.31
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0290; Lca/L=0.4,n=.0260; Lca/L=0.5,n=.0239;Lca/L=0.6,n=.0223
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   15436.40
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  17976.47
  TOTAL AREA(ACRES) =  46437.31       PEAK FLOW RATE(CFS) =   17976.47

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.46; 30M = 0.91; 1HR = 1.24; 3HR = 2.22; 6HR = 3.23; 24HR = 5.54
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  46437.31  TC(MIN.) =    115.61
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.38
  PEAK FLOW RATE(CFS)   =  17976.47
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

TECHNICAL APPENDIX I-A
HYDROLOGIC ANALYSIS
UPSTREAM AREAS
100-YEAR HIGH CONFIDENCE

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: LU35100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ======  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.030
        MOUNTAIN                           0.920
        VALLEY(UNDEVELOPED)/DESERT         0.050
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1001.00 IS CODE =  21
------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
========================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   330.00
  ELEVATION DATA: UPSTREAM(FEET) =   3210.00  DOWNSTREAM(FEET) =   3190.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   12.581
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.647
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        1.30      0.25      1.00    75   12.58
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      3.97
  TOTAL AREA(ACRES) =      1.30   PEAK FLOW RATE(CFS) =      3.97

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

************************************************************************
  FLOW PROCESS FROM NODE   1001.00 TO NODE   1002.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3190.00  DOWNSTREAM(FEET) =   3175.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   154.00   CHANNEL SLOPE =  0.0974
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      3.97
  FLOW VELOCITY(FEET/SEC.) =   4.53   FLOW DEPTH(FEET) =   0.56
  TRAVEL TIME(MIN.) =   0.57   Tc(MIN.) =  13.15
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1002.00 =   484.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1001.00 TO NODE   1002.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  13.15
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.056
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        1.20      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.20      SUBAREA RUNOFF(CFS) =    5.19
  EFFECTIVE AREA(ACRES) =      2.50   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      2.50       PEAK FLOW RATE(CFS) =      10.81

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

************************************************************************
  FLOW PROCESS FROM NODE   1002.00 TO NODE   1003.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3175.00  DOWNSTREAM(FEET) =   3160.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   136.00   CHANNEL SLOPE =  0.1103
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
```

```
 MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     10.81
 FLOW VELOCITY(FEET/SEC.) =   6.14   FLOW DEPTH(FEET) =   0.92
 TRAVEL TIME(MIN.) =   0.37   Tc(MIN.) =  13.52
 LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1003.00 =   620.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1002.00 TO NODE   1003.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  13.52
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.945
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      B        0.30      0.30      1.00    63
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      C        2.10      0.25      1.00    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    2.40      SUBAREA RUNOFF(CFS) =   10.13
 EFFECTIVE AREA(ACRES) =      4.90   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =      4.90       PEAK FLOW RATE(CFS) =      20.69

 SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
 5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
 FLOW PROCESS FROM NODE   1003.00 TO NODE   1004.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   3160.00  DOWNSTREAM(FEET) =   3120.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   357.00   CHANNEL SLOPE =  0.1120
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     20.69
 FLOW VELOCITY(FEET/SEC.) =   7.15   FLOW DEPTH(FEET) =   0.97
 TRAVEL TIME(MIN.) =   0.83   Tc(MIN.) =  14.35
 LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1004.00 =   977.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1003.00 TO NODE   1004.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  14.35
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.695
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      B        0.10      0.30      1.00    63
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      C        3.20      0.25      1.00    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    3.30      SUBAREA RUNOFF(CFS) =   13.20
 EFFECTIVE AREA(ACRES) =      8.20   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =      8.20       PEAK FLOW RATE(CFS) =      32.79

 SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
 5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27
```

```
****************************************************************************
 FLOW PROCESS FROM NODE   1004.00 TO NODE   1005.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   3120.00  DOWNSTREAM(FEET) =   3100.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   332.00   CHANNEL SLOPE =  0.0602
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     32.79
 FLOW VELOCITY(FEET/SEC.) =   6.43   FLOW DEPTH(FEET) =   1.47
 TRAVEL TIME(MIN.) =   0.86   Tc(MIN.) =  15.21
 LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1005.00 =  1309.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1004.00 TO NODE   1005.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  15.21
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.462
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      C        5.50      0.25      1.00    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    5.50      SUBAREA RUNOFF(CFS) =   20.85
 EFFECTIVE AREA(ACRES) =     13.70   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     13.70       PEAK FLOW RATE(CFS) =      51.92

 SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
 5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
 FLOW PROCESS FROM NODE   1005.00 TO NODE   1006.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   3100.00  DOWNSTREAM(FEET) =   3080.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   195.00   CHANNEL SLOPE =  0.1026
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     51.92
 FLOW VELOCITY(FEET/SEC.) =   8.84   FLOW DEPTH(FEET) =   1.62
 TRAVEL TIME(MIN.) =   0.37   Tc(MIN.) =  15.58
 LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1006.00 =  1504.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1005.00 TO NODE   1006.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  15.58
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.396
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      C        7.80      0.25      1.00    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    7.80      SUBAREA RUNOFF(CFS) =   29.11
```

```
  EFFECTIVE AREA(ACRES) =     21.50   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     21.50       PEAK FLOW RATE(CFS) =      80.21

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1006.00 TO NODE   1007.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3080.00  DOWNSTREAM(FEET) =   3075.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   220.00   CHANNEL SLOPE =  0.0227
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     80.21
  FLOW VELOCITY(FEET/SEC.) =   5.59   FLOW DEPTH(FEET) =   2.57
  TRAVEL TIME(MIN.) =   0.66   Tc(MIN.) =  16.23
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1007.00 =  1724.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1006.00 TO NODE   1007.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.23
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.278
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       10.10      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   10.10      SUBAREA RUNOFF(CFS) =   36.61
  EFFECTIVE AREA(ACRES) =     31.60   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     31.60       PEAK FLOW RATE(CFS) =     114.54

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1007.00 TO NODE   1008.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3075.00  DOWNSTREAM(FEET) =   3060.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   340.00   CHANNEL SLOPE =  0.0441
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    114.54
  FLOW VELOCITY(FEET/SEC.) =   7.85   FLOW DEPTH(FEET) =   2.60
  TRAVEL TIME(MIN.) =   0.72   Tc(MIN.) =  16.96
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1008.00 =  2064.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1007.00 TO NODE   1008.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.96
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.148
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
```

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       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       14.60      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        4.60      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   19.20      SUBAREA RUNOFF(CFS) =   66.70
  EFFECTIVE AREA(ACRES) =     50.80   AREA-AVERAGED Fm(INCH/HR) =  0.26
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     50.80       PEAK FLOW RATE(CFS) =     177.54

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1008.00 TO NODE   1009.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3060.00  DOWNSTREAM(FEET) =   3040.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   409.00   CHANNEL SLOPE =  0.0489
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    177.54
  FLOW VELOCITY(FEET/SEC.) =   9.07   FLOW DEPTH(FEET) =   2.86
  TRAVEL TIME(MIN.) =   0.75   Tc(MIN.) =  17.71
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1009.00 =  2473.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1008.00 TO NODE   1009.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.71
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.013
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        9.60      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       22.90      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   32.50      SUBAREA RUNOFF(CFS) =  109.63
  EFFECTIVE AREA(ACRES) =     83.30   AREA-AVERAGED Fm(INCH/HR) =  0.26
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     83.30       PEAK FLOW RATE(CFS) =     280.98

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1009.00 TO NODE   1010.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3040.00  DOWNSTREAM(FEET) =   3000.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1354.00   CHANNEL SLOPE =  0.0295
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    280.98
  FLOW VELOCITY(FEET/SEC.) =   8.44   FLOW DEPTH(FEET) =   3.79
  TRAVEL TIME(MIN.) =   2.67   Tc(MIN.) =  20.38
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1010.00 =  3827.00 FEET.
```

```
****************************************************************************
  FLOW PROCESS FROM NODE   1009.00 TO NODE   1010.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  20.38
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.568
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       22.50      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       20.80      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   43.30      SUBAREA RUNOFF(CFS) =  128.27
  EFFECTIVE AREA(ACRES) =    126.60   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    126.60       PEAK FLOW RATE(CFS) =     375.88

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1010.00 TO NODE   1011.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3000.00  DOWNSTREAM(FEET) =   2960.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1293.00   CHANNEL SLOPE =  0.0309
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    375.88
  FLOW VELOCITY(FEET/SEC.) =   9.24   FLOW DEPTH(FEET) =   4.35
  TRAVEL TIME(MIN.) =   2.33   Tc(MIN.) =  22.72
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1011.00 =  5120.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1010.00 TO NODE   1011.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  22.72
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.369
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       24.80      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       52.80      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   77.60      SUBAREA RUNOFF(CFS) =  216.73
  EFFECTIVE AREA(ACRES) =    204.20   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    204.20       PEAK FLOW RATE(CFS) =     570.01

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1011.00 TO NODE   1012.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2960.00  DOWNSTREAM(FEET) =   2940.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   900.00   CHANNEL SLOPE =  0.0222
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    570.01
  FLOW VELOCITY(FEET/SEC.) =   9.06   FLOW DEPTH(FEET) =   5.48
  TRAVEL TIME(MIN.) =   1.66   Tc(MIN.) =  24.37
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1012.00 =  6020.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1011.00 TO NODE   1012.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  24.37
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.228
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       10.90      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       15.10      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   26.00      SUBAREA RUNOFF(CFS) =   69.21
  EFFECTIVE AREA(ACRES) =    230.20   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    230.20       PEAK FLOW RATE(CFS) =     613.35

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1012.00 TO NODE   1013.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2940.00  DOWNSTREAM(FEET) =   2920.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   830.00   CHANNEL SLOPE =  0.0241
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    613.35
  FLOW VELOCITY(FEET/SEC.) =   9.51   FLOW DEPTH(FEET) =   5.57
  TRAVEL TIME(MIN.) =   1.45   Tc(MIN.) =  25.83
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1013.00 =  6850.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1012.00 TO NODE   1013.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  25.83
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.105
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        3.20      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       21.50      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   24.70      SUBAREA RUNOFF(CFS) =   63.32
  EFFECTIVE AREA(ACRES) =    254.90   AREA-AVERAGED Fm(INCH/HR) =  0.27
```

```
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    254.90       PEAK FLOW RATE(CFS) =     651.06

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1013.00 TO NODE   1014.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2920.00  DOWNSTREAM(FEET) =   2905.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   564.00   CHANNEL SLOPE =  0.0266
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    651.06
  FLOW VELOCITY(FEET/SEC.) =  10.03   FLOW DEPTH(FEET) =   5.60
  TRAVEL TIME(MIN.) =   0.94   Tc(MIN.) =  26.76
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1014.00 =  7414.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1013.00 TO NODE   1014.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  26.76
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.025
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       79.00      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        2.90      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   81.90      SUBAREA RUNOFF(CFS) =  201.00
  EFFECTIVE AREA(ACRES) =    336.80   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    336.80       PEAK FLOW RATE(CFS) =     833.79

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1014.00 TO NODE   1015.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2905.00  DOWNSTREAM(FEET) =   2880.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   901.00   CHANNEL SLOPE =  0.0277
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    833.79
  FLOW VELOCITY(FEET/SEC.) =  10.83   FLOW DEPTH(FEET) =   5.95
  TRAVEL TIME(MIN.) =   1.39   Tc(MIN.) =  28.15
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1015.00 =  8315.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1014.00 TO NODE   1015.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  28.15
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.907
  SUBAREA LOSS RATE DATA(AMC  II):
```

```
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        1.80      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       14.10      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   15.90      SUBAREA RUNOFF(CFS) =   37.94
  EFFECTIVE AREA(ACRES) =    352.70   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    352.70       PEAK FLOW RATE(CFS) =     835.99

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1015.00 TO NODE   1035.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2880.00  DOWNSTREAM(FEET) =   2840.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1895.00   CHANNEL SLOPE =  0.0211
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    835.99
  FLOW VELOCITY(FEET/SEC.) =   9.79   FLOW DEPTH(FEET) =   6.38
  TRAVEL TIME(MIN.) =   3.23   Tc(MIN.) =  31.38
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1035.00 = 10210.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1015.00 TO NODE   1035.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  31.38
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.713
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        8.00      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       28.80      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   36.80      SUBAREA RUNOFF(CFS) =   81.22
  EFFECTIVE AREA(ACRES) =    389.50   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    389.50       PEAK FLOW RATE(CFS) =     855.64

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1035.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  31.38
  RAINFALL INTENSITY(INCH/HR) =   2.71
  AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =   389.50
```

```
  TOTAL STREAM AREA(ACRES) =   389.50
  PEAK FLOW RATE(CFS) AT CONFLUENCE =    855.64

****************************************************************************
  FLOW PROCESS FROM NODE   1020.00 TO NODE   1021.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   330.00
  ELEVATION DATA: UPSTREAM(FEET) =   3525.00  DOWNSTREAM(FEET) =   3485.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   10.952
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.714
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.70      0.30      1.00    63   10.95
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.30      0.20      1.00    81   10.95
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      4.90
  TOTAL AREA(ACRES) =      1.00   PEAK FLOW RATE(CFS) =      4.90

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1021.00 TO NODE   1022.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3485.00  DOWNSTREAM(FEET) =   3440.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   191.00   CHANNEL SLOPE =  0.2356
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      4.90
  FLOW VELOCITY(FEET/SEC.) =   6.55   FLOW DEPTH(FEET) =   0.50
  TRAVEL TIME(MIN.) =   0.49   Tc(MIN.) =  11.44
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1022.00 =   521.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1021.00 TO NODE   1022.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.44
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.569
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.10      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.80      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.90      SUBAREA RUNOFF(CFS) =    4.34
  EFFECTIVE AREA(ACRES) =      1.90   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.90       PEAK FLOW RATE(CFS) =       9.11

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1022.00 TO NODE   1023.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3440.00  DOWNSTREAM(FEET) =   3400.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   227.00   CHANNEL SLOPE =  0.1762
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      9.11
  FLOW VELOCITY(FEET/SEC.) =   7.01   FLOW DEPTH(FEET) =   0.74
  TRAVEL TIME(MIN.) =   0.54   Tc(MIN.) =  11.98
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1023.00 =   748.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1022.00 TO NODE   1023.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.98
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.407
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.20      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.20      SUBAREA RUNOFF(CFS) =    5.62
  EFFECTIVE AREA(ACRES) =      3.10   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      3.10       PEAK FLOW RATE(CFS) =      14.45

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1023.00 TO NODE   1024.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3400.00  DOWNSTREAM(FEET) =   3280.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   160.00   CHANNEL SLOPE =  0.7500
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     14.45
  FLOW VELOCITY(FEET/SEC.) =  13.44   FLOW DEPTH(FEET) =   0.65
  TRAVEL TIME(MIN.) =   0.20   Tc(MIN.) =  12.18
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1024.00 =   908.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1023.00 TO NODE   1024.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.18
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.347
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        0.10      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.60      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
```

```
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.70      SUBAREA RUNOFF(CFS) =    3.24
  EFFECTIVE AREA(ACRES) =      3.80   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      3.80       PEAK FLOW RATE(CFS) =      17.53

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1024.00 TO NODE   1025.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3280.00  DOWNSTREAM(FEET) =   3240.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   138.00   CHANNEL SLOPE =  0.2899
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     17.53
  FLOW VELOCITY(FEET/SEC.) =   9.95   FLOW DEPTH(FEET) =   0.92
  TRAVEL TIME(MIN.) =   0.23   Tc(MIN.) =  12.41
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1025.00 =  1046.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1024.00 TO NODE   1025.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.41
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.278
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        2.80      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.30      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.10      SUBAREA RUNOFF(CFS) =   14.04
  EFFECTIVE AREA(ACRES) =      6.90   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      6.90       PEAK FLOW RATE(CFS) =      31.33

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1025.00 TO NODE   1026.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3240.00  DOWNSTREAM(FEET) =   3200.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   200.00   CHANNEL SLOPE =  0.2000
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     31.33
  FLOW VELOCITY(FEET/SEC.) =   9.88   FLOW DEPTH(FEET) =   1.04
  TRAVEL TIME(MIN.) =   0.34   Tc(MIN.) =  12.74
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1026.00 =  1246.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1025.00 TO NODE   1026.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  12.74
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.177
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        1.50      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.80      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.30      SUBAREA RUNOFF(CFS) =   14.71
  EFFECTIVE AREA(ACRES) =     10.20   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     10.20       PEAK FLOW RATE(CFS) =      45.42

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1026.00 TO NODE   1027.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3200.00  DOWNSTREAM(FEET) =   3120.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   477.00   CHANNEL SLOPE =  0.1677
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     45.42
  FLOW VELOCITY(FEET/SEC.) =  10.23   FLOW DEPTH(FEET) =   1.33
  TRAVEL TIME(MIN.) =   0.78   Tc(MIN.) =  13.52
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1027.00 =  1723.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1026.00 TO NODE   1027.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  13.52
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.943
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        3.90      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        3.10      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    7.00      SUBAREA RUNOFF(CFS) =   29.71
  EFFECTIVE AREA(ACRES) =     17.20   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     17.20       PEAK FLOW RATE(CFS) =      72.98

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1027.00 TO NODE   1028.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3120.00  DOWNSTREAM(FEET) =   3100.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   273.00   CHANNEL SLOPE =  0.0733
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   3.00
```

```
  CHANNEL FLOW THRU SUBAREA(CFS) =     72.98
  FLOW VELOCITY(FEET/SEC.) =   8.41   FLOW DEPTH(FEET) =   1.81
  TRAVEL TIME(MIN.) =   0.54   Tc(MIN.) =  14.06
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1028.00 =  1996.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1027.00 TO NODE   1028.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  14.06
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.781
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        2.70      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.50      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.20      SUBAREA RUNOFF(CFS) =   13.07
  EFFECTIVE AREA(ACRES) =     20.40   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     20.40       PEAK FLOW RATE(CFS) =      83.54

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1028.00 TO NODE   1029.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3100.00  DOWNSTREAM(FEET) =   3080.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   212.00   CHANNEL SLOPE =  0.0943
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     83.54
  FLOW VELOCITY(FEET/SEC.) =   9.57   FLOW DEPTH(FEET) =   1.81
  TRAVEL TIME(MIN.) =   0.37   Tc(MIN.) =  14.43
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1029.00 =  2208.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1028.00 TO NODE   1029.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  14.43
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.670
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        4.60      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        4.40      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        8.70      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   17.70      SUBAREA RUNOFF(CFS) =   70.60
  EFFECTIVE AREA(ACRES) =     38.10   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     38.10       PEAK FLOW RATE(CFS) =     152.11

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1029.00 TO NODE   1030.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3080.00  DOWNSTREAM(FEET) =   3000.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   781.00   CHANNEL SLOPE =  0.1024
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    152.11
  FLOW VELOCITY(FEET/SEC.) =  11.54   FLOW DEPTH(FEET) =   2.43
  TRAVEL TIME(MIN.) =   1.13   Tc(MIN.) =  15.56
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1030.00 =  2989.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1029.00 TO NODE   1030.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  15.56
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.399
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       24.90      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        6.60      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   31.50      SUBAREA RUNOFF(CFS) =  117.93
  EFFECTIVE AREA(ACRES) =     69.60   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     69.60       PEAK FLOW RATE(CFS) =     260.74

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1030.00 TO NODE   1031.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   3000.00  DOWNSTREAM(FEET) =   2980.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   392.00   CHANNEL SLOPE =  0.0510
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    260.74
  FLOW VELOCITY(FEET/SEC.) =  10.17   FLOW DEPTH(FEET) =   3.44
  TRAVEL TIME(MIN.) =   0.64   Tc(MIN.) =  16.20
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1031.00 =  3381.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1030.00 TO NODE   1031.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.20
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.284
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       53.50      0.25      1.00    75
```

```
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        2.40      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   55.90      SUBAREA RUNOFF(CFS) =  203.04
  EFFECTIVE AREA(ACRES) =    125.50   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    125.50       PEAK FLOW RATE(CFS) =     456.53

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1031.00 TO NODE   1032.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2980.00  DOWNSTREAM(FEET) =   2920.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1552.00   CHANNEL SLOPE =  0.0387
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    456.53
  FLOW VELOCITY(FEET/SEC.) =  10.55   FLOW DEPTH(FEET) =   4.54
  TRAVEL TIME(MIN.) =   2.45   Tc(MIN.) =  18.65
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1032.00 =  4933.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1031.00 TO NODE   1032.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.65
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.842
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       65.60      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       44.00      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  109.60      SUBAREA RUNOFF(CFS) =  356.33
  EFFECTIVE AREA(ACRES) =    235.10   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    235.10       PEAK FLOW RATE(CFS) =     763.02

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1032.00 TO NODE   1033.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2920.00  DOWNSTREAM(FEET) =   2900.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   976.00   CHANNEL SLOPE =  0.0205
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    763.02
  FLOW VELOCITY(FEET/SEC.) =   9.45   FLOW DEPTH(FEET) =   6.14
  TRAVEL TIME(MIN.) =   1.72   Tc(MIN.) =  20.38
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1033.00 =  5909.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1032.00 TO NODE   1033.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  20.38
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.568
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       35.60      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.60      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   36.20      SUBAREA RUNOFF(CFS) =  108.13
  EFFECTIVE AREA(ACRES) =    271.30   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    271.30       PEAK FLOW RATE(CFS) =     813.12

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1033.00 TO NODE   1034.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2900.00  DOWNSTREAM(FEET) =   2880.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   942.00   CHANNEL SLOPE =  0.0212
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    813.12
  FLOW VELOCITY(FEET/SEC.) =   9.74   FLOW DEPTH(FEET) =   6.28
  TRAVEL TIME(MIN.) =   1.61   Tc(MIN.) =  21.99
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1034.00 =  6851.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1033.00 TO NODE   1034.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  21.99
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.431
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       30.50      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.20      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   31.70      SUBAREA RUNOFF(CFS) =   90.81
  EFFECTIVE AREA(ACRES) =    303.00   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    303.00       PEAK FLOW RATE(CFS) =     870.48

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1034.00 TO NODE   1035.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2880.00  DOWNSTREAM(FEET) =   2840.00
```

```
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1097.00   CHANNEL SLOPE =  0.0365
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    870.48
  FLOW VELOCITY(FEET/SEC.) =  12.11   FLOW DEPTH(FEET) =   5.67
  TRAVEL TIME(MIN.) =   1.51   Tc(MIN.) =  23.50
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1035.00 =  7948.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1034.00 TO NODE   1035.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  23.50
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.303
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        1.20      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      113.90      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       18.60      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  133.70      SUBAREA RUNOFF(CFS) =  368.12
  EFFECTIVE AREA(ACRES) =    436.70   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    436.70       PEAK FLOW RATE(CFS) =    1203.62

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1035.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  23.50
  RAINFALL INTENSITY(INCH/HR) =   3.30
  AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =   436.70
  TOTAL STREAM AREA(ACRES) =   436.70
  PEAK FLOW RATE(CFS) AT CONFLUENCE =   1203.62

  ** CONFLUENCE DATA **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1    855.64  31.38    2.713  0.27( 0.27) 1.00   389.5    1000.00
      2   1203.62  23.50    3.303  0.24( 0.24) 1.00   436.7    1020.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1   1999.11  23.50    3.303  0.25( 0.25) 1.00   728.4    1020.00
      2   1827.57  31.38    2.713  0.26( 0.26) 1.00   826.2    1000.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =   1999.11    Tc(MIN.) =    23.50
  EFFECTIVE AREA(ACRES) =   728.38   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    826.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1035.00 = 10210.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1035.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>PEAK FLOW RATE ESTIMATOR CHANGED TO UNIT-HYDROGRAPH METHOD<<<<<
  >>>>>USING TIME-OF-CONCENTRATION OF LONGEST FLOWPATH<<<<<
============================================================================
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.78;30M= 1.34;1H= 1.94;3H= 3.96;6H= 6.19;24H=11.27
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  5.0%
           MOUNTAIN= 92.0%;FOOTHILL=  3.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.52; LAG(HR) = 0.42; Fm(INCH/HR) = 0.26; Ybar = 0.31
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.96; 30M = 0.96; 1HR = 0.96;
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =    826.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1035.00 = 10210.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0453; Lca/L=0.4,n=.0406; Lca/L=0.5,n=.0373;Lca/L=0.6,n=.0348
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     565.80
  UNIT-HYDROGRAPH METHOD PEAK FLOW RATE(CFS) =   1769.41
  TOTAL PEAK FLOW RATE(CFS) =   1769.41 (SOURCE FLOW INCLUDED)
  RATIONAL METHOD PEAK FLOW RATE(CFS) =   1999.11
   (UPSTREAM NODE PEAK FLOW RATE(CFS) =   1999.11)
  PEAK FLOW RATE(CFS) USED =   1999.11
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =    826.20  TC(MIN.) =     31.38
  AREA-AVERAGED Fm(INCH/HR)=  0.26   Ybar =  0.31
  PEAK FLOW RATE(CFS)   =   1999.11
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU36100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.170
        FOOTHILL                           0.030
        MOUNTAIN                           0.750
        VALLEY(UNDEVELOPED)/DESERT         0.050
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1035.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU35100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1999.11    Tc(MIN.) =  31.38
  AREA-AVERAGED Fm(INCH/HR) =  0.26    Ybar = 0.31
  TOTAL AREA(ACRES) =     826.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1035.00 = 10210.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1035.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1999.11    Tc(MIN.) =  31.38
  AREA-AVERAGED Fm(INCH/HR) =  0.26    Ybar = 0.31
  TOTAL AREA(ACRES) =     826.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1035.00 = 10210.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1035.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1036.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2840.00  DOWNSTREAM(FEET) =   2800.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1878.00   CHANNEL SLOPE =  0.0213
  CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1999.11
  FLOW VELOCITY(FEET/SEC.) =  14.40   FLOW DEPTH(FEET) =   7.80
  TRAVEL TIME(MIN.) =   2.17   Tc(MIN.) =  33.55
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1036.00 = 12088.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1036.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  33.55
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.079
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       31.30      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       21.90      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   53.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.78;30M= 1.34;1H= 1.94;3H= 3.96;6H= 6.19;24H=11.27
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  5.0%
           MOUNTAIN= 91.0%;FOOTHILL=  3.0%;DESERT(UNDEV.)=  1.0%
  Tc(HR) = 0.56; LAG(HR) = 0.45; Fm(INCH/HR) = 0.26; Ybar = 0.31
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.96; 30M = 0.96; 1HR = 0.96;
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =    879.40
```

```
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1036.00 = 12088.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0421; Lca/L=0.4,n=.0377; Lca/L=0.5,n=.0346;Lca/L=0.6,n=.0323
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     599.81
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1822.73
  TOTAL AREA(ACRES) =    879.40       PEAK FLOW RATE(CFS) =    1999.11
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =    879.40  TC(MIN.) =     33.55
  AREA-AVERAGED Fm(INCH/HR)=  0.26   Ybar =  0.31
  PEAK FLOW RATE(CFS)   =   1999.11
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU37100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.130
        MOUNTAIN                           0.710
        VALLEY(UNDEVELOPED)/DESERT         0.150
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1036.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU36100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1999.11    Tc(MIN.) =  33.55
  AREA-AVERAGED Fm(INCH/HR) =  0.26    Ybar = 0.31
  TOTAL AREA(ACRES) =     879.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1036.00 = 12088.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1036.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1999.11    Tc(MIN.) =  33.55
  AREA-AVERAGED Fm(INCH/HR) =  0.26    Ybar = 0.31
  TOTAL AREA(ACRES) =     879.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1036.00 = 12088.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1036.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1037.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2800.00  DOWNSTREAM(FEET) =   2760.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1959.00   CHANNEL SLOPE =  0.0204
  CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1999.11
  FLOW VELOCITY(FEET/SEC.) =  14.18   FLOW DEPTH(FEET) =   7.88
  TRAVEL TIME(MIN.) =   2.30   Tc(MIN.) =  35.85
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1037.00 = 14047.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1037.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  35.85
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.001
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       40.40      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       56.40      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   96.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.78;30M= 1.34;1H= 1.94;3H= 3.96;6H= 6.19;24H=11.27
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.60; LAG(HR) = 0.48; Fm(INCH/HR) = 0.26; Ybar = 0.32
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.96; 30M = 0.96; 1HR = 0.96;
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =    976.20
```

```
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1037.00 = 14047.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0397; Lca/L=0.4,n=.0356; Lca/L=0.5,n=.0327;Lca/L=0.6,n=.0305
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     663.34
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1910.21
  TOTAL AREA(ACRES) =    976.20       PEAK FLOW RATE(CFS) =    1999.11
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =    976.20  TC(MIN.) =     35.85
  AREA-AVERAGED Fm(INCH/HR)=  0.26   Ybar =  0.32
  PEAK FLOW RATE(CFS)   =   1999.11
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU38100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.040
        MOUNTAIN                           0.890
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1037.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU37100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1999.11    Tc(MIN.) =  35.85
  AREA-AVERAGED Fm(INCH/HR) =  0.26    Ybar = 0.32
  TOTAL AREA(ACRES) =     976.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1037.00 = 14047.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1037.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1999.11    Tc(MIN.) =  35.85
  AREA-AVERAGED Fm(INCH/HR) =  0.26    Ybar = 0.32
  TOTAL AREA(ACRES) =     976.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1037.00 = 14047.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1037.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1038.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2760.00  DOWNSTREAM(FEET) =   2700.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2116.00   CHANNEL SLOPE =  0.0284
  CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1999.11
  FLOW VELOCITY(FEET/SEC.) =  16.01   FLOW DEPTH(FEET) =   7.24
  TRAVEL TIME(MIN.) =   2.20   Tc(MIN.) =  38.06
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1038.00 = 16163.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1038.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  38.06
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.934
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       17.10      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      137.10      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       11.50      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  165.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.78;30M= 1.34;1H= 1.94;3H= 3.96;6H= 6.19;24H=11.27
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.63; LAG(HR) = 0.51; Fm(INCH/HR) = 0.26; Ybar = 0.31
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.95; 30M = 0.95; 1HR = 0.95;
```

```
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1141.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1038.00 = 16163.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0377; Lca/L=0.4,n=.0338; Lca/L=0.5,n=.0311;Lca/L=0.6,n=.0290
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     777.92
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2111.29
  TOTAL AREA(ACRES) =   1141.90       PEAK FLOW RATE(CFS) =    2111.29

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   1141.90  TC(MIN.) =     38.06
  AREA-AVERAGED Fm(INCH/HR)=  0.26   Ybar =  0.31
  PEAK FLOW RATE(CFS)   =   2111.29
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
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             Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                          Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU39100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  =====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.040
        MOUNTAIN                           0.890
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1938.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU38100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2111.29    Tc(MIN.) =  38.06
  AREA-AVERAGED Fm(INCH/HR) =  0.26    Ybar = 0.31
  TOTAL AREA(ACRES) =    1141.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1938.00 = 16163.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1038.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2111.29    Tc(MIN.) =  38.06
  AREA-AVERAGED Fm(INCH/HR) =  0.26    Ybar = 0.31
  TOTAL AREA(ACRES) =    1141.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1038.00 = 16163.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1038.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1039.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2700.00  DOWNSTREAM(FEET) =   2600.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2298.00   CHANNEL SLOPE =  0.0435
  CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2111.29
  FLOW VELOCITY(FEET/SEC.) =  19.04   FLOW DEPTH(FEET) =   6.66
  TRAVEL TIME(MIN.) =   2.01   Tc(MIN.) =  40.07
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1039.00 = 18461.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1039.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  40.07
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.878
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        3.20      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       10.50      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       88.80      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  102.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.78;30M= 1.34;1H= 1.94;3H= 3.96;6H= 6.19;24H=11.27
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.67; LAG(HR) = 0.53; Fm(INCH/HR) = 0.25; Ybar = 0.31
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.94; 30M = 0.94; 1HR = 0.94;
```

```
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1244.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1039.00 = 18461.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0362; Lca/L=0.4,n=.0325; Lca/L=0.5,n=.0298;Lca/L=0.6,n=.0278
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =     854.07
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2251.23
  TOTAL AREA(ACRES) =   1244.40       PEAK FLOW RATE(CFS) =    2251.23

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   1244.40  TC(MIN.) =     40.07
  AREA-AVERAGED Fm(INCH/HR)=  0.25   Ybar =  0.31
  PEAK FLOW RATE(CFS)   =   2251.23
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU40100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.040
        MOUNTAIN                           0.890
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1039.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU39100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2251.23    Tc(MIN.) =  40.07
  AREA-AVERAGED Fm(INCH/HR) =  0.25    Ybar = 0.31
  TOTAL AREA(ACRES) =    1244.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1039.00 = 18461.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1039.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2251.23    Tc(MIN.) =  40.07
  AREA-AVERAGED Fm(INCH/HR) =  0.25    Ybar = 0.31
  TOTAL AREA(ACRES) =    1244.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1039.00 = 18461.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1039.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1040.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2600.00  DOWNSTREAM(FEET) =   2400.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  3287.00   CHANNEL SLOPE =  0.0608
  CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2251.23
  FLOW VELOCITY(FEET/SEC.) =  21.90   FLOW DEPTH(FEET) =   6.30
  TRAVEL TIME(MIN.) =   2.50   Tc(MIN.) =  42.57
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1040.00 = 21748.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1040.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  42.57
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.814
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      115.00      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  115.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.78;30M= 1.34;1H= 1.94;3H= 3.96;6H= 6.19;24H=11.27
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.71; LAG(HR) = 0.57; Fm(INCH/HR) = 0.25; Ybar = 0.30
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.94; 30M = 0.94; 1HR = 0.94;
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1359.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1040.00 = 21748.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
```

```
 Lca/L=0.3,n=.0348; Lca/L=0.4,n=.0312; Lca/L=0.5,n=.0286;Lca/L=0.6,n=.0267
 TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =     940.71
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2428.98
 TOTAL AREA(ACRES) =   1359.40       PEAK FLOW RATE(CFS) =    2428.98

 SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
 5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27
================================================================================
 END OF STUDY SUMMARY:
 TOTAL AREA(ACRES)     =   1359.40  TC(MIN.) =     42.57
 AREA-AVERAGED Fm(INCH/HR)=  0.25   Ybar =  0.30
 PEAK FLOW RATE(CFS)   =   2428.98
================================================================================
================================================================================
 END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU41100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.040
        MOUNTAIN                           0.890
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1040.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU40100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2428.98    Tc(MIN.) =  42.57
  AREA-AVERAGED Fm(INCH/HR) =  0.25    Ybar = 0.30
  TOTAL AREA(ACRES) =    1359.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1040.00 = 21748.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1040.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2428.98    Tc(MIN.) =  42.57
  AREA-AVERAGED Fm(INCH/HR) =  0.25    Ybar = 0.30
  TOTAL AREA(ACRES) =    1359.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1040.00 = 21748.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1040.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1041.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2400.00  DOWNSTREAM(FEET) =   2200.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2212.00   CHANNEL SLOPE =  0.0904
  CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2428.98
  FLOW VELOCITY(FEET/SEC.) =  21.94   FLOW DEPTH(FEET) =   6.65
  TRAVEL TIME(MIN.) =   1.68   Tc(MIN.) =  44.25
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1041.00 = 23960.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1041.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  44.25
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.774
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       61.20      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      156.90      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  218.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.78;30M= 1.34;1H= 1.94;3H= 3.96;6H= 6.19;24H=11.27
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.74; LAG(HR) = 0.59; Fm(INCH/HR) = 0.24; Ybar = 0.29
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.93; 30M = 0.93; 1HR = 0.93;
  3HR = 0.99; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1577.50
```

```
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1041.00 = 23960.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0344; Lca/L=0.4,n=.0308; Lca/L=0.5,n=.0283;Lca/L=0.6,n=.0264
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    1101.46
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2751.02
  TOTAL AREA(ACRES) =   1577.50       PEAK FLOW RATE(CFS) =    2751.02

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   1577.50  TC(MIN.) =     44.25
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.29
  PEAK FLOW RATE(CFS)   =   2751.02
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU42100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ======  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.040
        MOUNTAIN                           0.890
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1041.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU41100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2751.02    Tc(MIN.) =  44.25
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.29
  TOTAL AREA(ACRES) =    1577.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1041.00 = 23960.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1041.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2751.02    Tc(MIN.) =  44.25
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.29
  TOTAL AREA(ACRES) =    1577.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1041.00 = 23960.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1041.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1042.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2200.00  DOWNSTREAM(FEET) =   2000.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1708.00   CHANNEL SLOPE =  0.1171
  CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2751.02
  FLOW VELOCITY(FEET/SEC.) =  24.93   FLOW DEPTH(FEET) =   6.63
  TRAVEL TIME(MIN.) =   1.14   Tc(MIN.) =  45.39
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1042.00 = 25668.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1042.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  45.39
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.748
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      169.60      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       24.80      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  194.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.78;30M= 1.34;1H= 1.94;3H= 3.96;6H= 6.19;24H=11.27
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.76; LAG(HR) = 0.61; Fm(INCH/HR) = 0.24; Ybar = 0.29
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.92; 30M = 0.92; 1HR = 0.92;
  3HR = 0.99; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1771.90
```

```
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1042.00 = 25668.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0342; Lca/L=0.4,n=.0306; Lca/L=0.5,n=.0281;Lca/L=0.6,n=.0263
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    1238.13
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3014.59
  TOTAL AREA(ACRES) =   1771.90       PEAK FLOW RATE(CFS) =    3014.59

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   1771.90  TC(MIN.) =     45.39
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.29
  PEAK FLOW RATE(CFS)   =   3014.59
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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                         Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: LU43100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  =====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.040
        MOUNTAIN                           0.890
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1042.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU42100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3014.59    Tc(MIN.) =  45.39
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.29
  TOTAL AREA(ACRES) =    1771.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1042.00 = 25668.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1042.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3014.59    Tc(MIN.) =  45.39
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.29
  TOTAL AREA(ACRES) =    1771.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1042.00 = 25668.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1042.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1043.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2000.00  DOWNSTREAM(FEET) =   1990.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1322.00   CHANNEL SLOPE =  0.0076
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3014.59
  FLOW VELOCITY(FEET/SEC.) =  10.68   FLOW DEPTH(FEET) =   9.55
  TRAVEL TIME(MIN.) =   2.06   Tc(MIN.) =  47.46
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1043.00 = 26990.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1043.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  47.46
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.704
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        7.40      0.40      1.00    40
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       42.50      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      106.00      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  155.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.78;30M= 1.34;1H= 1.94;3H= 3.96;6H= 6.18;24H=11.25
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.79; LAG(HR) = 0.63; Fm(INCH/HR) = 0.24; Ybar = 0.29
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.91; 30M = 0.91; 1HR = 0.91;
```

```
  3HR = 0.99; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1927.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1043.00 = 26990.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0341; Lca/L=0.4,n=.0306; Lca/L=0.5,n=.0281;Lca/L=0.6,n=.0262
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    1347.82
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3151.16
  TOTAL AREA(ACRES) =   1927.80       PEAK FLOW RATE(CFS) =    3151.16

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.77; 30M = 1.33; 1HR = 1.92; 3HR = 3.91; 6HR = 6.09; 24HR =11.08
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   1927.80  TC(MIN.) =     47.46
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.29
  PEAK FLOW RATE(CFS)   =   3151.16
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: LU44100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  =====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.040
        MOUNTAIN                           0.890
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1043.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU43100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3151.16    Tc(MIN.) =  47.46
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.29
  TOTAL AREA(ACRES) =    1927.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1043.00 = 26990.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1043.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3151.16    Tc(MIN.) =  47.46
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.29
  TOTAL AREA(ACRES) =    1927.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1043.00 = 26990.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1043.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1044.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1990.00  DOWNSTREAM(FEET) =   1980.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1681.00   CHANNEL SLOPE =  0.0059
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3151.16
  FLOW VELOCITY(FEET/SEC.) =   9.74   FLOW DEPTH(FEET) =   9.40
  TRAVEL TIME(MIN.) =   2.88   Tc(MIN.) =  50.33
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1044.00 = 28671.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1044.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  50.33
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.648
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        2.20      0.40      1.00    40
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       27.60      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       59.80      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   89.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.78;30M= 1.34;1H= 1.94;3H= 3.95;6H= 6.17;24H=11.23
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.84; LAG(HR) = 0.67; Fm(INCH/HR) = 0.24; Ybar = 0.29
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.91; 30M = 0.91; 1HR = 0.91;
```

```
  3HR = 0.99; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   2017.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1044.00 = 28671.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0342; Lca/L=0.4,n=.0307; Lca/L=0.5,n=.0282;Lca/L=0.6,n=.0263
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    1409.10
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3158.29
  TOTAL AREA(ACRES) =   2017.40       PEAK FLOW RATE(CFS) =    3158.29

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.76; 30M = 1.32; 1HR = 1.90; 3HR = 3.82; 6HR = 5.93; 24HR =10.75
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   2017.40  TC(MIN.) =     50.33
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.29
  PEAK FLOW RATE(CFS)   =   3158.29
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU45100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  =====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.040
        MOUNTAIN                           0.890
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1044.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU44100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3158.29    Tc(MIN.) =  50.33
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.29
  TOTAL AREA(ACRES) =    2017.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1044.00 = 28671.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1044.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3158.29    Tc(MIN.) =  50.33
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.29
  TOTAL AREA(ACRES) =    2017.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1044.00 = 28671.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1044.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1045.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1980.00  DOWNSTREAM(FEET) =   1960.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2360.00   CHANNEL SLOPE =  0.0085
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3158.29
  FLOW VELOCITY(FEET/SEC.) =  11.06   FLOW DEPTH(FEET) =   8.52
  TRAVEL TIME(MIN.) =   3.56   Tc(MIN.) =  53.89
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1045.00 = 31031.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1045.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  53.89
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.584
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       40.90      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      179.40      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       97.70      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  318.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.77;30M= 1.33;1H= 1.93;3H= 3.92;6H= 6.12;24H=11.12
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.90; LAG(HR) = 0.72; Fm(INCH/HR) = 0.24; Ybar = 0.29
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.90; 30M = 0.90; 1HR = 0.90;
```

```
  3HR = 0.98; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   2335.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1045.00 = 31031.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0341; Lca/L=0.4,n=.0306; Lca/L=0.5,n=.0281;Lca/L=0.6,n=.0262
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    1610.46
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3548.03
  TOTAL AREA(ACRES) =   2335.40       PEAK FLOW RATE(CFS) =    3548.03

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.74; 30M = 1.30; 1HR = 1.87; 3HR = 3.74; 6HR = 5.77; 24HR =10.44
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   2335.40  TC(MIN.) =     53.89
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.29
  PEAK FLOW RATE(CFS)   =   3548.03
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU46100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ======  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.040
        MOUNTAIN                           0.890
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1045.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU45100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3548.03    Tc(MIN.) =  53.89
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.29
  TOTAL AREA(ACRES) =    2335.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1045.00 = 31031.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1045.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3548.03    Tc(MIN.) =  53.89
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.29
  TOTAL AREA(ACRES) =    2335.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1045.00 = 31031.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1045.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1046.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1960.00  DOWNSTREAM(FEET) =   1915.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2743.00   CHANNEL SLOPE =  0.0164
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3548.03
  FLOW VELOCITY(FEET/SEC.) =  14.46   FLOW DEPTH(FEET) =   7.54
  TRAVEL TIME(MIN.) =   3.16   Tc(MIN.) =  57.05
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1046.00 = 33774.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1046.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  57.05
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.533
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       30.70      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       79.90      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  110.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.77;30M= 1.33;1H= 1.92;3H= 3.89;6H= 6.06;24H=11.01
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.95; LAG(HR) = 0.76; Fm(INCH/HR) = 0.24; Ybar = 0.29
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.89; 30M = 0.89; 1HR = 0.89;
  3HR = 0.98; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   2446.00
```

```
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1046.00 = 33774.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0335; Lca/L=0.4,n=.0301; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0258
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    1661.34
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3548.59
  TOTAL AREA(ACRES) =   2446.00       PEAK FLOW RATE(CFS) =    3548.59

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.66; 30M = 1.22; 1HR = 1.71; 3HR = 3.25; 6HR = 4.87; 24HR = 8.64
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   2446.00  TC(MIN.) =     57.05
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.29
  PEAK FLOW RATE(CFS)   =   3548.59
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU47100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  =====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.040
        MOUNTAIN                           0.890
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1046.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU46100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3548.59    Tc(MIN.) =  57.05
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.29
  TOTAL AREA(ACRES) =    2446.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1046.00 = 33774.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1046.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3548.59    Tc(MIN.) =  57.05
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.29
  TOTAL AREA(ACRES) =    2446.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1046.00 = 33774.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1046.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1047.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1915.00  DOWNSTREAM(FEET) =   1910.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   221.00   CHANNEL SLOPE =  0.0226
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3548.59
  FLOW VELOCITY(FEET/SEC.) =  16.19   FLOW DEPTH(FEET) =   6.88
  TRAVEL TIME(MIN.) =   0.23   Tc(MIN.) =  57.28
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1047.00 = 33995.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1047.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  57.28
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.530
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B      146.30      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C     1591.10      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      118.40      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1855.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.77;30M= 1.33;1H= 1.92;3H= 3.91;6H= 6.09;24H=11.07
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 89.0%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.95; LAG(HR) = 0.76; Fm(INCH/HR) = 0.25; Ybar = 0.29
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.81; 30M = 0.81; 1HR = 0.81;
```

```
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4301.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1047.00 = 33995.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0335; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    2913.83
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5750.24
  TOTAL AREA(ACRES) =   4301.80       PEAK FLOW RATE(CFS) =    5750.24

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.77; 30M = 1.33; 1HR = 1.93; 3HR = 3.93; 6HR = 6.13; 24HR =11.15
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   4301.80  TC(MIN.) =     57.28
  AREA-AVERAGED Fm(INCH/HR)=  0.25   Ybar =  0.29
  PEAK FLOW RATE(CFS)   =   5750.24
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU48100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.070
        MOUNTAIN                           0.860
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1047.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU47100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5750.24    Tc(MIN.) =  57.28
  AREA-AVERAGED Fm(INCH/HR) =  0.25    Ybar = 0.29
  TOTAL AREA(ACRES) =    4301.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1047.00 = 33995.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1047.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5750.24    Tc(MIN.) =  57.28
  AREA-AVERAGED Fm(INCH/HR) =  0.25    Ybar = 0.29
  TOTAL AREA(ACRES) =    4301.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1047.00 = 33995.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1047.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1048.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1910.00  DOWNSTREAM(FEET) =   1750.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1601.00   CHANNEL SLOPE =  0.0999
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   5750.24
  FLOW VELOCITY(FEET/SEC.) =  26.92   FLOW DEPTH(FEET) =   6.73
  TRAVEL TIME(MIN.) =   0.99   Tc(MIN.) =  58.27
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 35596.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1048.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  58.27
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.515
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        3.60      0.40       1.00    40
  NATURAL FAIR COVER
  "WOODLAND"                 A        3.30      0.40       1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       59.50      0.30       1.00    63
  NATURAL POOR COVER
  "BARREN"                   B        0.40      0.30       1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B        0.10      0.30       1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B       16.70      0.30       1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.31
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   83.60
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.77;30M= 1.33;1H= 1.92;3H= 3.91;6H= 6.09;24H=11.07
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 88.9%;FOOTHILL=  4.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.97; LAG(HR) = 0.78; Fm(INCH/HR) = 0.25; Ybar = 0.30
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.80; 30M = 0.80; 1HR = 0.80;
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4385.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 35596.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0333; Lca/L=0.4,n=.0299; Lca/L=0.5,n=.0274;Lca/L=0.6,n=.0256
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    2959.96
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5752.67
  TOTAL AREA(ACRES) =   4385.40       PEAK FLOW RATE(CFS) =    5752.67

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.93; 3HR = 3.94; 6HR = 6.14; 24HR =11.18

****************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1048.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  58.27
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.996
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      926.70      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        0.50      0.25      0.50    69
  NATURAL POOR COVER
  "BARREN"                   C       10.50      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C       10.70      0.25      1.00    79
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C      299.20      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C       40.40      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1288.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.77;30M= 1.33;1H= 1.92;3H= 3.92;6H= 6.10;24H=11.10
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 88.3%;FOOTHILL=  4.7%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.97; LAG(HR) = 0.78; Fm(INCH/HR) = 0.25; Ybar = 0.29
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.77; 30M = 0.77; 1HR = 0.77;
  3HR = 0.96; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   5673.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 35596.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0333; Lca/L=0.4,n=.0299; Lca/L=0.5,n=.0274;Lca/L=0.6,n=.0256
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    3844.51
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7185.64
  TOTAL AREA(ACRES) =   5673.40       PEAK FLOW RATE(CFS) =    7185.64

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.93; 3HR = 3.94; 6HR = 6.14; 24HR =11.18

****************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1048.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  58.27
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.996
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      805.90      0.20      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 D       51.50      0.20      1.00    79
  NATURAL POOR COVER
  "BARREN"                   D        2.40      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D        3.10      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       23.30      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D      567.30      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1453.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.77;30M= 1.33;1H= 1.93;3H= 3.92;6H= 6.11;24H=11.11
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.0%
           MOUNTAIN= 87.8%;FOOTHILL=  5.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.97; LAG(HR) = 0.78; Fm(INCH/HR) = 0.24; Ybar = 0.27
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.73; 30M = 0.73; 1HR = 0.73;
  3HR = 0.96; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   7126.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 35596.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0333; Lca/L=0.4,n=.0299; Lca/L=0.5,n=.0274;Lca/L=0.6,n=.0256
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    4922.31
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8755.24
  TOTAL AREA(ACRES) =   7126.90       PEAK FLOW RATE(CFS) =    8755.24

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.93; 3HR = 3.94; 6HR = 6.14; 24HR =11.18
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   7126.90  TC(MIN.) =     58.27
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.27
  PEAK FLOW RATE(CFS)   =   8755.24
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
        (c) Copyright 1983-2003 Advanced Engineering Software (aes)
            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: LU49100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.050
        MOUNTAIN                           0.800
        VALLEY(UNDEVELOPED)/DESERT         0.140
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1048.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU48100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     8755.24    Tc(MIN.) =  58.27
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.27
  TOTAL AREA(ACRES) =    7126.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 35596.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1048.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     8755.24    Tc(MIN.) =  58.27
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.27
  TOTAL AREA(ACRES) =    7126.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 35596.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1048.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1750.00  DOWNSTREAM(FEET) =   1670.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2254.00   CHANNEL SLOPE =  0.0355
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   8755.24
  FLOW VELOCITY(FEET/SEC.) =  21.00   FLOW DEPTH(FEET) =  11.44
  TRAVEL TIME(MIN.) =   1.79   Tc(MIN.) =  60.06
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 37850.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  60.06
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.489
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       10.20      0.30       1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        2.00      0.30       1.00    72
  NATURAL FAIR COVER
  "WOODLAND"                 B       11.10      0.30       1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      267.80      0.25       1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        3.40      0.25       0.50    69
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C      128.10      0.25       1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  422.60
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.77;30M= 1.33;1H= 1.92;3H= 3.91;6H= 6.08;24H=11.06
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  6.4%
           MOUNTAIN= 87.4%;FOOTHILL=  5.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.00; LAG(HR) = 0.80; Fm(INCH/HR) = 0.24; Ybar = 0.27
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.72; 30M = 0.72; 1HR = 0.72;
  3HR = 0.95; 6HR = 0.98; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   7549.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 37850.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0327; Lca/L=0.4,n=.0293; Lca/L=0.5,n=.0270;Lca/L=0.6,n=.0252
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    5174.80
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8926.17
  TOTAL AREA(ACRES) =   7549.50       PEAK FLOW RATE(CFS) =    8926.17

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.73; 30M = 1.29; 1HR = 1.84; 3HR = 3.66; 6HR = 5.63; 24HR =10.16

****************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  60.06
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.950
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C        4.70      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      391.50      0.20      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D      149.60      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       33.60      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  579.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.77;30M= 1.33;1H= 1.92;3H= 3.89;6H= 6.05;24H=11.00
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 86.8%;FOOTHILL=  5.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.00; LAG(HR) = 0.80; Fm(INCH/HR) = 0.24; Ybar = 0.27
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8128.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 37850.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0327; Lca/L=0.4,n=.0293; Lca/L=0.5,n=.0270;Lca/L=0.6,n=.0252
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    5552.56
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9438.57
  TOTAL AREA(ACRES) =   8128.90       PEAK FLOW RATE(CFS) =    9438.57

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.73; 30M = 1.29; 1HR = 1.84; 3HR = 3.66; 6HR = 5.63; 24HR =10.16
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   8128.90  TC(MIN.) =     60.06
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.27
  PEAK FLOW RATE(CFS)   =   9438.57
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: LU50100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.050
        MOUNTAIN                           0.870
        VALLEY(UNDEVELOPED)/DESERT         0.070
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1049.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU49100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9438.57    Tc(MIN.) =  60.06
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.27
  TOTAL AREA(ACRES) =    8128.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 37850.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1049.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9438.57    Tc(MIN.) =  60.06
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.27
  TOTAL AREA(ACRES) =    8128.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 37850.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1049.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1050.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1670.00  DOWNSTREAM(FEET) =   1665.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   290.00   CHANNEL SLOPE =  0.0172
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   9438.57
  FLOW VELOCITY(FEET/SEC.) =  16.48   FLOW DEPTH(FEET) =  14.50
  TRAVEL TIME(MIN.) =   0.29   Tc(MIN.) =  60.35
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 38140.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1050.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  60.35
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.485
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       41.60      0.40      1.00    40
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       85.70      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C     1084.00      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      175.60      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1386.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.77;30M= 1.33;1H= 1.91;3H= 3.87;6H= 6.02;24H=10.94
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 86.9%;FOOTHILL=  5.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.01; LAG(HR) = 0.80; Fm(INCH/HR) = 0.24; Ybar = 0.28
```

```
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.68; 30M = 0.68; 1HR = 0.69;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9515.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 38140.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0327; Lca/L=0.4,n=.0293; Lca/L=0.5,n=.0269;Lca/L=0.6,n=.0251
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    6404.98
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  10721.31
  TOTAL AREA(ACRES) =   9515.80       PEAK FLOW RATE(CFS) =   10721.31

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.75; 30M = 1.31; 1HR = 1.88; 3HR = 3.78; 6HR = 5.86; 24HR =10.62
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   9515.80  TC(MIN.) =     60.35
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.28
  PEAK FLOW RATE(CFS)   =  10721.31
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU51100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ======  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.050
        MOUNTAIN                           0.870
        VALLEY(UNDEVELOPED)/DESERT         0.070
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1050.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU50100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    10721.31    Tc(MIN.) =  60.35
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.28
  TOTAL AREA(ACRES) =    9515.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 38140.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1050.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    10721.31    Tc(MIN.) =  60.35
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.28
  TOTAL AREA(ACRES) =    9515.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 38140.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1050.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1051.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1665.00  DOWNSTREAM(FEET) =   1630.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2134.00   CHANNEL SLOPE =  0.0164
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  10721.31
  FLOW VELOCITY(FEET/SEC.) =  16.58   FLOW DEPTH(FEET) =  14.52
  TRAVEL TIME(MIN.) =   2.14   Tc(MIN.) =  62.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 40274.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1051.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  62.50
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.455
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      297.00      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      163.30      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  460.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.76;30M= 1.32;1H= 1.91;3H= 3.86;6H= 6.00;24H=10.90
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 86.9%;FOOTHILL=  5.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.04; LAG(HR) = 0.83; Fm(INCH/HR) = 0.24; Ybar = 0.28
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.67; 30M = 0.68; 1HR = 0.68;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9976.10
```

```
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 40274.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0323; Lca/L=0.4,n=.0289; Lca/L=0.5,n=.0266;Lca/L=0.6,n=.0248
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    6678.47
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  11143.95
  TOTAL AREA(ACRES) =   9976.10       PEAK FLOW RATE(CFS) =   11143.95

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.72; 30M = 1.28; 1HR = 1.83; 3HR = 3.62; 6HR = 5.55; 24HR =10.00
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   9976.10  TC(MIN.) =     62.50
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.28
  PEAK FLOW RATE(CFS)   =  11143.95
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU52100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.050
        MOUNTAIN                           0.870
        VALLEY(UNDEVELOPED)/DESERT         0.070
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1051.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU51100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    11143.95    Tc(MIN.) =  62.50
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.28
  TOTAL AREA(ACRES) =    9976.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 40274.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1051.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    11143.95    Tc(MIN.) =  62.50
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.28
  TOTAL AREA(ACRES) =    9976.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 40274.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1051.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1630.00  DOWNSTREAM(FEET) =   1410.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  5523.00   CHANNEL SLOPE =  0.0398
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  11143.95
  FLOW VELOCITY(FEET/SEC.) =  23.09   FLOW DEPTH(FEET) =  11.60
  TRAVEL TIME(MIN.) =   3.99   Tc(MIN.) =  66.48
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 45797.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  66.48
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.405
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       19.10      0.40      1.00    40
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      198.40      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      507.40      0.20      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       26.70      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  751.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.76;30M= 1.32;1H= 1.89;3H= 3.82;6H= 5.92;24H=10.74
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 86.9%;FOOTHILL=  5.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.11; LAG(HR) = 0.89; Fm(INCH/HR) = 0.24; Ybar = 0.28
```

```
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.66; 30M = 0.67; 1HR = 0.67;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  10727.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 45797.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0311; Lca/L=0.4,n=.0279; Lca/L=0.5,n=.0256;Lca/L=0.6,n=.0239
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    7051.71
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  11522.89
  TOTAL AREA(ACRES) =  10727.70       PEAK FLOW RATE(CFS) =   11522.89

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.66; 30M = 1.23; 1HR = 1.72; 3HR = 3.26; 6HR = 4.90; 24HR = 8.70
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  10727.70  TC(MIN.) =     66.48
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.28
  PEAK FLOW RATE(CFS)   =  11522.89
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
        (c) Copyright 1983-2003 Advanced Engineering Software (aes)
            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                          Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU53100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.110
        MOUNTAIN                           0.810
        VALLEY(UNDEVELOPED)/DESERT         0.070
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1052.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU52100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    11522.89    Tc(MIN.) =  66.48
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.28
  TOTAL AREA(ACRES) =   10727.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 45797.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1052.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    11522.89    Tc(MIN.) =  66.48
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.28
  TOTAL AREA(ACRES) =   10727.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 45797.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1052.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1410.00  DOWNSTREAM(FEET) =   1297.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2262.00   CHANNEL SLOPE =  0.0500
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  11522.89
  FLOW VELOCITY(FEET/SEC.) =  25.29   FLOW DEPTH(FEET) =  11.09
  TRAVEL TIME(MIN.) =   1.49   Tc(MIN.) =  67.97
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 48059.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  67.97
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.387
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        4.50      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        2.20      0.30      1.00    72
  NATURAL FAIR COVER
  "WOODLAND"                 B       31.40      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      214.70      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C       21.40      0.25      0.50    69
  NATURAL POOR COVER
  "BARREN"                   C        0.70      0.25      1.00    91
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.96
  SUBAREA AREA(ACRES) =  274.90
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.76;30M= 1.32;1H= 1.89;3H= 3.82;6H= 5.92;24H=10.74
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 86.7%;FOOTHILL=  5.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.13; LAG(HR) = 0.91; Fm(INCH/HR) = 0.24; Ybar = 0.28
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.65; 30M = 0.66; 1HR = 0.67;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  11002.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 48059.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0308; Lca/L=0.4,n=.0276; Lca/L=0.5,n=.0253;Lca/L=0.6,n=.0236
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    7212.28
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  11579.71
  TOTAL AREA(ACRES) =  11002.60       PEAK FLOW RATE(CFS) =   11579.71

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.75; 30M = 1.31; 1HR = 1.88; 3HR = 3.78; 6HR = 5.85; 24HR =10.59

****************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  67.97
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.897
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        7.60      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       35.40      0.25      1.00    77
  PUBLIC PARK                C        0.20      0.25      0.85    69
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       85.00      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C       92.50      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      717.00      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  937.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.76;30M= 1.32;1H= 1.89;3H= 3.81;6H= 5.92;24H=10.73
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 86.3%;FOOTHILL=  5.7%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.13; LAG(HR) = 0.91; Fm(INCH/HR) = 0.23; Ybar = 0.28
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.64; 30M = 0.65; 1HR = 0.66;
  3HR = 0.93; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  11940.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 48059.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0308; Lca/L=0.4,n=.0276; Lca/L=0.5,n=.0253;Lca/L=0.6,n=.0236
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    7832.19
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  12388.02
  TOTAL AREA(ACRES) =  11940.30       PEAK FLOW RATE(CFS) =   12388.02

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.75; 30M = 1.31; 1HR = 1.88; 3HR = 3.78; 6HR = 5.85; 24HR =10.59

****************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  67.97
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.897
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        2.90      0.20      0.50    75
  NATURAL FAIR COVER
  "GRASS"                    D       10.20      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       44.50      0.20      1.00    83
  PUBLIC PARK                D        0.70      0.20      0.85    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D      674.40      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D      148.30      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  881.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.76;30M= 1.32;1H= 1.89;3H= 3.81;6H= 5.91;24H=10.72
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 85.9%;FOOTHILL=  6.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.13; LAG(HR) = 0.91; Fm(INCH/HR) = 0.23; Ybar = 0.27
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.62; 30M = 0.64; 1HR = 0.64;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12821.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 48059.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0308; Lca/L=0.4,n=.0276; Lca/L=0.5,n=.0253;Lca/L=0.6,n=.0236
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    8445.45
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  13143.39
  TOTAL AREA(ACRES) =  12821.30       PEAK FLOW RATE(CFS) =   13143.39

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.75; 30M = 1.31; 1HR = 1.88; 3HR = 3.78; 6HR = 5.85; 24HR =10.59
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  12821.30  TC(MIN.) =     67.97
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.27
  PEAK FLOW RATE(CFS)   =  13143.39
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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 ************************************************************************
             RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
            (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
          (c) Copyright 1983-2003 Advanced Engineering Software (aes)
              Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                           Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

 ----------------------------------------------------------------------------
  FILE NAME: LU54100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
 ============================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
 ============================================================================
                     --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.060
        MOUNTAIN                           0.860
        VALLEY(UNDEVELOPED)/DESERT         0.070
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


 ************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1053.00 IS CODE = 15.1
 ----------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
 ============================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU53100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    13143.39    Tc(MIN.) =  67.97
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.27
  TOTAL AREA(ACRES) =   12821.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 48059.00 FEET.

 ****************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1053.00 IS CODE = 14.0
 ----------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
 ============================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    13143.39    Tc(MIN.) =  67.97
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.27
  TOTAL AREA(ACRES) =   12821.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 48059.00 FEET.

 ****************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1053.00 IS CODE =  12
 ----------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
 ============================================================================

 ****************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  51
 ----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
 ============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1297.00  DOWNSTREAM(FEET) =   1235.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  3488.00   CHANNEL SLOPE =  0.0178
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  13143.39
  FLOW VELOCITY(FEET/SEC.) =  21.24   FLOW DEPTH(FEET) =  14.05
  TRAVEL TIME(MIN.) =   2.74   Tc(MIN.) =  70.71
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 51547.00 FEET.

 ****************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) =  70.71
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.356
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      435.00      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        7.80      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       36.00      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C       10.20      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      271.30      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       26.90      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  787.20
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.75;30M= 1.31;1H= 1.88;3H= 3.78;6H= 5.86;24H=10.62
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 85.9%;FOOTHILL=  6.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.18; LAG(HR) = 0.94; Fm(INCH/HR) = 0.23; Ybar = 0.27
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.61; 30M = 0.63; 1HR = 0.63;
  3HR = 0.92; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  13608.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 51547.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0301; Lca/L=0.4,n=.0270; Lca/L=0.5,n=.0248;Lca/L=0.6,n=.0232
  TIME OF PEAK FLOW(HR) = 16.67  RUNOFF VOLUME(AF) =    8827.74
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  13326.39
  TOTAL AREA(ACRES) =  13608.50       PEAK FLOW RATE(CFS) =   13326.39

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.67; 30M = 1.24; 1HR = 1.74; 3HR = 3.32; 6HR = 5.01; 24HR = 8.93

****************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  70.71
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.879
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        5.30      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       13.70      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   19.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.75;30M= 1.31;1H= 1.88;3H= 3.78;6H= 5.86;24H=10.61
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 85.9%;FOOTHILL=  6.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.18; LAG(HR) = 0.94; Fm(INCH/HR) = 0.23; Ybar = 0.27
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.61; 30M = 0.63; 1HR = 0.63;
  3HR = 0.92; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  13627.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 51547.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0301; Lca/L=0.4,n=.0270; Lca/L=0.5,n=.0248;Lca/L=0.6,n=.0232
  TIME OF PEAK FLOW(HR) = 16.67  RUNOFF VOLUME(AF) =    8837.94
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  13339.30
  TOTAL AREA(ACRES) =  13627.50       PEAK FLOW RATE(CFS) =   13339.30

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.67; 30M = 1.24; 1HR = 1.74; 3HR = 3.32; 6HR = 5.01; 24HR = 8.93
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  13627.50  TC(MIN.) =     70.71
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.27
  PEAK FLOW RATE(CFS)   =  13339.30
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU55100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.060
        MOUNTAIN                           0.860
        VALLEY(UNDEVELOPED)/DESERT         0.070
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1054.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU54100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    13339.30    Tc(MIN.) =  70.71
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.27
  TOTAL AREA(ACRES) =   13627.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 51547.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1054.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    13339.30    Tc(MIN.) =  70.71
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.27
  TOTAL AREA(ACRES) =   13627.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 51547.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1054.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1235.00  DOWNSTREAM(FEET) =   1115.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  3993.00   CHANNEL SLOPE =  0.0301
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  13339.30
  FLOW VELOCITY(FEET/SEC.) =  25.77   FLOW DEPTH(FEET) =  12.25
  TRAVEL TIME(MIN.) =   2.58   Tc(MIN.) =  73.29
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 55540.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  73.29
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.328
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       43.80      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       21.40      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       35.80      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C       11.10      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      659.60      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      129.70      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  901.40
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.74;30M= 1.30;1H= 1.87;3H= 3.74;6H= 5.78;24H=10.46
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 85.9%;FOOTHILL=  6.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.22; LAG(HR) = 0.98; Fm(INCH/HR) = 0.23; Ybar = 0.27
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.59; 30M = 0.62; 1HR = 0.62;
  3HR = 0.92; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  14528.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 55540.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0294; Lca/L=0.4,n=.0264; Lca/L=0.5,n=.0242;Lca/L=0.6,n=.0226
  TIME OF PEAK FLOW(HR) = 16.67  RUNOFF VOLUME(AF) =    9255.89
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  13934.63
  TOTAL AREA(ACRES) =  14528.90       PEAK FLOW RATE(CFS) =   13934.63

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.64; 30M = 1.20; 1HR = 1.67; 3HR = 3.13; 6HR = 4.66; 24HR = 8.21

****************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  73.29
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.861
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       86.60      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       43.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  130.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.74;30M= 1.30;1H= 1.87;3H= 3.74;6H= 5.77;24H=10.44
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 85.9%;FOOTHILL=  6.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.22; LAG(HR) = 0.98; Fm(INCH/HR) = 0.23; Ybar = 0.27
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.59; 30M = 0.61; 1HR = 0.62;
  3HR = 0.92; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  14658.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 55540.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0294; Lca/L=0.4,n=.0264; Lca/L=0.5,n=.0242;Lca/L=0.6,n=.0226
  TIME OF PEAK FLOW(HR) = 16.67  RUNOFF VOLUME(AF) =    9320.85
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  14014.64
  TOTAL AREA(ACRES) =  14658.90       PEAK FLOW RATE(CFS) =   14014.64

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.64; 30M = 1.20; 1HR = 1.67; 3HR = 3.13; 6HR = 4.66; 24HR = 8.21
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  14658.90  TC(MIN.) =     73.29
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.27
  PEAK FLOW RATE(CFS)   =  14014.64
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU56100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.060
        MOUNTAIN                           0.860
        VALLEY(UNDEVELOPED)/DESERT         0.070
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1055.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU55100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    14014.64    Tc(MIN.) =  73.29
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.27
  TOTAL AREA(ACRES) =   14658.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 55540.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1055.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    14014.64    Tc(MIN.) =  73.29
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.27
  TOTAL AREA(ACRES) =   14658.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 55540.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1055.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1115.00  DOWNSTREAM(FEET) =    978.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  4363.00   CHANNEL SLOPE =  0.0314
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  14014.64
  FLOW VELOCITY(FEET/SEC.) =  26.55   FLOW DEPTH(FEET) =  12.44
  TRAVEL TIME(MIN.) =   2.74   Tc(MIN.) =  76.03
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 59903.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  76.03
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.301
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       11.50      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        2.90      0.30      1.00    72
  NATURAL FAIR COVER
  "WOODLAND"                 B       15.10      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      566.60      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        9.10      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C      601.90      0.25      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1207.10
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.74;30M= 1.30;1H= 1.86;3H= 3.71;6H= 5.72;24H=10.33
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 85.9%;FOOTHILL=  6.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.27; LAG(HR) = 1.01; Fm(INCH/HR) = 0.23; Ybar = 0.28
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.57; 30M = 0.60; 1HR = 0.61;
  3HR = 0.91; 6HR = 0.96; 24HR= 0.97
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  15866.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 59903.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0287; Lca/L=0.4,n=.0258; Lca/L=0.5,n=.0237;Lca/L=0.6,n=.0221
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    9972.61
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  14003.70
  TOTAL AREA(ACRES) =  15866.00       PEAK FLOW RATE(CFS) =   14014.64
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.67; 30M = 1.24; 1HR = 1.74; 3HR = 3.33; 6HR = 5.02; 24HR = 8.94

****************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  76.03
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.843
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C       84.60      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      433.40      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      116.90      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D      298.40      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       94.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1027.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.73;30M= 1.29;1H= 1.85;3H= 3.68;6H= 5.67;24H=10.25
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 85.9%;FOOTHILL=  6.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.27; LAG(HR) = 1.01; Fm(INCH/HR) = 0.23; Ybar = 0.28
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.56; 30M = 0.59; 1HR = 0.60;
  3HR = 0.91; 6HR = 0.96; 24HR= 0.97
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  16893.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 59903.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0287; Lca/L=0.4,n=.0258; Lca/L=0.5,n=.0237;Lca/L=0.6,n=.0221
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =   10525.85
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  14661.79
  TOTAL AREA(ACRES) =  16893.70       PEAK FLOW RATE(CFS) =   14661.79

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.67; 30M = 1.24; 1HR = 1.74; 3HR = 3.33; 6HR = 5.02; 24HR = 8.94
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  16893.70  TC(MIN.) =     76.03
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.28
  PEAK FLOW RATE(CFS)   =  14661.79
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: LU57100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.060
        MOUNTAIN                           0.860
        VALLEY(UNDEVELOPED)/DESERT         0.070
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1056.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU56100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    14661.79    Tc(MIN.) =  76.03
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.28
  TOTAL AREA(ACRES) =   16893.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 59903.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1056.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    14661.79    Tc(MIN.) =  76.03
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.28
  TOTAL AREA(ACRES) =   16893.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 59903.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1056.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    978.00  DOWNSTREAM(FEET) =    800.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  5201.00   CHANNEL SLOPE =  0.0342
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  14661.79
  FLOW VELOCITY(FEET/SEC.) =  23.60   FLOW DEPTH(FEET) =  14.09
  TRAVEL TIME(MIN.) =   3.67   Tc(MIN.) =  79.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 65104.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  79.70
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.266
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        2.00      0.25      1.00    75
  NATURAL FAIR COVER
  "MEADOWS"                  C        0.90      0.25      1.00    80
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       40.20      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        0.30      0.25      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      208.80      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      155.20      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  407.40
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.73;30M= 1.29;1H= 1.84;3H= 3.66;6H= 5.63;24H=10.15
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 85.9%;FOOTHILL=  6.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.33; LAG(HR) = 1.06; Fm(INCH/HR) = 0.23; Ybar = 0.28
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.56; 30M = 0.58; 1HR = 0.59;
  3HR = 0.90; 6HR = 0.96; 24HR= 0.97
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  17301.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 65104.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =   10654.34
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  14763.33
  TOTAL AREA(ACRES) =  17301.10       PEAK FLOW RATE(CFS) =   14763.33

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.54; 30M = 1.11; 1HR = 1.49; 3HR = 2.56; 6HR = 3.59; 24HR = 6.09

****************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  79.70
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.819
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       63.60      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       57.80      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  121.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.73;30M= 1.29;1H= 1.84;3H= 3.65;6H= 5.61;24H=10.12
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.0%
           MOUNTAIN= 85.9%;FOOTHILL=  6.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.33; LAG(HR) = 1.06; Fm(INCH/HR) = 0.23; Ybar = 0.28
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.56; 30M = 0.58; 1HR = 0.59;
  3HR = 0.90; 6HR = 0.96; 24HR= 0.97
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  17422.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 65104.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =   10693.91
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  14816.00
  TOTAL AREA(ACRES) =  17422.50       PEAK FLOW RATE(CFS) =   14816.00

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.54; 30M = 1.11; 1HR = 1.49; 3HR = 2.56; 6HR = 3.59; 24HR = 6.09
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  17422.50  TC(MIN.) =     79.70
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.28
  PEAK FLOW RATE(CFS)   =  14816.00
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                         Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: LU58100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.100
        MOUNTAIN                           0.780
        VALLEY(UNDEVELOPED)/DESERT         0.110
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1057.00 TO NODE   1057.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU57100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    14816.00    Tc(MIN.) =  79.70
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.28
  TOTAL AREA(ACRES) =   17422.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 65104.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1057.00 TO NODE   1057.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    14816.00    Tc(MIN.) =  79.70
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.28
  TOTAL AREA(ACRES) =   17422.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 65104.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1057.00 TO NODE   1057.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1057.00 TO NODE   1058.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    800.00  DOWNSTREAM(FEET) =    657.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  5445.00   CHANNEL SLOPE =  0.0263
  CHANNEL BASE(FEET) =   35.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  14816.00
  FLOW VELOCITY(FEET/SEC.) =  21.27   FLOW DEPTH(FEET) =  14.16
  TRAVEL TIME(MIN.) =   4.27   Tc(MIN.) =  83.97
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1058.00 = 70549.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1057.00 TO NODE   1058.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  83.97
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.229
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       96.50      0.40       1.00    40
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A        0.70      0.40       0.50    32
  NATURAL FAIR COVER
  "OPEN BRUSH"               A       12.00      0.40       1.00    46
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     A       30.00      0.40       1.00    55
  NATURAL FAIR COVER
  "WOODLAND"                 A       91.00      0.40       1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       37.50      0.30       1.00    63
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.39
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  267.70
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.73;30M= 1.29;1H= 1.84;3H= 3.65;6H= 5.60;24H=10.10
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.1%
           MOUNTAIN= 85.8%;FOOTHILL=  6.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.40; LAG(HR) = 1.12; Fm(INCH/HR) = 0.23; Ybar = 0.28
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.55; 30M = 0.58; 1HR = 0.59;
  3HR = 0.90; 6HR = 0.95; 24HR= 0.97
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  17690.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1058.00 = 70549.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0214
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =   10754.26
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  14794.07
  TOTAL AREA(ACRES) =  17690.20       PEAK FLOW RATE(CFS) =   14816.00
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.68; 30M = 1.25; 1HR = 1.76; 3HR = 3.39; 6HR = 5.13; 24HR = 9.16

****************************************************************************
  FLOW PROCESS FROM NODE   1057.00 TO NODE   1058.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  83.97
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.790
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B        1.30      0.30      0.50    56
  NATURAL POOR COVER
  "BARREN"                   B        2.40      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B       17.50      0.30      1.00    69
  COMMERCIAL                 B        2.20      0.30      0.10    56
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B       15.70      0.30      1.00    72
  NATURAL FAIR COVER
  "WOODLAND"                 B      206.30      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  245.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.73;30M= 1.29;1H= 1.84;3H= 3.64;6H= 5.60;24H=10.09
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.1%
           MOUNTAIN= 85.7%;FOOTHILL=  6.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.40; LAG(HR) = 1.12; Fm(INCH/HR) = 0.23; Ybar = 0.29
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.55; 30M = 0.57; 1HR = 0.59;
  3HR = 0.90; 6HR = 0.95; 24HR= 0.97
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  17935.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1058.00 = 70549.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0214
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =   10848.19
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  14917.07
  TOTAL AREA(ACRES) =  17935.60       PEAK FLOW RATE(CFS) =   14917.07

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.68; 30M = 1.25; 1HR = 1.76; 3HR = 3.39; 6HR = 5.13; 24HR = 9.16

****************************************************************************
  FLOW PROCESS FROM NODE   1057.00 TO NODE   1058.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  83.97
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.790
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C     1027.50      0.25      1.00    75
  NATURAL FAIR COVER
  "MEADOWS"                  C        2.90      0.25      1.00    80
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        0.40      0.25      0.50    69
  NATURAL FAIR COVER
  "GRASS"                    C       17.00      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      163.50      0.25      1.00    77
  COMMERCIAL                 C        1.10      0.25      0.10    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1212.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.72;30M= 1.29;1H= 1.83;3H= 3.63;6H= 5.57;24H=10.03
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.4%
           MOUNTAIN= 85.2%;FOOTHILL=  6.4%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.40; LAG(HR) = 1.12; Fm(INCH/HR) = 0.23; Ybar = 0.29
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.54; 30M = 0.56; 1HR = 0.58;
  3HR = 0.89; 6HR = 0.95; 24HR= 0.97
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  19148.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1058.00 = 70549.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0214
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =   11445.77
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  15599.81
  TOTAL AREA(ACRES) =  19148.00       PEAK FLOW RATE(CFS) =   15599.81

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.68; 30M = 1.25; 1HR = 1.76; 3HR = 3.39; 6HR = 5.13; 24HR = 9.16

****************************************************************************
  FLOW PROCESS FROM NODE   1057.00 TO NODE   1058.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  83.97
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.790
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C      572.50      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C      252.80      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D     1472.40      0.20      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 D      295.00      0.20      1.00    79
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.90      0.20      0.50    75
  NATURAL FAIR COVER
  "GRASS"                    D        2.10      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 2595.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.72;30M= 1.28;1H= 1.82;3H= 3.60;6H= 5.52;24H= 9.93
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  7.8%
           MOUNTAIN= 84.4%;FOOTHILL=  6.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.40; LAG(HR) = 1.12; Fm(INCH/HR) = 0.23; Ybar = 0.29
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
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  DEPTH-AREA FACTORS: 5M = 0.51; 30M = 0.54; 1HR = 0.55;
  3HR = 0.88; 6HR = 0.95; 24HR= 0.97
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  21743.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1058.00 = 70549.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0214
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =   12825.05
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  17108.78
  TOTAL AREA(ACRES) =  21743.70       PEAK FLOW RATE(CFS) =   17108.78

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.68; 30M = 1.25; 1HR = 1.76; 3HR = 3.39; 6HR = 5.13; 24HR = 9.16

****************************************************************************
  FLOW PROCESS FROM NODE   1057.00 TO NODE   1058.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  83.97
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.790
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      407.80      0.20      1.00    83
  COMMERCIAL                 D        0.90      0.20      0.10    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D     1735.70      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 2144.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.71;30M= 1.28;1H= 1.82;3H= 3.58;6H= 5.48;24H= 9.86
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.1%
           MOUNTAIN= 83.8%;FOOTHILL=  7.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.40; LAG(HR) = 1.12; Fm(INCH/HR) = 0.23; Ybar = 0.28
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.49; 30M = 0.52; 1HR = 0.54;
  3HR = 0.87; 6HR = 0.94; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  23888.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1058.00 = 70549.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0214
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =   14052.26
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18407.86
  TOTAL AREA(ACRES) =  23888.10       PEAK FLOW RATE(CFS) =   18407.86

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.68; 30M = 1.25; 1HR = 1.76; 3HR = 3.39; 6HR = 5.13; 24HR = 9.16
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  23888.10  TC(MIN.) =     83.97
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.28
  PEAK FLOW RATE(CFS)   =  18407.86
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU59100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.070
        MOUNTAIN                           0.840
        VALLEY(UNDEVELOPED)/DESERT         0.080
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1058.00 TO NODE   1058.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU58100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    18407.86    Tc(MIN.) =  83.97
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.28
  TOTAL AREA(ACRES) =   23888.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1058.00 = 70549.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1058.00 TO NODE   1058.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    18407.86    Tc(MIN.) =  83.97
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.28
  TOTAL AREA(ACRES) =   23888.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1058.00 = 70549.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1058.00 TO NODE   1058.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1058.00 TO NODE   1059.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    657.00  DOWNSTREAM(FEET) =    630.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2185.00   CHANNEL SLOPE =  0.0124
  CHANNEL BASE(FEET) =   50.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  18407.86
  FLOW VELOCITY(FEET/SEC.) =  19.57   FLOW DEPTH(FEET) =  14.57
  TRAVEL TIME(MIN.) =   1.86   Tc(MIN.) =  85.83
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1059.00 = 72734.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1058.00 TO NODE   1059.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  85.83
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.213
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       21.30      0.40       1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"               A       15.80      0.40       1.00    46
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     A        8.90      0.40       1.00    55
  NATURAL FAIR COVER
  "WOODLAND"                 A       23.80      0.40       1.00    36
  COMMERCIAL                 B        0.70      0.30       0.10    56
  NATURAL FAIR COVER
  "WOODLAND"                 B        2.50      0.30       1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   73.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.71;30M= 1.28;1H= 1.82;3H= 3.58;6H= 5.48;24H= 9.85
```

```
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.1%
           MOUNTAIN= 83.8%;FOOTHILL=  7.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.43; LAG(HR) = 1.14; Fm(INCH/HR) = 0.23; Ybar = 0.28
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.49; 30M = 0.52; 1HR = 0.54;
  3HR = 0.87; 6HR = 0.94; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  23961.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1059.00 = 72734.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0277; Lca/L=0.4,n=.0249; Lca/L=0.5,n=.0228;Lca/L=0.6,n=.0213
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =   14055.83
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18316.66
  TOTAL AREA(ACRES) =  23961.10       PEAK FLOW RATE(CFS) =   18407.86
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.58; 30M = 1.15; 1HR = 1.57; 3HR = 2.80; 6HR = 4.04; 24HR = 6.98

****************************************************************************
  FLOW PROCESS FROM NODE   1058.00 TO NODE   1059.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  85.83
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.778
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      403.90      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        3.80      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C        7.00      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      145.40      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C      167.50      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C       36.90      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  764.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.71;30M= 1.27;1H= 1.81;3H= 3.55;6H= 5.43;24H= 9.76
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.1%
           MOUNTAIN= 83.8%;FOOTHILL=  7.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.43; LAG(HR) = 1.14; Fm(INCH/HR) = 0.23; Ybar = 0.29
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.48; 30M = 0.52; 1HR = 0.54;
  3HR = 0.87; 6HR = 0.94; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  24725.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1059.00 = 72734.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0277; Lca/L=0.4,n=.0249; Lca/L=0.5,n=.0228;Lca/L=0.6,n=.0213
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =   14308.77
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18612.79
  TOTAL AREA(ACRES) =  24725.60       PEAK FLOW RATE(CFS) =   18612.79

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.58; 30M = 1.15; 1HR = 1.57; 3HR = 2.80; 6HR = 4.04; 24HR = 6.98

****************************************************************************
  FLOW PROCESS FROM NODE   1058.00 TO NODE   1059.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  85.83
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.778
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      289.70      0.20      1.00    81
  NATURAL FAIR COVER
  "MEADOWS"                  D        0.20      0.20      1.00    84
  NATURAL FAIR COVER
  "GRASS"                    D        0.10      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      117.70      0.20      1.00    83
  COMMERCIAL                 D        3.40      0.20      0.10    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D      287.30      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  698.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.71;30M= 1.27;1H= 1.80;3H= 3.53;6H= 5.39;24H= 9.69
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.1%
           MOUNTAIN= 83.8%;FOOTHILL=  7.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.43; LAG(HR) = 1.14; Fm(INCH/HR) = 0.23; Ybar = 0.29
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.48; 30M = 0.51; 1HR = 0.53;
  3HR = 0.87; 6HR = 0.94; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  25424.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1059.00 = 72734.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0277; Lca/L=0.4,n=.0249; Lca/L=0.5,n=.0228;Lca/L=0.6,n=.0213
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =   14581.05
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18912.14
  TOTAL AREA(ACRES) =  25424.00       PEAK FLOW RATE(CFS) =   18912.14

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.58; 30M = 1.15; 1HR = 1.57; 3HR = 2.80; 6HR = 4.04; 24HR = 6.98

****************************************************************************
  FLOW PROCESS FROM NODE   1058.00 TO NODE   1059.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  85.83
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.778
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 D       45.00      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   45.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.71;30M= 1.27;1H= 1.80;3H= 3.53;6H= 5.39;24H= 9.68
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.1%
           MOUNTAIN= 83.8%;FOOTHILL=  7.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.43; LAG(HR) = 1.14; Fm(INCH/HR) = 0.23; Ybar = 0.29
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.48; 30M = 0.51; 1HR = 0.53;
  3HR = 0.87; 6HR = 0.94; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  25469.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1059.00 = 72734.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0277; Lca/L=0.4,n=.0249; Lca/L=0.5,n=.0228;Lca/L=0.6,n=.0213
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =   14597.06
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18930.47
  TOTAL AREA(ACRES) =  25469.00       PEAK FLOW RATE(CFS) =   18930.47
```

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  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.58; 30M = 1.15; 1HR = 1.57; 3HR = 2.80; 6HR = 4.04; 24HR = 6.98
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  25469.00  TC(MIN.) =     85.83
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.29
  PEAK FLOW RATE(CFS)   =  18930.47
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: LU60100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.070
        MOUNTAIN                           0.840
        VALLEY(UNDEVELOPED)/DESERT         0.080
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1059.00 TO NODE   1059.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU59100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    18930.47    Tc(MIN.) =  85.83
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.29
  TOTAL AREA(ACRES) =   25469.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1059.00 = 72734.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1059.00 TO NODE   1059.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    18930.47    Tc(MIN.) =  85.83
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.29
  TOTAL AREA(ACRES) =   25469.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1059.00 = 72734.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1059.00 TO NODE   1059.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1059.00 TO NODE   1060.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    630.00  DOWNSTREAM(FEET) =    518.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  7828.00   CHANNEL SLOPE =  0.0143
  CHANNEL BASE(FEET) =   50.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  18930.47
  FLOW VELOCITY(FEET/SEC.) =  20.78   FLOW DEPTH(FEET) =  14.19
  TRAVEL TIME(MIN.) =   6.28   Tc(MIN.) =  92.11
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1060.00 = 80562.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1059.00 TO NODE   1060.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  92.11
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.165
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       37.80      0.40       1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"               A      124.10      0.40       1.00    46
  COMMERCIAL                 A        3.70      0.40       0.10    32
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     A        0.20      0.40       1.00    55
  NATURAL FAIR COVER
  "WOODLAND"                 A       68.90      0.40       1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       17.60      0.30       1.00    63
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.39
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  252.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.70;30M= 1.27;1H= 1.80;3H= 3.52;6H= 5.37;24H= 9.64
```

```
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.1%
           MOUNTAIN= 83.8%;FOOTHILL=  7.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.54; LAG(HR) = 1.23; Fm(INCH/HR) = 0.23; Ybar = 0.29
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.47; 30M = 0.51; 1HR = 0.53;
  3HR = 0.86; 6HR = 0.94; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  25721.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1060.00 = 80562.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0272; Lca/L=0.4,n=.0244; Lca/L=0.5,n=.0224;Lca/L=0.6,n=.0209
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =   14587.33
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18453.19
  TOTAL AREA(ACRES) =  25721.30       PEAK FLOW RATE(CFS) =   18930.47
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1059.00 TO NODE   1060.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  92.11
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.736
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B        1.30      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       11.80      0.30      1.00    66
  COMMERCIAL                 B        5.10      0.30      0.10    56
  NATURAL FAIR COVER
  "WOODLAND"                 B       18.00      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      209.70      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        2.50      0.25      1.00    91
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  248.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.70;30M= 1.27;1H= 1.80;3H= 3.51;6H= 5.35;24H= 9.60
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.1%
           MOUNTAIN= 83.8%;FOOTHILL=  7.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.54; LAG(HR) = 1.23; Fm(INCH/HR) = 0.23; Ybar = 0.29
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.47; 30M = 0.51; 1HR = 0.53;
  3HR = 0.86; 6HR = 0.94; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  25969.71
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1060.00 = 80562.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0272; Lca/L=0.4,n=.0244; Lca/L=0.5,n=.0224;Lca/L=0.6,n=.0209
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =   14639.70
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18524.02
  TOTAL AREA(ACRES) =  25969.71       PEAK FLOW RATE(CFS) =   18930.47
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1059.00 TO NODE   1060.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  92.11
```

```
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.736
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C       28.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      502.60      0.25      1.00    77
  COMMERCIAL                 C        1.30      0.25      0.10    69
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        6.10      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C        9.90      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       46.10      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  594.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.70;30M= 1.26;1H= 1.79;3H= 3.49;6H= 5.31;24H= 9.51
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.1%
           MOUNTAIN= 83.8%;FOOTHILL=  7.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.54; LAG(HR) = 1.23; Fm(INCH/HR) = 0.23; Ybar = 0.30
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.47; 30M = 0.50; 1HR = 0.52;
  3HR = 0.86; 6HR = 0.94; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  26564.11
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1060.00 = 80562.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0272; Lca/L=0.4,n=.0244; Lca/L=0.5,n=.0224;Lca/L=0.6,n=.0209
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =   14780.74
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18700.54
  TOTAL AREA(ACRES) =  26564.11       PEAK FLOW RATE(CFS) =   18930.47
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1059.00 TO NODE   1060.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  92.11
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.736
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D       30.10      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      129.80      0.20      1.00    83
  COMMERCIAL                 D        1.70      0.20      0.10    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       38.00      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       91.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  290.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.70;30M= 1.26;1H= 1.78;3H= 3.47;6H= 5.29;24H= 9.47
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.1%
           MOUNTAIN= 83.8%;FOOTHILL=  7.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.54; LAG(HR) = 1.23; Fm(INCH/HR) = 0.23; Ybar = 0.30
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.47; 30M = 0.50; 1HR = 0.52;
  3HR = 0.86; 6HR = 0.94; 24HR= 0.96
```

```
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  26854.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1060.00 = 80562.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0272; Lca/L=0.4,n=.0244; Lca/L=0.5,n=.0224;Lca/L=0.6,n=.0209
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =   14862.71
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18797.48
  TOTAL AREA(ACRES) =  26854.80       PEAK FLOW RATE(CFS) =   18930.47
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  26854.80  TC(MIN.) =     92.11
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.30
  PEAK FLOW RATE(CFS)   =  18930.47
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
 ************************************************************************
             RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
            (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
          (c) Copyright 1983-2003 Advanced Engineering Software (aes)
              Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                           Analysis prepared by:

                            Huitt - Zollars, Inc.
                           430 Exchange, Suite 200
                            Irvine, CA. 92602-1309
                               714 - 734 - 5100

 ------------------------------------------------------------------------
   FILE NAME: LU61100H.DAT
   TIME/DATE OF STUDY: 09:43 02/17/2004
 ========================================================================
   USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
 ========================================================================
                     --*TIME-OF-CONCENTRATION MODEL*--

   USER SPECIFIED STORM EVENT(YEAR) =  100.00
   SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
   SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
   *USER-DEFINED TABLED RAINFALL USED*
   NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
    1)   5.000; 10.000
    2)  10.000;  6.000
    3)  15.000;  4.500
    4)  20.000;  3.600
    5)  30.000;  2.750
    6)  60.000;  1.950
    7) 120.000;  1.550
   *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

   *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
      HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
      WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
 NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
 ===  =====  =========  =================  ======  =====  ======  =====  =======
   1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

   GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
     1. Relative Flow-Depth =  0.00 FEET
        as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
     2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
   *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
    OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
   *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

   UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
     WATERSHED LAG = 0.80 * Tc
           S-GRAPH TYPE                PERCENTAGE(DECIMAL)
         VALLEY(DEVELOPED)                  0.010
         FOOTHILL                           0.130
         MOUNTAIN                           0.660
         VALLEY(UNDEVELOPED)/DESERT         0.200
         DESERT(UNDEVELOPED)                0.000
     PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
     SIERRA MADRE DEPTH-AREA FACTORS USED.
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


 ************************************************************************
   FLOW PROCESS FROM NODE   1060.00 TO NODE   1060.00 IS CODE = 15.1
 ------------------------------------------------------------------------
   >>>>>DEFINE MEMORY BANK # 1 <<<<<
 ========================================================================
   PEAK FLOWRATE TABLE FILE NAME: LU60100H.DNA
   MEMORY BANK #  1 DEFINED AS FOLLOWS:
   PEAK FLOW RATE(CFS) =    18930.47    Tc(MIN.) =  92.11
   AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.30
   TOTAL AREA(ACRES) =   26854.80
   LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1060.00 = 80562.00 FEET.

 ************************************************************************
   FLOW PROCESS FROM NODE   1060.00 TO NODE   1060.00 IS CODE = 14.0
 ------------------------------------------------------------------------
   >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
 ========================================================================

   MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
   PEAK FLOW RATE(CFS) =    18930.47    Tc(MIN.) =  92.11
   AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.30
   TOTAL AREA(ACRES) =   26854.80
   LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1060.00 = 80562.00 FEET.

 ************************************************************************
   FLOW PROCESS FROM NODE   1060.00 TO NODE   1060.00 IS CODE =  12
 ------------------------------------------------------------------------
   >>>>>CLEAR MEMORY BANK # 1 <<<<<
 ========================================================================

 ************************************************************************
   FLOW PROCESS FROM NODE   1060.00 TO NODE   1061.00 IS CODE =  51
 ------------------------------------------------------------------------
   >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
   >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
 ========================================================================
   ELEVATION DATA: UPSTREAM(FEET) =    518.00  DOWNSTREAM(FEET) =    435.00
   CHANNEL LENGTH THRU SUBAREA(FEET) =  8004.00   CHANNEL SLOPE =  0.0104
   CHANNEL BASE(FEET) =   55.00   "Z" FACTOR =   1.000
   MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
   CHANNEL FLOW THRU SUBAREA(CFS) =  18930.47
   FLOW VELOCITY(FEET/SEC.) =  18.33   FLOW DEPTH(FEET) =  14.80
   TRAVEL TIME(MIN.) =   7.28   Tc(MIN.) =  99.39
   LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1061.00 = 88566.00 FEET.

 ************************************************************************
   FLOW PROCESS FROM NODE   1060.00 TO NODE   1061.00 IS CODE =  81
 ------------------------------------------------------------------------
   >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ========================================================================
   MAINLINE Tc(MIN) =  99.39
   * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.116
   SUBAREA LOSS RATE DATA(AMC  II):
    DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
   NATURAL FAIR COVER
   "CHAPARRAL,BROADLEAF"      A       72.70      0.40       1.00    40
   RESIDENTIAL
   "5-7 DWELLINGS/ACRE"       A        9.10      0.40       0.50    32
   NATURAL POOR COVER
   "BARREN"                   A        0.20      0.40       1.00    78
   NATURAL FAIR COVER
   "GRASS"                    A        4.00      0.40       1.00    50
   NATURAL FAIR COVER
   "OPEN BRUSH"               A       97.50      0.40       1.00    46
   COMMERCIAL                 A        8.10      0.40       0.10    32
   SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
   SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.94
   SUBAREA AREA(ACRES) =  191.60
   UNIT-HYDROGRAPH DATA:
   RAINFALL(INCH): 5M= 0.70;30M= 1.26;1H= 1.78;3H= 3.47;6H= 5.28;24H= 9.46
```

```
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.2%
           MOUNTAIN= 83.7%;FOOTHILL=  7.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.66; LAG(HR) = 1.33; Fm(INCH/HR) = 0.23; Ybar = 0.30
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.46; 30M = 0.50; 1HR = 0.52;
  3HR = 0.86; 6HR = 0.94; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  27046.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1061.00 = 88566.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0270; Lca/L=0.4,n=.0242; Lca/L=0.5,n=.0222;Lca/L=0.6,n=.0208
  TIME OF PEAK FLOW(HR) = 17.00  RUNOFF VOLUME(AF) =   14884.70
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18567.77
  TOTAL AREA(ACRES) =  27046.40       PEAK FLOW RATE(CFS) =   18930.47
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.60; 30M = 1.17; 1HR = 1.60; 3HR = 2.90; 6HR = 4.22; 24HR = 7.35

****************************************************************************
  FLOW PROCESS FROM NODE   1060.00 TO NODE   1061.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  99.39
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.687
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     A        8.70      0.40      1.00    55
  NATURAL FAIR COVER
  "WOODLAND"                 A       70.50      0.40      1.00    36
  NATURAL FAIR COVER
  "GRASS"                    B        0.80      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       18.30      0.30      1.00    66
  COMMERCIAL                 B        2.90      0.30      0.10    56
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        1.60      0.30      1.00    72
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.38
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =  102.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.70;30M= 1.26;1H= 1.78;3H= 3.47;6H= 5.28;24H= 9.45
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  8.2%
           MOUNTAIN= 83.6%;FOOTHILL=  7.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.66; LAG(HR) = 1.33; Fm(INCH/HR) = 0.23; Ybar = 0.30
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.46; 30M = 0.50; 1HR = 0.52;
  3HR = 0.86; 6HR = 0.94; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  27149.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1061.00 = 88566.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0270; Lca/L=0.4,n=.0242; Lca/L=0.5,n=.0222;Lca/L=0.6,n=.0208
  TIME OF PEAK FLOW(HR) = 17.00  RUNOFF VOLUME(AF) =   14895.94
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18590.75
  TOTAL AREA(ACRES) =  27149.20       PEAK FLOW RATE(CFS) =   18930.47
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.60; 30M = 1.17; 1HR = 1.60; 3HR = 2.90; 6HR = 4.22; 24HR = 7.35

****************************************************************************
  FLOW PROCESS FROM NODE   1060.00 TO NODE   1061.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  99.39
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.687
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 B       16.20      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C     1119.80      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C       17.10      0.25      0.50    69
  NATURAL POOR COVER
  "BARREN"                   C       18.20      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C      128.60      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      739.90      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 2039.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.69;30M= 1.25;1H= 1.77;3H= 3.43;6H= 5.20;24H= 9.30
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  9.0%
           MOUNTAIN= 82.4%;FOOTHILL=  7.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.66; LAG(HR) = 1.33; Fm(INCH/HR) = 0.23; Ybar = 0.31
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.45; 30M = 0.49; 1HR = 0.51;
  3HR = 0.85; 6HR = 0.93; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  29189.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1061.00 = 88566.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0270; Lca/L=0.4,n=.0242; Lca/L=0.5,n=.0222;Lca/L=0.6,n=.0208
  TIME OF PEAK FLOW(HR) = 17.00  RUNOFF VOLUME(AF) =   15616.08
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  19366.18
  TOTAL AREA(ACRES) =  29189.00       PEAK FLOW RATE(CFS) =   19366.18

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.60; 30M = 1.17; 1HR = 1.60; 3HR = 2.90; 6HR = 4.22; 24HR = 7.35

****************************************************************************
  FLOW PROCESS FROM NODE   1060.00 TO NODE   1061.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  99.39
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.687
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 C        0.10      0.25      0.10    69
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C      195.30      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C      132.20      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D     1067.40      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D       23.60      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D       34.20      0.20      1.00    93
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) = 1452.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.68;30M= 1.25;1H= 1.76;3H= 3.40;6H= 5.15;24H= 9.21
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT=  9.5%
           MOUNTAIN= 81.6%;FOOTHILL=  7.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.66; LAG(HR) = 1.33; Fm(INCH/HR) = 0.23; Ybar = 0.31
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
```

```
  DEPTH-AREA FACTORS: 5M = 0.44; 30M = 0.48; 1HR = 0.50;
  3HR = 0.85; 6HR = 0.93; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  30641.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1061.00 = 88566.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0270; Lca/L=0.4,n=.0242; Lca/L=0.5,n=.0222;Lca/L=0.6,n=.0208
  TIME OF PEAK FLOW(HR) = 17.00  RUNOFF VOLUME(AF) =   16185.08
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  19946.53
  TOTAL AREA(ACRES) =  30641.80       PEAK FLOW RATE(CFS) =   19946.53

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.60; 30M = 1.17; 1HR = 1.60; 3HR = 2.90; 6HR = 4.22; 24HR = 7.35

****************************************************************************
  FLOW PROCESS FROM NODE   1060.00 TO NODE   1061.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  99.39
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.687
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D       99.70      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      651.20      0.20      1.00    83
  COMMERCIAL                 D        3.60      0.20      0.10    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D      574.70      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D      210.30      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1539.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.68;30M= 1.25;1H= 1.75;3H= 3.38;6H= 5.11;24H= 9.12
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT= 10.0%
           MOUNTAIN= 80.9%;FOOTHILL=  8.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.66; LAG(HR) = 1.33; Fm(INCH/HR) = 0.23; Ybar = 0.31
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.43; 30M = 0.47; 1HR = 0.49;
  3HR = 0.84; 6HR = 0.93; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  32181.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1061.00 = 88566.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0270; Lca/L=0.4,n=.0242; Lca/L=0.5,n=.0222;Lca/L=0.6,n=.0208
  TIME OF PEAK FLOW(HR) = 17.33  RUNOFF VOLUME(AF) =   16821.61
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  20625.61
  TOTAL AREA(ACRES) =  32181.30       PEAK FLOW RATE(CFS) =   20625.61

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.60; 30M = 1.17; 1HR = 1.60; 3HR = 2.90; 6HR = 4.22; 24HR = 7.35
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  32181.30  TC(MIN.) =     99.39
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.31
  PEAK FLOW RATE(CFS)   =  20625.61
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
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************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: LU62100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.010
        FOOTHILL                           0.310
        MOUNTAIN                           0.260
        VALLEY(UNDEVELOPED)/DESERT         0.420
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1061.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU61100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    20625.61    Tc(MIN.) =  99.39
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.31
  TOTAL AREA(ACRES) =   32181.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1061.00 = 88566.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1061.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    20625.61    Tc(MIN.) =  99.39
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.31
  TOTAL AREA(ACRES) =   32181.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1061.00 = 88566.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1061.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1062.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    435.00  DOWNSTREAM(FEET) =    345.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  8275.00   CHANNEL SLOPE =  0.0109
  CHANNEL BASE(FEET) =   60.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  20625.61
  FLOW VELOCITY(FEET/SEC.) =  18.89   FLOW DEPTH(FEET) =  14.63
  TRAVEL TIME(MIN.) =   7.30   Tc(MIN.) = 106.69
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1062.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) = 106.69
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.071
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       36.50      0.40       1.00    40
  NATURAL FAIR COVER
  "WOODLAND"                 A      444.40      0.40       1.00    36
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A        1.00      0.40       0.50    32
  NATURAL POOR COVER
  "BARREN"                   A        6.90      0.40       1.00    78
  NATURAL FAIR COVER
  "GRASS"                    A       60.30      0.40       1.00    50
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 A        2.20      0.40       1.00    44
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  551.30
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.68;30M= 1.24;1H= 1.75;3H= 3.37;6H= 5.09;24H= 9.09
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT= 10.6%
           MOUNTAIN= 79.9%;FOOTHILL=  8.5%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.78; LAG(HR) = 1.42; Fm(INCH/HR) = 0.23; Ybar = 0.32
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.43; 30M = 0.46; 1HR = 0.49;
  3HR = 0.84; 6HR = 0.93; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  32732.61
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0268; Lca/L=0.4,n=.0240; Lca/L=0.5,n=.0221;Lca/L=0.6,n=.0206
  TIME OF PEAK FLOW(HR) = 17.00  RUNOFF VOLUME(AF) =   16840.10
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  20353.74
  TOTAL AREA(ACRES) =  32732.61       PEAK FLOW RATE(CFS) =   20625.61
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.58; 30M = 1.15; 1HR = 1.57; 3HR = 2.81; 6HR = 4.06; 24HR = 7.02

****************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1062.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 106.69
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.639
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  URBAN FAIR COVER
  "TURF"                     A        1.30      0.40      1.00    44
  NATURAL FAIR COVER
  "OPEN BRUSH"               A      138.50      0.40      1.00    46
  COMMERCIAL                 A        5.60      0.40      0.10    32
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     A        1.80      0.40      1.00    55
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       13.80      0.30      1.00    63
  AGRICULTURAL POOR COVER
  "FALLOW"                   B        2.70      0.30      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.39
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =  163.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.68;30M= 1.24;1H= 1.75;3H= 3.37;6H= 5.09;24H= 9.07
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT= 10.7%
           MOUNTAIN= 79.7%;FOOTHILL=  8.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.78; LAG(HR) = 1.42; Fm(INCH/HR) = 0.23; Ybar = 0.32
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.42; 30M = 0.46; 1HR = 0.49;
  3HR = 0.84; 6HR = 0.93; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  32896.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0268; Lca/L=0.4,n=.0240; Lca/L=0.5,n=.0221;Lca/L=0.6,n=.0206
  TIME OF PEAK FLOW(HR) = 17.50  RUNOFF VOLUME(AF) =   16858.64
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  20397.21
  TOTAL AREA(ACRES) =  32896.30       PEAK FLOW RATE(CFS) =   20625.61
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.58; 30M = 1.15; 1HR = 1.57; 3HR = 2.81; 6HR = 4.06; 24HR = 7.02

****************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1062.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 106.69
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.639
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B        2.30      0.30      0.50    56
  NATURAL POOR COVER
  "BARREN"                   B        5.00      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B       51.10      0.30      1.00    69
  URBAN FAIR COVER
  "TURF"                     B       10.00      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B      258.20      0.30      1.00    66
  COMMERCIAL                 B       64.50      0.30      0.10    56
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.85
  SUBAREA AREA(ACRES) =  391.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.68;30M= 1.24;1H= 1.75;3H= 3.36;6H= 5.08;24H= 9.05
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT= 11.1%
           MOUNTAIN= 79.0%;FOOTHILL=  8.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.78; LAG(HR) = 1.42; Fm(INCH/HR) = 0.23; Ybar = 0.32
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.42; 30M = 0.46; 1HR = 0.49;
  3HR = 0.84; 6HR = 0.93; 24HR= 0.96
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  33287.41
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0268; Lca/L=0.4,n=.0240; Lca/L=0.5,n=.0221;Lca/L=0.6,n=.0206
  TIME OF PEAK FLOW(HR) = 17.50  RUNOFF VOLUME(AF) =   16971.74
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  20554.26
  TOTAL AREA(ACRES) =  33287.41       PEAK FLOW RATE(CFS) =   20625.61
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.58; 30M = 1.15; 1HR = 1.57; 3HR = 2.81; 6HR = 4.06; 24HR = 7.02

****************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1062.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 106.69
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.639
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  PUBLIC PARK                B        6.20      0.30      0.85    56
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B       17.10      0.30      1.00    72
  NATURAL FAIR COVER
  "WOODLAND"                 B       74.10      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C     1292.00      0.25      1.00    75
  NATURAL FAIR COVER
  "WOODLAND"                 C      636.80      0.25      1.00    73
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        6.90      0.25      0.50    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 2033.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.67;30M= 1.24;1H= 1.74;3H= 3.33;6H= 5.02;24H= 8.93
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT= 12.9%
           MOUNTAIN= 76.0%;FOOTHILL= 10.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.78; LAG(HR) = 1.42; Fm(INCH/HR) = 0.24; Ybar = 0.33
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  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.41; 30M = 0.45; 1HR = 0.48;
  3HR = 0.83; 6HR = 0.92; 24HR= 0.95
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  35320.51
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0268; Lca/L=0.4,n=.0240; Lca/L=0.5,n=.0221;Lca/L=0.6,n=.0206
  TIME OF PEAK FLOW(HR) = 17.50  RUNOFF VOLUME(AF) =   17594.75
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  21371.47
  TOTAL AREA(ACRES) =  35320.51       PEAK FLOW RATE(CFS) =   21371.47

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.58; 30M = 1.15; 1HR = 1.57; 3HR = 2.81; 6HR = 4.06; 24HR = 7.02

****************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1062.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 106.69
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.639
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   C       40.70      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C      190.10      0.25      1.00    79
  URBAN FAIR COVER
  "TURF"                     C       87.00      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"               C     2310.80      0.25      1.00    77
  COMMERCIAL                 C      161.30      0.25      0.10    69
  PUBLIC PARK                C        8.70      0.25      0.85    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.95
  SUBAREA AREA(ACRES) = 2798.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.66;30M= 1.23;1H= 1.73;3H= 3.29;6H= 4.95;24H= 8.79
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT= 15.0%
           MOUNTAIN= 72.3%;FOOTHILL= 11.7%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.78; LAG(HR) = 1.42; Fm(INCH/HR) = 0.24; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.40; 30M = 0.44; 1HR = 0.47;
  3HR = 0.82; 6HR = 0.92; 24HR= 0.95
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  38119.11
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0268; Lca/L=0.4,n=.0240; Lca/L=0.5,n=.0221;Lca/L=0.6,n=.0206
  TIME OF PEAK FLOW(HR) = 17.50  RUNOFF VOLUME(AF) =   18544.37
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  22526.08
  TOTAL AREA(ACRES) =  38119.11       PEAK FLOW RATE(CFS) =   22526.08

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.58; 30M = 1.15; 1HR = 1.57; 3HR = 2.81; 6HR = 4.06; 24HR = 7.02

****************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1062.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 106.69
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.639
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C      389.30      0.25      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D     1418.60      0.20      1.00    81
  NATURAL FAIR COVER
  "MEADOWS"                  D        3.10      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                 D      963.30      0.20      1.00    79
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.80      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D       84.90      0.20      1.00    93
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 2860.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.66;30M= 1.23;1H= 1.71;3H= 3.26;6H= 4.88;24H= 8.67
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT= 16.9%
           MOUNTAIN= 69.1%;FOOTHILL= 13.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.78; LAG(HR) = 1.42; Fm(INCH/HR) = 0.23; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.38; 30M = 0.43; 1HR = 0.46;
  3HR = 0.81; 6HR = 0.92; 24HR= 0.95
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  40979.11
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0268; Lca/L=0.4,n=.0240; Lca/L=0.5,n=.0221;Lca/L=0.6,n=.0206
  TIME OF PEAK FLOW(HR) = 17.50  RUNOFF VOLUME(AF) =   19568.42
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  23737.68
  TOTAL AREA(ACRES) =  40979.11       PEAK FLOW RATE(CFS) =   23737.68

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.58; 30M = 1.15; 1HR = 1.57; 3HR = 2.81; 6HR = 4.06; 24HR = 7.02

****************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1062.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 106.69
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.639
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D      865.20      0.20      1.00    84
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 D        0.20      0.20      1.00    82
  URBAN FAIR COVER
  "TURF"                     D       57.80      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D     2760.50      0.20      1.00    83
  COMMERCIAL                 D      225.30      0.20      0.10    75
  PUBLIC PARK                D        2.90      0.20      0.85    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.95
  SUBAREA AREA(ACRES) = 3911.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.65;30M= 1.22;1H= 1.70;3H= 3.22;6H= 4.81;24H= 8.53
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT= 19.1%
           MOUNTAIN= 65.3%;FOOTHILL= 14.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.78; LAG(HR) = 1.42; Fm(INCH/HR) = 0.23; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.36; 30M = 0.41; 1HR = 0.45;
  3HR = 0.80; 6HR = 0.91; 24HR= 0.95
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  44891.01
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0268; Lca/L=0.4,n=.0240; Lca/L=0.5,n=.0221;Lca/L=0.6,n=.0206
  TIME OF PEAK FLOW(HR) = 17.50  RUNOFF VOLUME(AF) =   21077.60
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  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  25429.14
  TOTAL AREA(ACRES) =  44891.01       PEAK FLOW RATE(CFS) =   25429.14

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.58; 30M = 1.15; 1HR = 1.57; 3HR = 2.81; 6HR = 4.06; 24HR = 7.02

****************************************************************************
  FLOW PROCESS FROM NODE   1061.00 TO NODE   1062.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 106.69
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.639
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL GOOD COVER
  "MEADOWS"                  D        0.20      0.20      1.00    78
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D     1546.10      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1546.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.65;30M= 1.22;1H= 1.70;3H= 3.20;6H= 4.79;24H= 8.48
  S-GRAPH: VALLEY(DEV.)=  1.0%;VALLEY(UNDEV.)/DESERT= 19.9%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.78; LAG(HR) = 1.42; Fm(INCH/HR) = 0.23; Ybar = 0.32
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.36; 30M = 0.41; 1HR = 0.44;
  3HR = 0.79; 6HR = 0.91; 24HR= 0.95
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  46437.31
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0268; Lca/L=0.4,n=.0240; Lca/L=0.5,n=.0221;Lca/L=0.6,n=.0206
  TIME OF PEAK FLOW(HR) = 17.50  RUNOFF VOLUME(AF) =   21690.53
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26077.13
  TOTAL AREA(ACRES) =  46437.31       PEAK FLOW RATE(CFS) =   26077.13

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.58; 30M = 1.15; 1HR = 1.57; 3HR = 2.81; 6HR = 4.06; 24HR = 7.02
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  46437.31  TC(MIN.) =    106.69
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.32
  PEAK FLOW RATE(CFS)   =  26077.13
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
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             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LU35002E.FLD
  TIME/DATE OF STUDY: 13:11 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1035.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =     826.200 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.840 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.030
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.920
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.740
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.18
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.32
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.46
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.94
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.46
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.67

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.963
          30-MINUTE FACTOR = 0.963
           1-HOUR FACTOR = 0.963
           3-HOUR FACTOR = 0.994
           6-HOUR FACTOR = 0.997
          24-HOUR FACTOR = 0.998

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   9.921


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.075	107.370
2	3.342	226.564
3	6.452	310.788
4	10.509	405.295
5	16.062	554.891
6	23.361	729.267
7	31.456	808.820
8	37.773	631.275
9	42.919	514.169
10	47.476	455.318
11	51.460	398.094
12	54.436	297.283
13	56.987	254.937
14	59.129	213.965
15	61.202	207.192
16	63.137	193.363
17	64.820	168.142
18	66.379	155.747
19	67.866	148.622
20	69.238	137.068
21	70.505	126.588
22	71.753	124.657
23	72.947	119.320
24	73.971	102.311
25	74.949	97.742
26	75.863	91.355
27	76.761	89.669
28	77.601	84.015
29	78.426	82.396
30	79.194	76.730
31	79.901	70.659
32	80.602	70.000
33	81.272	66.941
34	81.926	65.331
35	82.578	65.149
36	83.153	57.470
37	83.679	52.564
38	84.205	52.563
39	84.724	51.874
40	85.176	45.120
41	85.609	43.335
42	86.041	43.150
43	86.467	42.554
44	86.875	40.774
45	87.253	37.707
46	87.627	37.415
47	88.001	37.372
48	88.375	37.373
49	88.739	36.376
50	89.077	33.792
51	89.414	33.608
52	89.749	33.469
53	90.080	33.128
54	90.412	33.111
55	90.726	31.412
56	91.020	29.386
57	91.314	29.349
58	91.608	29.420
59	91.902	29.384
60	92.196	29.386
61	92.485	28.877
62	92.738	25.282

63	92.980	24.140
64	93.221	24.035
65	93.461	24.036
66	93.702	24.072
67	93.942	24.001
68	94.183	24.068
69	94.412	22.841
70	94.601	18.896
71	94.787	18.569
72	94.972	18.568
73	95.158	18.572
74	95.344	18.569
75	95.530	18.533
76	95.716	18.607
77	95.902	18.569
78	96.087	18.534
79	96.268	18.027
80	96.411	14.299
81	96.547	13.645
82	96.682	13.459
83	96.817	13.495
84	96.952	13.459
85	97.087	13.495
86	97.222	13.495
87	97.357	13.459
88	97.492	13.531
89	97.626	13.386
90	97.761	13.531
91	97.893	13.161
92	98.024	13.103
93	98.145	12.089
94	98.194	4.922
95	98.231	3.619
96	98.267	3.619
97	98.302	3.475
98	98.338	3.619
99	98.374	3.619
100	98.410	3.547
101	98.446	3.619
102	98.481	3.547
103	98.518	3.619
104	98.553	3.548
105	98.589	3.546
106	98.626	3.693
107	98.661	3.546
108	98.697	3.548
109	98.733	3.619
110	98.768	3.547
111	98.804	3.619
112	98.839	3.475
113	98.876	3.693
114	98.911	3.474
115	98.947	3.619
116	98.983	3.620
117	99.019	3.547
118	99.055	3.619
119	99.091	3.619
120	99.128	3.619
121	99.164	3.619
122	99.200	3.620
123	99.236	3.619
124	99.273	3.619
125	99.309	3.619
126	99.345	3.619
127	99.381	3.619
128	99.417	3.619
129	99.454	3.619
130	99.490	3.620
131	99.526	3.619
132	99.562	3.619
133	99.599	3.619
134	99.635	3.619
135	99.671	3.619
136	99.707	3.619
137	99.743	3.619
138	99.780	3.619
139	99.816	3.620
140	99.852	3.619
141	99.888	3.619
142	99.925	3.619
143	99.961	3.619
144	99.997	3.619
145	100.000	0.298

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 130.4180

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 53.0790

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 50.0 100.0 150.0 200.0
14.000	16.2818	33.21	. Q . V . . .
14.083	16.5139	33.70	. Q . V . . .
14.167	16.7498	34.24	. Q . V . . .
14.250	16.9895	34.81	. Q . V . . .
14.333	17.2335	35.42	. Q . V . . .
14.417	17.4821	36.09	. Q . V . . .
14.500	17.7356	36.82	. Q . V . . .
14.583	17.9945	37.58	. Q . V . . .
14.667	18.2584	38.32	. Q . V . . .
14.750	18.5273	39.05	. Q . V . . .
14.833	18.8012	39.78	. Q . V . . .
14.917	19.0804	40.53	. Q . V . . .
15.000	19.3647	41.28	. Q . V . . .
15.083	19.6543	42.06	. Q . V . . .
15.167	19.9495	42.86	. Q . V . . .
15.250	20.2507	43.73	. Q . V . . .
15.333	20.5581	44.63	. Q . V . . .
15.417	20.8711	45.45	. Q. V . . .
15.500	21.1891	46.17	. Q. V . . .
15.583	21.5121	46.90	. Q. V . . .
15.667	21.8400	47.62	. Q. V . . .
15.750	22.1710	48.05	. Q. V . . .
15.833	22.5026	48.16	. Q. V . . .
15.917	22.8363	48.45	. Q. V . . .
16.000	23.1779	49.60	. Q. V . . .
16.083	23.6142	63.36	. . Q V . . .
16.167	24.1523	78.13	. . Q V . . .
16.250	24.7654	89.02	. . QV . . .
16.333	25.4671	101.89	. . VQ . .
16.417	26.3024	121.29	. . V. Q . .
16.500	27.2838	142.50	. . V Q . .
16.583	28.3252	151.22	. . .V Q .
16.667	29.2215	130.14	. . . V Q . .
16.750	30.0221	116.24	. . . VQ . .
16.833	30.7715	108.82	. . .Q V . .
16.917	31.4697	101.38	. . Q V . .
17.000	32.0815	88.83	. . Q . V . .
17.083	32.6534	83.04	. . Q . V . .
17.167	33.1866	77.42	. . Q . V . .
17.250	33.7082	75.73	. . Q . V . .
17.333	34.2116	73.11	. . Q . V . .
17.417	34.6883	69.22	. . Q . V . .
17.500	35.1483	66.78	. . Q . V . .
17.583	35.5956	64.95	. . Q . V . .
17.667	36.0275	62.72	. . Q . V . .
17.750	36.4455	60.69	. . Q . V . .
17.833	36.8564	59.66	. .Q . V . .
17.917	37.2574	58.23	. .Q . V . .
18.000	37.6399	55.54	. .Q . V . .
18.083	38.0133	54.22	. Q . V . .
18.167	38.3756	52.60	. Q . V . .
18.250	38.7301	51.47	. Q . V. .
18.333	39.0731	49.80	. Q. . V. .
18.417	39.4067	48.45	. Q. . V. .
18.500	39.7266	46.45	. Q. . V. .
18.583	40.0321	44.36	. Q . . V .
18.667	40.3291	43.11	. Q . . V .
18.750	40.6166	41.74	. Q . . V .
18.833	40.8962	40.60	. Q . . V .
18.917	41.1693	39.66	. Q . . .V .
19.000	41.4310	38.00	. Q . . .V .
19.083	41.6842	36.75	. Q . . .V .
19.167	41.9329	36.11	. Q . . .V .
19.250	42.1766	35.39	. Q . . .V .
19.333	42.4108	34.01	. Q . . .V .
19.417	42.6399	33.26	. Q . . . V .
19.500	42.8653	32.72	. Q . . . V .
19.583	43.0867	32.15	. Q . . . V .
19.667	43.3033	31.45	. Q . . . V .
19.750	43.5142	30.64	. Q . . . V .
19.833	43.7219	30.16	. Q . . . V .
19.917	43.9266	29.72	. Q . . . V .
20.000	44.1285	29.31	. Q . . . V .

END OF FLOODSCx ROUTING ANALYSIS

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

TECHNICAL APPENDIX I-B
HYDROLOGIC ANALYSIS
EXISTING CONDITION
2-YEAR EXPECTED VALUE

Hydrologic Analyses of Upstream Areas not Contemplated to be Developed are not Duplicated in this Technical Appendix
See Technical Appendix I-A

Rainfall Depths
2-Year - Expected Value - Existing Condition

	Area	< 2000	> 2000	Rainfall Depth							Area	< 2000	> 2000	Rainfall Depth					
Subarea	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr	Node	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr
		X		0.13	0.28	0.37	0.62	0.85	1.44			X		0.13	0.28	0.37	0.62	0.85	1.44
			X	0.18	0.32	0.46	0.94	1.46	2.67				X	0.18	0.32	0.46	0.94	1.46	2.67
1062	3,455.0	3,014.8	440.2	0.14	0.29	0.38	0.66	0.93	1.60	1063	49,893.6	26,019.6	23,874.0	0.15	0.30	0.41	0.77	1.14	2.03
1063	1,335.4	1,335.4	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1064	51,229.0	27,355.0	23,874.0	0.15	0.30	0.41	0.77	1.13	2.01
1064	1,896.8	1,896.8	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1065	53,125.8	29,251.8	23,874.0	0.15	0.30	0.41	0.76	1.12	1.99
1065	8,303.5	8,303.5	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1066	61,429.3	37,555.3	23,874.0	0.15	0.30	0.40	0.74	1.09	1.92
1066	5,184.1	5,184.1	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1067	66,613.4	42,739.4	23,874.0	0.15	0.29	0.40	0.73	1.07	1.88
1067	1,594.1	1,594.1	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1068	68,207.5	44,333.5	23,874.0	0.15	0.29	0.40	0.73	1.06	1.87

Channel Hydraulics, Travel Times, Times of Concentration, and Lag Estimates
2-Year - Expected Value - Existing Condition

U/S Node	D/S Node	U/S Elevation	D/S Elevation	Length (ft)	Manning (n)	Base (ft)	Sideslope (z)	Height (ft)	Q(2) (cfs)	Dn (ft)	V (fps)	Tt (min)	Tc (min)	Lag (hr)
1062	1063	345	319	2852	0.025	60	2	15	1,943	2.81	10.56	4.50	233.98	3.12
1063	1064	319	275	5418	0.025	60	2	15	1,953	2.91	10.19	8.86	242.84	3.24
1064	1065	275	240	5738	0.025	60	2	15	1,967	3.18	9.32	10.26	253.10	3.37
1065	1066	240	213	6295	0.030	85	2	15	1,987	3.24	6.71	15.63	268.73	3.58
1066	1067	213	176	6201	0.030	85	2	15	2,067	3.00	7.56	13.67	282.40	3.77
1067	1068	176	133	6324	0.030	85	2	15	2,141	2.95	7.98	13.21	295.61	3.94

Losses

Node	E1063
Total Area (ac)	49,892.0
24-Hour Rainfall Depth (in)	2.03
Fm (in/hr)	0.59
Y-Bar	0.73

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	1.7	1.9	0.0	0.0	19.1	77.3	163.8	234.9
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	4.4	0.0	0.0	0.6	15.2	3.6	49.7	28.8
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	6.2	8.9	3.6
Barren (Poor)	100	78	86	91	93	0.0	0.0	1.8	0.1	7.1	7.8	78.2	121.6
Chaparral, Broadleaf (Fair)	100	40	63	75	81	79.8	7.5	679.9	421.3	418.5	739.1	######	9,918.9
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	58.2	140.7	49.6	41.5	2,575.2	6,194.4
Grass (Fair)	100	50	69	79	84	8.0	5.6	161.4	55.7	72.3	76.4	550.8	1,066.2
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.3
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Open Brush (Fair)	100	46	66	77	83	110.1	16.3	1,099.4	270.3	498.0	304.6	5,075.5	4,833.8
Woodland (Fair)	100	36	60	73	79	56.9	23.7	196.5	40.4	758.8	415.1	1,508.6	2,087.8
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	6.4	6.1	0.0	0.0	8.6	6.1	0.0	0.2
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	1.3	10.0	87.0	57.8

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.11	0.19
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.11	0.19
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.11	0.19
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.11	0.19
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.11	0.19
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.25	0.43	0.59	0.66
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.05	0.19	0.31
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.01	0.15	0.31	0.43
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.11	0.27	0.38
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.12	0.29	0.38
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.02	0.14	0.25
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.08	0.23	0.35
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.03	0.16	0.27
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.23	0.43	0.59	0.70
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.07	0.23	0.33
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.11	0.27	0.38
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.07	0.23	0.33

Losses

Node	E1064
Total Area (ac)	51,226.7
24-Hour Rainfall Depth (in)	2.01
Fm (in/hr)	0.59
Y-Bar	0.73

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	1.3	5.6	0.4	4.4	20.4	82.9	164.2	239.3
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	1.7	0.5	0.4	5.2	16.9	4.1	50.1	34.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	7.9	0.0	6.2	8.9	11.5
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	7.1	7.8	78.2	121.6
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.6	22.2	236.4	139.9	419.1	761.3	######	######
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	4.0	1.5	49.6	41.5	2,579.2	6,195.9
Grass (Fair)	100	50	69	79	84	1.3	65.2	74.3	97.6	73.6	141.6	625.1	1,163.8
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.3
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Open Brush (Fair)	100	46	66	77	83	0.5	30.2	195.5	191.8	498.5	334.8	5,271.0	5,025.6
Woodland (Fair)	100	36	60	73	79	8.2	13.4	61.9	56.5	767.0	428.5	1,570.5	2,144.3
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.9	2.3	0.0	0.0	9.5	8.4	0.0	0.2
Pasture, Dryland (Fair)	100	49	69	79	84	15.3	19.1	8.6	17.1	15.3	19.1	8.6	17.1
Turf (Fair)	100	44	65	77	82	18.9	18.5	0.0	5.6	20.2	28.5	87.0	63.4

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.11	0.19
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.11	0.19
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.11	0.19
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.11	0.19
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.11	0.19
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.24	0.43	0.58	0.66
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.05	0.19	0.30
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.01	0.15	0.30	0.43
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.11	0.26	0.37
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.12	0.28	0.37
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.02	0.13	0.24
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.08	0.23	0.35
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.03	0.16	0.26
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.23	0.43	0.58	0.70
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.07	0.23	0.33
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.11	0.26	0.37
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.07	0.23	0.33

Losses

Node	E1065
Total Area (ac)	53,123.3
24-Hour Rainfall Depth (in)	1.99
Fm (in/hr)	0.59
Y-Bar	0.73

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.9	3.9	4.0	0.4	21.3	86.8	168.2	239.7
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	20.3	15.0	9.6	12.6	37.2	19.1	59.7	46.6
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	10.9	47.0	4.5	0.0	17.1	55.9	16.0
Barren (Poor)	100	78	86	91	93	0.9	9.7	14.7	21.4	8.0	17.5	92.9	143.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	3.8	8.9	210.4	22.0	422.9	770.2	######	######
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	60.4	70.4	49.6	41.5	2,639.6	6,266.3
Grass (Fair)	100	50	69	79	84	29.3	61.8	145.3	136.7	102.9	203.4	770.4	1,300.5
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.3
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	10.0	0.0	0.0	0.0	10.2
Open Brush (Fair)	100	46	66	77	83	3.3	56.2	350.8	93.7	501.8	391.0	5,621.8	5,119.3
Woodland (Fair)	100	36	60	73	79	9.8	65.2	210.2	68.2	776.8	493.7	1,780.7	2,212.5
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	30.2	6.5	10.2	9.5	38.6	6.5	10.4
Pasture, Dryland (Fair)	100	49	69	79	84	47.1	0.7	0.4	3.8	62.4	19.8	9.0	20.9
Turf (Fair)	100	44	65	77	82	0.8	0.7	0.7	3.3	21.0	29.2	87.7	66.7

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.11	0.19
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.11	0.19
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.11	0.19
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.11	0.19
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.11	0.19
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.24	0.42	0.58	0.66
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.05	0.19	0.30
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.01	0.14	0.30	0.42
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.11	0.26	0.37
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.12	0.28	0.37
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.02	0.13	0.24
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.08	0.22	0.35
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.03	0.16	0.26
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.22	0.42	0.58	0.70
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.07	0.22	0.32
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.11	0.26	0.37
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.07	0.22	0.32

Losses

Node	E1066
Total Area (ac)	61,426.9
24-Hour Rainfall Depth (in)	1.92
Fm (in/hr)	0.59
Y-Bar	0.74

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	17.3	352.9	417.2	35.2	38.6	439.7	585.4	274.9
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	17.6	179.5	233.1	13.3	54.8	198.6	292.8	59.9
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	19.8	22.2	1.5	46.7	19.8	39.3	57.4	62.7
Barren (Poor)	100	78	86	91	93	67.4	235.2	196.3	33.6	75.4	252.7	289.2	176.6
Chaparral, Broadleaf (Fair)	100	40	63	75	81	3.6	104.1	277.7	154.4	426.5	874.3	######	######
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	2.4	29.0	20.2	49.6	43.9	2,668.6	6,286.5
Grass (Fair)	100	50	69	79	84	59.4	338.3	706.7	223.8	162.3	541.7	1,477.1	1,524.3
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.3
Meadows or Cienegas (Good)	100	30	58	71	78	0.4	28.0	4.0	1.6	0.4	28.0	4.0	11.8
Open Brush (Fair)	100	46	66	77	83	9.3	151.0	1,739.1	420.0	511.1	542.0	7,360.9	5,539.3
Woodland (Fair)	100	36	60	73	79	108.3	259.4	359.5	83.0	885.1	753.1	2,140.2	2,295.5
Fallow (Poor)	100	77	86	91	94	2.2	0.0	90.5	38.9	2.2	2.7	90.5	38.9
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	37.7	12.4	87.2	9.5	76.3	18.9	97.6
Pasture, Dryland (Fair)	100	49	69	79	84	69.8	215.1	258.4	281.4	132.2	234.9	267.4	302.3
Turf (Fair)	100	44	65	77	82	39.0	139.2	53.8	6.0	60.0	168.4	141.5	72.7

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.10	0.18
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.88	0.88	0.88	0.88
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.10	0.18
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.88	0.88	0.88	0.88
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.10	0.18
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.88	0.88	0.88	0.88
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.10	0.18
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.88	0.88	0.88	0.88
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.10	0.18
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.88	0.88	0.88	0.88
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.23	0.41	0.57	0.65
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.04	0.18	0.29
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.14	0.29	0.41
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.10	0.25	0.36
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.11	0.27	0.36
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.02	0.12	0.23
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.07	0.21	0.33
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.02	0.15	0.25
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.21	0.41	0.57	0.69
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.06	0.21	0.31
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.10	0.25	0.36
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.06	0.21	0.31

Losses

Node	E1067
Total Area (ac)	66,611.2
24-Hour Rainfall Depth (in)	1.88
Fm (in/hr)	0.59
Y-Bar	0.74

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	6.2	10.8	2.7	38.6	445.9	596.2	277.6
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	77.2	0.0	59.0	54.8	275.8	292.8	118.9
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.2	0.0	0.1	19.8	39.5	57.4	62.8
Barren (Poor)	100	78	86	91	93	0.0	0.0	8.7	0.6	75.4	252.7	297.9	177.2
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	11.6	132.8	30.8	426.5	885.9	######	######
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	1.6	0.0	9.1	49.6	45.5	2,668.6	6,295.6
Grass (Fair)	100	50	69	79	84	0.9	47.2	379.3	444.7	163.2	588.9	1,856.4	1,969.0
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.3
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	1.8	0.2	0.6	0.4	29.8	4.2	12.4
Open Brush (Fair)	100	46	66	77	83	8.9	156.7	1,062.6	461.6	520.0	698.7	8,423.5	6,000.9
Woodland (Fair)	100	36	60	73	79	17.9	71.3	116.8	79.5	903.0	824.4	2,257.0	2,375.0
Fallow (Poor)	100	77	86	91	94	0.2	450.4	226.4	158.4	2.4	453.1	316.9	197.3
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	22.5	0.7	5.3	9.5	98.8	19.6	102.9
Pasture, Dryland (Fair)	100	49	69	79	84	5.5	529.8	206.0	368.4	137.7	764.7	473.4	670.7
Turf (Fair)	100	44	65	77	82	0.0	5.3	0.0	4.0	60.0	173.7	141.5	76.7

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.09	0.17
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.88	0.88	0.88	0.88
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.09	0.17
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.88	0.88	0.88	0.88
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.09	0.17
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.88	0.88	0.88	0.88
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.09	0.17
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.88	0.88	0.88	0.88
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.09	0.17
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.88	0.88	0.88	0.88
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.22	0.40	0.56	0.64
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.04	0.17	0.28
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.13	0.28	0.40
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.09	0.24	0.35
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.10	0.26	0.35
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.01	0.12	0.22
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.06	0.20	0.33
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.02	0.14	0.24
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.20	0.40	0.56	0.68
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.06	0.20	0.30
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.09	0.24	0.35
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.06	0.20	0.30

Losses

Node	E1068
Total Area (ac)	68,205.2
24-Hour Rainfall Depth (in)	1.87
Fm (in/hr)	0.58
Y-Bar	0.74

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	4.9	8.0	2.9	37.8	43.5	453.9	599.1	315.4
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.2	19.0	0.0	142.9	55.0	294.8	292.8	261.8
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.4	0.7	0.0	19.8	39.9	58.1	62.8
Barren (Poor)	100	78	86	91	93	0.0	2.0	0.0	0.6	75.4	254.7	297.9	177.8
Chaparral, Broadleaf (Fair)	100	40	63	75	81	2.2	0.0	0.0	0.0	428.7	885.9	######	######
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	49.6	45.5	2,668.6	6,295.6
Grass (Fair)	100	50	69	79	84	6.2	20.9	222.2	421.5	169.4	609.8	2,078.6	2,390.5
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.3
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.4	29.8	4.2	12.4
Open Brush (Fair)	100	46	66	77	83	3.1	1.1	71.5	188.9	523.1	699.8	8,495.0	6,189.8
Woodland (Fair)	100	36	60	73	79	21.0	11.8	22.4	65.5	924.0	836.2	2,279.4	2,440.5
Fallow (Poor)	100	77	86	91	94	5.2	22.4	0.0	104.4	7.6	475.5	316.9	301.7
Orchards, Evergreen (Fair)	100	44	65	77	82	15.8	30.9	5.1	18.3	25.3	129.7	24.7	121.2
Pasture, Dryland (Fair)	100	49	69	79	84	31.6	65.8	0.0	9.8	169.3	830.5	473.4	680.5
Turf (Fair)	100	44	65	77	82	0.0	0.7	0.0	6.3	60.0	174.4	141.5	83.0

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.09	0.17
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.88	0.88	0.88	0.88
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.09	0.17
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.88	0.88	0.88	0.88
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.09	0.17
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.88	0.88	0.88	0.88
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.09	0.17
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.88	0.88	0.88	0.88
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.09	0.17
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.88	0.88	0.88	0.88
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.22	0.40	0.56	0.64
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.04	0.17	0.28
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.13	0.28	0.40
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.09	0.24	0.35
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.10	0.26	0.35
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.01	0.12	0.22
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.06	0.20	0.33
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.02	0.14	0.24
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.20	0.40	0.56	0.68
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.05	0.20	0.30
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.09	0.24	0.35
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.05	0.20	0.30

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             F L O O D    R O U T I N G    A N A L Y S I S
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                          Analysis prepared by:

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                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LE63002E.FLD
  TIME/DATE OF STUDY: 10:19 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1063.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   49892.000 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    3.120 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.020
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.150
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.640
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.190
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.590
         LOW LOSS FRACTION = 0.730
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.15
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.30
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.41
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.77
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.14
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.03

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.343
          30-MINUTE FACTOR = 0.394
           1-HOUR FACTOR = 0.434
           3-HOUR FACTOR = 0.784
           6-HOUR FACTOR = 0.903
          24-HOUR FACTOR = 0.943

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   2.671


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.261	1576.741
2	0.784	3153.484
3	1.307	3153.483
4	1.827	3142.095
5	2.343	3113.227
6	2.891	3304.565
7	3.632	4470.249
8	4.405	4664.813
9	5.184	4700.872
10	5.989	4855.415
11	6.812	4968.159
12	7.829	6137.017
13	8.893	6419.199
14	10.041	6925.649
15	11.316	7693.945
16	12.608	7793.672
17	14.081	8887.708
18	15.619	9279.149
19	17.434	10956.048
20	19.181	10536.261
21	20.820	9894.864
22	22.939	12781.252
23	25.173	13484.335
24	27.079	11500.094
25	28.948	11276.010
26	30.513	9439.711
27	32.220	10303.707
28	33.975	10589.097
29	35.563	9582.671
30	37.017	8770.118
31	38.608	9602.466
32	40.274	10050.449
33	41.822	9338.320
34	43.349	9215.823
35	45.037	10183.741
36	46.900	11241.427
37	48.526	9810.955
38	50.046	9172.597
39	51.279	7436.895
40	52.417	6869.614
41	53.484	6435.924
42	54.527	6291.537
43	55.405	5300.556
44	56.226	4955.206
45	57.228	6041.271
46	58.119	5376.352
47	58.803	4129.811
48	59.490	4142.539
49	60.168	4094.341
50	60.841	4058.089
51	61.516	4073.349
52	62.192	4080.784
53	62.901	4276.384
54	63.467	3417.590
55	64.038	3446.569
56	64.725	4144.610
57	65.336	3682.932
58	65.795	2773.523
59	66.309	3096.915
60	66.828	3131.625
61	67.333	3049.177
62	67.853	3138.161

63	68.353	3017.920
64	68.793	2651.210
65	69.231	2643.292
66	69.690	2771.038
67	70.116	2571.110
68	70.522	2446.726
69	70.928	2454.045
70	71.334	2446.265
71	71.735	2419.519
72	72.123	2341.491
73	72.492	2228.845
74	72.859	2210.109
75	73.234	2266.455
76	73.608	2254.256
77	73.949	2060.543
78	74.291	2062.109
79	74.632	2056.631
80	74.972	2054.421
81	75.315	2065.791
82	75.645	1990.939
83	75.973	1979.155
84	76.284	1877.787
85	76.571	1735.265
86	76.859	1734.943
87	77.146	1733.377
88	77.428	1700.141
89	77.695	1612.537
90	77.960	1599.970
91	78.224	1590.256
92	78.470	1481.708
93	78.711	1455.054
94	78.954	1464.951
95	79.210	1547.353
96	79.461	1514.668
97	79.698	1430.379
98	79.936	1433.878
99	80.172	1423.244
100	80.397	1361.926
101	80.618	1331.636
102	80.839	1332.280
103	81.060	1334.858
104	81.279	1322.935
105	81.497	1313.774
106	81.713	1304.844
107	81.928	1294.532
108	82.137	1262.768
109	82.333	1184.049
110	82.522	1139.995
111	82.711	1139.442
112	82.901	1142.665
113	83.088	1128.808
114	83.269	1092.948
115	83.450	1092.579
116	83.631	1093.408
117	83.812	1091.520
118	83.987	1058.053
119	84.160	1041.021
120	84.327	1008.474
121	84.493	1004.792
122	84.660	1003.457
123	84.826	1002.766
124	84.993	1005.528
125	85.159	1003.641
126	85.325	1004.792
127	85.492	1006.311
128	85.659	1003.457
129	85.823	993.421
130	85.981	951.162
131	86.119	836.398
132	86.248	777.428
133	86.378	780.328
134	86.507	780.604
135	86.636	775.403
136	86.765	780.558
137	86.893	776.093
138	87.022	776.922
139	87.151	779.638
140	87.280	776.922
141	87.409	778.257
142	87.538	777.750
143	87.667	776.093
144	87.793	763.618
145	87.906	681.677
146	88.015	656.404
147	88.123	648.900
148	88.230	645.079
149	88.338	652.399
150	88.446	651.524

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 5812.6660

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1900.5004

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 500.0 1000.0 1500.0 2000.0
14.000	501.5436	1012.04	. V Q . .
14.083	508.6765	1035.69	. V Q . .
14.167	515.9735	1059.53	. V .Q . .
14.250	523.4420	1084.43	. .V .Q . .
14.333	531.0840	1109.63	. .V . Q . .
14.417	538.8906	1133.51	. .V . Q . .
14.500	546.8564	1156.64	. .V . Q . .
14.583	555.0008	1182.57	. .V . Q . .
14.667	563.3290	1209.26	. .V . Q . .
14.750	571.8346	1235.01	. . V . Q . .
14.833	580.5172	1260.71	. . V . Q . .
14.917	589.3854	1287.66	. . V . Q . .
15.000	598.4596	1317.57	. . V . Q . .
15.083	607.7289	1345.91	. . V . Q . .
15.167	617.1915	1373.96	. . V . Q . .
15.250	626.8386	1400.76	. . V . Q . .
15.333	636.6639	1426.64	. . V . Q . .
15.417	646.6509	1450.11	. . V . Q. .
15.500	656.7787	1470.56	. . V . Q. .
15.583	667.0581	1492.56	. . V . Q. .
15.667	677.4832	1513.72	. . V . Q .
15.750	688.0526	1534.67	. . V . Q .
15.833	698.7859	1558.49	. . V . .Q .
15.917	709.6752	1581.12	. . V . .Q .
16.000	720.7198	1603.67	. . V . . Q .
16.083	732.0235	1641.30	. . V . . Q .
16.167	743.5410	1672.34	. . V . . Q .
16.250	755.1573	1686.70	. . V . . Q .
16.333	766.8521	1698.07	. . V . . Q .
16.417	778.6356	1710.97	. . V . . Q .
16.500	790.5319	1727.34	. . V . . Q .
16.583	802.5984	1752.06	. . V . . Q .
16.667	814.7720	1767.59	. . V . . Q .
16.750	827.0153	1777.72	. . V . . Q .
16.833	839.3300	1788.09	. . V . . Q .
16.917	851.7292	1800.36	. . V . . Q .
17.000	864.3053	1826.05	. . V . . Q .
17.083	876.9768	1839.90	. . V . . Q .
17.167	889.6983	1847.16	. . V . . Q .
17.250	902.4526	1851.93	. . V . . Q .
17.333	915.2437	1857.26	. . V. . Q .
17.417	928.1484	1873.78	. . V. . Q .
17.500	941.1414	1886.58	. . V. . Q .
17.583	954.2575	1904.45	. . V . Q .
17.667	967.3547	1901.71	. . V . Q .
17.750	980.4892	1907.13	. . V . Q .
17.833	993.8788	1944.17	. . V . Q .
17.917	1007.3264	1952.59	. . .V . Q.
18.000	1020.6207	1930.34	. . .V . Q .
18.083	1033.8618	1922.60	. . .V . Q .
18.167	1046.9882	1905.95	. . . V . Q .
18.250	1060.1730	1914.43	. . . V . Q .
18.333	1073.3197	1908.90	. . . V . Q .
18.417	1086.3621	1893.76	. . . V . Q .
18.500	1099.3032	1879.05	. . . . V . Q .
18.583	1112.2537	1880.41	. . . . V . Q .
18.667	1125.1920	1878.65	. . . V . Q .
18.750	1138.0439	1866.10	. . . V . Q .
18.833	1150.8092	1853.51	. . . V . Q .
18.917	1163.5684	1852.62	. . . V . Q .
19.000	1176.3115	1850.31	. . . V . Q .
19.083	1188.8250	1816.94	. . . V . Q .
19.167	1201.1705	1792.58	. . . V . Q .
19.250	1213.2969	1760.75	. . . V . Q .
19.333	1225.2993	1742.75	. . . V . Q .
19.417	1237.1663	1723.09	. . . V . Q .
19.500	1248.9155	1706.00	. . . V . Q .
19.583	1260.4578	1675.92	. . . V . Q .
19.667	1271.8346	1651.91	. . . V . Q .
19.750	1283.1240	1639.22	. . . V . Q .
19.833	1294.1838	1605.89	. . . V . Q .
19.917	1304.9548	1563.96	. . . V .Q .
20.000	1315.5111	1532.77	. . . V Q .

END OF FLOODSCx ROUTING ANALYSIS

```
**************************************************************************

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                           Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LE64002E.FLD
  TIME/DATE OF STUDY: 12:56 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1064.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   51226.699 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    3.240 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.020
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.150
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.630
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.200
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.590
         LOW LOSS FRACTION = 0.740
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.15
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.30
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.41
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.77
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.13
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.01

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.339
          30-MINUTE FACTOR = 0.390
           1-HOUR FACTOR = 0.430
           3-HOUR FACTOR = 0.780
           6-HOUR FACTOR = 0.901
          24-HOUR FACTOR = 0.942

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   2.572


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


==========================================================================
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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.251	1554.536
2	0.753	3109.071
3	1.255	3109.072
4	1.755	3102.079
5	2.250	3066.188
6	2.760	3158.243
7	3.434	4177.782
8	4.179	4612.324
9	4.922	4606.181
10	5.687	4734.761
11	6.472	4866.287
12	7.341	5384.723
13	8.410	6617.534
14	9.366	5927.391
15	10.651	7958.788
16	11.797	7099.578
17	13.139	8315.090
18	14.569	8856.455
19	16.107	9527.642
20	17.896	11087.775
21	19.514	10023.951
22	21.145	10100.392
23	23.242	12993.062
24	25.374	13208.983
25	27.162	11079.657
26	28.966	11175.560
27	30.464	9275.508
28	32.109	10192.265
29	33.795	10446.035
30	35.367	9739.080
31	36.761	8636.557
32	38.259	9282.468
33	39.912	10238.018
34	41.389	9150.147
35	42.911	9429.347
36	44.417	9331.885
37	46.263	11436.703
38	47.872	9969.240
39	49.449	9768.385
40	50.730	7935.770
41	51.869	7054.333
42	52.935	6608.308
43	53.963	6365.149
44	54.921	5934.888
45	55.704	4854.155
46	56.575	5395.042
47	57.546	6014.815
48	58.336	4890.762
49	58.994	4076.443
50	59.656	4104.282
51	60.312	4065.595
52	60.961	4020.456
53	61.615	4052.337
54	62.270	4058.340
55	62.959	4268.720
56	63.507	3392.364
57	64.051	3367.030
58	64.707	4066.422
59	65.332	3869.844
60	65.771	2721.236
61	66.259	3022.934
62	66.761	3113.117

63	67.252	3040.044
64	67.738	3009.227
65	68.260	3238.608
66	68.689	2656.577
67	69.111	2614.936
68	69.538	2641.357
69	69.983	2759.569
70	70.373	2415.899
71	70.765	2428.094
72	71.157	2427.432
73	71.546	2412.260
74	71.931	2386.216
75	72.298	2272.636
76	72.653	2200.650
77	73.006	2186.281
78	73.373	2269.848
79	73.727	2195.829
80	74.056	2039.096
81	74.385	2037.961
82	74.714	2037.205
83	75.042	2030.399
84	75.372	2047.604
85	75.690	1969.520
86	76.006	1953.308
87	76.311	1893.753
88	76.589	1721.658
89	76.867	1721.847
90	77.144	1716.412
91	77.420	1707.573
92	77.681	1617.484
93	77.936	1580.097
94	78.191	1583.217
95	78.437	1520.117
96	78.669	1439.670
97	78.901	1439.103
98	79.139	1474.647
99	79.390	1551.076
100	79.625	1454.464
101	79.853	1416.935
102	80.082	1414.099
103	80.307	1396.895
104	80.523	1334.882
105	80.735	1316.921
106	80.948	1318.055
107	81.161	1317.772
108	81.372	1307.326
109	81.581	1297.022
110	81.789	1289.318
111	81.996	1279.628
112	82.198	1251.316
113	82.389	1184.577
114	82.571	1126.912
115	82.753	1127.999
116	82.935	1126.629
117	83.116	1125.636
118	83.292	1086.878
119	83.465	1076.196
120	83.639	1076.527
121	83.813	1078.701
122	83.985	1062.820
123	84.153	1040.463
124	84.315	1006.573
125	84.476	992.299
126	84.636	992.016
127	84.796	992.724
128	84.956	991.401
129	85.116	990.692
130	85.276	992.016
131	85.436	991.354
132	85.596	993.670
133	85.756	988.187
134	85.915	986.533
135	86.066	932.650
136	86.199	825.971
137	86.323	770.433
138	86.447	766.699
139	86.571	769.015
140	86.695	768.684
141	86.819	764.052
142	86.943	771.851
143	87.067	767.030
144	87.191	767.692
145	87.315	768.023
146	87.439	767.928
147	87.563	767.030
148	87.687	770.670
149	87.811	765.045
150	87.925	711.635

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 5983.2490

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1847.4341

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 475.0 950.0 1425.0 1900.0
14.000	481.4483	962.36	. V Q . .
14.083	488.2287	984.52	. V Q . .
14.167	495.1790	1009.18	. V .Q . .
14.250	502.2841	1031.66	. V .Q . .
14.333	509.5508	1055.12	. .V . Q . .
14.417	516.9809	1078.85	. .V . Q . .
14.500	524.5692	1101.83	. .V . Q . .
14.583	532.3179	1125.10	. .V . Q . .
14.667	540.2357	1149.67	. .V . Q . .
14.750	548.3299	1175.27	. .V . Q . .
14.833	556.5919	1199.64	. . V . Q . .
14.917	565.0249	1224.47	. . V . Q . .
15.000	573.6322	1249.78	. . V . Q . .
15.083	582.4427	1279.28	. . V . Q . .
15.167	591.4353	1305.73	. . V . Q . .
15.250	600.6284	1334.83	. . V . Q . .
15.333	609.9958	1360.15	. . V . Q . .
15.417	619.5201	1382.92	. . V . Q. .
15.500	629.1815	1402.83	. . V . Q. .
15.583	638.9861	1423.63	. . V . Q. .
15.667	648.9490	1446.62	. . V . Q .
15.750	659.0467	1466.18	. . V . Q .
15.833	669.2806	1485.97	. . V . .Q .
15.917	679.6837	1510.52	. . V . .Q .
16.000	690.2652	1536.44	. . V . . Q .
16.083	701.0953	1572.53	. . V . . Q .
16.167	712.1521	1605.44	. . V . . Q .
16.250	723.2986	1618.47	. . V . . Q .
16.333	734.5289	1630.65	. . V . . Q .
16.417	745.8497	1643.77	. . V . . Q .
16.500	757.3015	1662.80	. . V . . Q .
16.583	768.9038	1684.65	. . V . . Q .
16.667	780.6230	1701.63	. . V . . Q .
16.750	792.4227	1713.31	. . V . . Q .
16.833	804.3033	1725.06	. . V . . Q .
16.917	816.2769	1738.57	. . V . . Q .
17.000	828.3511	1753.18	. . V . . Q .
17.083	840.5897	1777.04	. . V . . Q .
17.167	852.8500	1780.19	. . V . . Q .
17.250	865.2496	1800.43	. . V . . Q .
17.333	877.5942	1792.44	. . V. . Q .
17.417	890.0665	1810.98	. . V. . Q .
17.500	902.6058	1820.71	. . V. . Q .
17.583	915.2480	1835.64	. . V. . Q .
17.667	927.9924	1850.49	. . V . Q .
17.750	940.6929	1844.11	. . V . Q .
17.833	953.4637	1854.33	. . V . Q.
17.917	966.4803	1890.01	. . V . Q.
18.000	979.5275	1894.45	. . .V . Q.
18.083	992.3932	1868.09	. . .V . Q.
18.167	1005.2255	1863.26	. . .V . Q.
18.250	1017.9351	1845.43	. . . V . Q .
18.333	1030.7184	1856.13	. . . V . Q.
18.417	1043.4487	1848.45	. . . V . Q .
18.500	1056.0887	1835.32	. . . V . Q .
18.583	1068.5991	1816.51	. . . V . Q .
18.667	1081.0972	1814.72	. . . V . Q .
18.750	1093.6053	1816.19	. . . V . Q .
18.833	1106.0045	1800.36	. . . V . Q .
18.917	1118.3435	1791.63	. . . V . Q .
19.000	1130.5958	1779.04	. . . V . Q .
19.083	1142.9100	1788.03	. . . V . Q .
19.167	1155.0227	1758.76	. . . V . Q .
19.250	1166.9918	1737.91	. . . V . Q .
19.333	1178.7229	1703.36	. . . V . Q .
19.417	1190.3195	1683.82	. . . V . Q .
19.500	1201.7893	1665.42	. . . V . Q .
19.583	1213.1453	1648.89	. . . V . Q .
19.667	1224.3381	1625.21	. . . V . Q .
19.750	1235.3320	1596.32	. . . V . Q .
19.833	1246.2279	1582.08	. . . V . Q .
19.917	1256.9758	1560.61	. . . V . Q .
20.000	1267.4679	1523.45	. . . V . Q .

END OF FLOODSCx ROUTING ANALYSIS

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**************************************************************************

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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LE65002E.FLD
  TIME/DATE OF STUDY: 12:57 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1065.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   53123.301 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    3.380 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.020
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.150
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.610
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.220
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.590
         LOW LOSS FRACTION = 0.740
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.15
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.30
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.41
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.76
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.12
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.99

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.332
          30-MINUTE FACTOR = 0.384
           1-HOUR FACTOR = 0.424
           3-HOUR FACTOR = 0.774
           6-HOUR FACTOR = 0.899
          24-HOUR FACTOR = 0.941

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   2.465


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.239	1536.518
2	0.717	3073.036
3	1.196	3073.036
4	1.674	3069.755
5	2.146	3031.730
6	2.627	3091.836
7	3.215	3778.662
8	3.927	4576.405
9	4.633	4535.169
10	5.351	4615.068
11	6.095	4775.607
12	6.861	4925.225
13	7.814	6117.225
14	8.791	6276.838
15	9.807	6532.490
16	11.012	7736.434
17	12.132	7199.196
18	13.452	8480.494
19	14.824	8814.408
20	16.344	9766.693
21	18.054	10982.444
22	19.569	9733.179
23	21.149	10151.014
24	23.159	12917.724
25	25.191	13049.441
26	26.905	11016.939
27	28.651	11215.478
28	30.079	9175.452
29	31.652	10102.685
30	33.249	10260.552
31	34.863	10368.020
32	36.188	8515.148
33	37.585	8971.804
34	39.192	10327.704
35	40.643	9324.645
36	42.146	9652.314
37	43.529	8888.992
38	45.181	10607.486
39	46.926	11216.360
40	48.442	9735.593
41	49.892	9319.938
42	51.074	7593.872
43	52.157	6952.304
44	53.173	6531.307
45	54.169	6398.131
46	55.079	5848.982
47	55.831	4830.532
48	56.686	5493.838
49	57.624	6020.562
50	58.394	4948.072
51	59.033	4106.177
52	59.675	4127.327
53	60.309	4068.238
54	60.937	4039.589
55	61.569	4060.102
56	62.200	4051.892
57	62.873	4325.008
58	63.446	3679.077
59	63.952	3253.596
60	64.532	3725.005
61	65.194	4252.023
62	65.684	3147.795

63	66.117	2783.460
64	66.596	3079.075
65	67.078	3091.868
66	67.546	3010.011
67	68.027	3092.554
68	68.517	3145.932
69	68.924	2616.611
70	69.329	2599.945
71	69.741	2644.452
72	70.168	2747.189
73	70.542	2397.804
74	70.918	2418.097
75	71.294	2416.528
76	71.668	2404.176
77	72.038	2375.600
78	72.395	2293.891
79	72.737	2197.231
80	73.076	2180.566
81	73.419	2200.271
82	73.778	2304.870
83	74.094	2034.597
84	74.410	2028.813
85	74.726	2029.597
86	75.041	2022.294
87	75.357	2030.431
88	75.670	2014.255
89	75.971	1933.771
90	76.273	1934.409
91	76.556	1821.329
92	76.822	1707.024
93	77.089	1719.719
94	77.356	1713.740
95	77.620	1698.055
96	77.869	1598.896
97	78.114	1570.074
98	78.357	1565.516
99	78.594	1519.147
100	78.817	1431.213
101	79.039	1429.203
102	79.265	1453.760
103	79.506	1545.321
104	79.737	1484.738
105	79.956	1404.352
106	80.174	1402.587
107	80.392	1399.940
108	80.602	1350.876
109	80.806	1310.977
110	81.010	1308.232
111	81.213	1308.036
112	81.417	1309.359
113	81.618	1290.733
114	81.818	1284.753
115	82.016	1274.264
116	82.213	1265.588
117	82.405	1231.963
118	82.586	1159.763
119	82.760	1121.433
120	82.935	1120.893
121	83.109	1120.795
122	83.283	1117.707
123	83.451	1079.279
124	83.617	1063.937
125	83.783	1067.417
126	83.949	1068.447
127	84.114	1060.702
128	84.274	1025.068
129	84.432	1013.402
130	84.585	983.992
131	84.738	986.590
132	84.891	980.463
133	85.044	985.855
134	85.197	982.375
135	85.350	984.679
136	85.503	980.512
137	85.656	983.502
138	85.810	987.031
139	85.962	979.336
140	86.113	965.464
141	86.254	909.243
142	86.379	802.389
143	86.497	761.019
144	86.615	756.853
145	86.734	764.451
146	86.852	759.157
147	86.971	763.372
148	87.090	761.019
149	87.208	759.157
150	87.326	761.068

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 6133.1670

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1880.8191

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 500.0 1000.0 1500.0 2000.0
14.000	484.2559	963.96	. V Q. . .
14.083	491.0637	988.49	. V Q. . .
14.167	498.0390	1012.82	. V Q . .
14.250	505.1835	1037.37	. V Q . .
14.333	512.4800	1059.45	. V .Q . .
14.417	519.9357	1082.58	. .V .Q . .
14.500	527.5524	1105.94	. .V . Q . .
14.583	535.3375	1130.39	. .V . Q . .
14.667	543.2830	1153.69	. .V . Q . .
14.750	551.3918	1177.40	. .V . Q . .
14.833	559.6749	1202.71	. .V . Q . .
14.917	568.1251	1226.96	. . V . Q . .
15.000	576.7454	1251.68	. . V . Q . .
15.083	585.5404	1277.03	. . V . Q . .
15.167	594.5242	1304.45	. . V . Q . .
15.250	603.7027	1332.71	. . V . Q . .
15.333	613.0735	1360.65	. . V . Q . .
15.417	622.6060	1384.11	. . V . Q . .
15.500	632.2773	1404.27	. . V . Q . .
15.583	642.0874	1424.42	. . V . Q . .
15.667	652.0437	1445.66	. . V . Q . .
15.750	662.1544	1468.08	. . V . Q. .
15.833	672.3994	1487.57	. . V . Q. .
15.917	682.7769	1506.81	. . V . Q .
16.000	693.3304	1532.37	. . V . Q .
16.083	704.1624	1572.81	. . V . .Q .
16.167	715.2217	1605.82	. . V . . Q .
16.250	726.3916	1621.86	. . V . . Q .
16.333	737.6404	1633.33	. . V . . Q .
16.417	748.9785	1646.29	. . V . . Q .
16.500	760.4405	1664.28	. . V . . Q .
16.583	772.0660	1688.02	. . V . . Q .
16.667	783.8197	1706.64	. . V . . Q .
16.750	795.6583	1718.96	. . V . . Q .
16.833	807.5834	1731.53	. . V . . Q .
16.917	819.5965	1744.30	. . V . . Q .
17.000	831.7105	1758.96	. . V . . Q .
17.083	843.9547	1777.85	. . V . . Q .
17.167	856.2758	1789.03	. . V . . Q .
17.250	868.6823	1801.41	. . V . . Q .
17.333	881.1739	1813.79	. . V . . Q .
17.417	893.6608	1813.10	. . V. . Q .
17.500	906.2769	1831.86	. . V. . Q .
17.583	918.9544	1840.77	. . V. . Q .
17.667	931.7471	1857.50	. . V. . Q .
17.750	944.6237	1869.69	. . V . Q .
17.833	957.4624	1864.18	. . V . Q .
17.917	970.3777	1875.30	. . V . Q .
18.000	983.5268	1909.25	. . V . Q .
18.083	996.6980	1912.45	. . .V . Q .
18.167	1009.6946	1887.11	. . .V . Q .
18.250	1022.6538	1881.67	. . .V . Q .
18.333	1035.4846	1863.03	. . . V . Q .
18.417	1048.3971	1874.88	. . . V . Q .
18.500	1061.2662	1868.60	. . . V . Q .
18.583	1074.0682	1858.85	. . . V . Q .
18.667	1086.6830	1831.66	. . . V . Q .
18.750	1099.2736	1828.15	. . . V . Q .
18.833	1111.9025	1833.71	. . . V . Q .
18.917	1124.4202	1817.57	. . . V . Q .
19.000	1136.8728	1808.13	. . . V . Q .
19.083	1149.2045	1790.55	. . . V . Q .
19.167	1161.5863	1797.84	. . . V . Q .
19.250	1173.9094	1789.31	. . . V . Q .
19.333	1186.0388	1761.19	. . . V . Q .
19.417	1198.0026	1737.13	. . . V . Q .
19.500	1209.7476	1705.38	. . . V . Q .
19.583	1221.3708	1687.70	. . . V . Q .
19.667	1232.8785	1670.92	. . . V . Q .
19.750	1244.2595	1652.53	. . . V . Q .
19.833	1255.4686	1627.56	. . . V . Q .
19.917	1266.4927	1600.69	. . . V . Q .
20.000	1277.4004	1583.80	. . . V .Q .

END OF FLOODSCx ROUTING ANALYSIS

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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LE66002E.FLD
  TIME/DATE OF STUDY: 12:59 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1066.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
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      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   61426.898 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    3.590 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.020
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.140
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.620
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.220
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.590
         LOW LOSS FRACTION = 0.760
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.15
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.30
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.40
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.74
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.09
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.92

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.307
          30-MINUTE FACTOR = 0.362
           1-HOUR FACTOR = 0.407
           3-HOUR FACTOR = 0.753
           6-HOUR FACTOR = 0.891
          24-HOUR FACTOR = 0.936

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   2.321


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.226	1680.710
2	0.679	3361.421
3	1.131	3361.422
4	1.584	3360.972
5	2.031	3324.873
6	2.482	3345.619
7	2.976	3670.486
8	3.635	4894.863
9	4.302	4961.965
10	4.974	4985.075
11	5.664	5125.703
12	6.373	5274.034
13	7.125	5581.413
14	8.070	7023.512
15	8.967	6663.600
16	9.977	7504.295
17	11.103	8360.471
18	12.160	7856.808
19	13.410	9281.039
20	14.706	9631.518
21	16.100	10353.892
22	17.732	12121.475
23	19.216	11028.296
24	20.613	10373.743
25	22.407	13331.055
26	24.342	14372.940
27	26.173	13601.590
28	27.743	11668.537
29	29.302	11577.669
30	30.675	10198.128
31	32.164	11060.871
32	33.685	11303.790
33	35.177	11078.611
34	36.412	9178.275
35	37.719	9711.439
36	39.223	11172.695
37	40.607	10276.145
38	41.979	10197.222
39	43.298	9794.047
40	44.716	10538.957
41	46.382	12373.688
42	47.810	10612.298
43	49.240	10620.460
44	50.449	8981.066
45	51.504	7833.889
46	52.491	7333.201
47	53.421	6907.355
48	54.348	6889.162
49	55.175	6146.972
50	55.862	5098.696
51	56.676	6047.106
52	57.552	6510.047
53	58.282	5425.837
54	58.878	4428.458
55	59.483	4491.483
56	60.077	4410.831
57	60.669	4400.799
58	61.258	4376.541
59	61.852	4407.175
60	62.452	4463.711
61	63.072	4599.623
62	63.557	3604.425

63	64.042	3602.102
64	64.624	4325.390
65	65.231	4508.288
66	65.652	3128.250
67	66.067	3082.285
68	66.517	3346.175
69	66.968	3345.325
70	67.407	3263.199
71	67.849	3287.967
72	68.328	3553.444
73	68.712	2851.325
74	69.091	2819.019
75	69.470	2818.055
76	69.879	3038.757
77	70.245	2714.166
78	70.597	2618.381
79	70.951	2624.559
80	71.304	2622.235
81	71.654	2602.058
82	72.000	2571.679
83	72.330	2452.713
84	72.650	2379.316
85	72.969	2363.163
86	73.289	2380.903
87	73.627	2507.350
88	73.925	2218.635
89	74.222	2206.563
90	74.519	2206.960
91	74.816	2206.110
92	75.112	2198.005
93	75.410	2215.745
94	75.696	2123.871
95	75.979	2101.540
96	76.260	2082.950
97	76.514	1887.130
98	76.765	1864.969
99	77.015	1862.928
100	77.266	1863.155
101	77.513	1834.306
102	77.746	1729.906
103	77.975	1701.795
104	78.204	1702.361
105	78.428	1661.837
106	78.638	1560.781
107	78.847	1555.170
108	79.058	1562.085
109	79.281	1655.772
110	79.505	1667.731
111	79.713	1545.648
112	79.918	1524.224
113	80.124	1525.245
114	80.327	1510.962
115	80.522	1445.046
116	80.713	1424.359
117	80.905	1424.869
118	81.097	1422.205
119	81.288	1421.922
120	81.477	1405.939
121	81.665	1393.923
122	81.852	1389.899
123	82.037	1377.997
124	82.219	1350.168
125	82.393	1289.523
126	82.557	1223.041
127	82.722	1220.037
128	82.886	1222.927
129	83.050	1216.069
130	83.212	1202.864
131	83.368	1163.530
132	83.524	1156.445
133	83.681	1164.947
134	83.837	1157.749
135	83.992	1151.457
136	84.143	1126.123
137	84.292	1101.184
138	84.436	1073.696
139	84.581	1072.732
140	84.725	1072.676
141	84.870	1074.149
142	85.014	1072.676
143	85.158	1072.789
144	85.302	1070.239
145	85.447	1077.437
146	85.591	1068.028
147	85.736	1077.437
148	85.880	1066.101
149	86.019	1033.285
150	86.148	961.361

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 6993.0049

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1901.4429

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 500.0 1000.0 1500.0 2000.0
14.000	478.8616	959.05	. V Q. . .
14.083	485.6317	983.03	. V Q. . .
14.167	492.5891	1010.20	. V Q . .
14.250	499.7271	1036.45	. V Q . .
14.333	507.0300	1060.38	. V .Q . .
14.417	514.4966	1084.15	. V .Q . .
14.500	522.1157	1106.28	. V . Q . .
14.583	529.8964	1129.77	. .V . Q . .
14.667	537.8503	1154.90	. .V . Q . .
14.750	545.9753	1179.76	. .V . Q . .
14.833	554.2556	1202.30	. .V . Q . .
14.917	562.6959	1225.53	. .V . Q . .
15.000	571.3079	1250.46	. . V . Q . .
15.083	580.0860	1274.59	. . V . Q . .
15.167	589.0399	1300.10	. . V . Q . .
15.250	598.1620	1324.53	. . V . Q . .
15.333	607.4629	1350.49	. . V . Q . .
15.417	616.9429	1376.51	. . V . Q . .
15.500	626.5628	1396.80	. . V . Q . .
15.583	636.3362	1419.10	. . V . Q . .
15.667	646.2545	1440.14	. . V . Q . .
15.750	656.3130	1460.49	. . V . Q. .
15.833	666.5204	1482.11	. . V . Q. .
15.917	676.8715	1502.97	. . V . Q .
16.000	687.3660	1523.80	. . V . Q .
16.083	698.1107	1560.14	. . V . .Q .
16.167	709.0858	1593.58	. . V . .Q .
16.250	720.1891	1612.19	. . V . . Q .
16.333	731.3951	1627.12	. . V . . Q .
16.417	742.7053	1642.24	. . V . . Q .
16.500	754.1136	1656.48	. . V . . Q .
16.583	765.6562	1675.98	. . V . . Q .
16.667	777.3650	1700.12	. . V . . Q .
16.750	789.1614	1712.84	. . V . . Q .
16.833	801.0319	1723.59	. . V . . Q .
16.917	812.9765	1734.36	. . V . . Q .
17.000	825.0258	1749.55	. . V . . Q .
17.083	837.1680	1763.06	. . V . . Q .
17.167	849.4150	1778.26	. . V . . Q .
17.250	861.6877	1782.00	. . V . . Q .
17.333	874.0696	1797.86	. . V . . Q .
17.417	886.5377	1810.37	. . V . . Q .
17.500	899.0081	1810.69	. . V . . Q .
17.583	911.5890	1826.75	. . V. . Q .
17.667	924.2434	1837.42	. . V. . Q .
17.750	936.9839	1849.93	. . V. . Q .
17.833	949.8424	1867.05	. . V. . Q .
17.917	962.6785	1863.80	. . V . Q .
18.000	975.5490	1868.80	. . V . Q .
18.083	988.6097	1896.41	. . V . Q .
18.167	1001.7371	1906.10	. . .V . Q .
18.250	1014.8063	1897.65	. . .V . Q .
18.333	1027.7273	1876.13	. . .V . Q .
18.417	1040.6249	1872.72	. . .V . Q .
18.500	1053.4659	1864.52	. . . V . Q .
18.583	1066.3556	1871.58	. . . V . Q .
18.667	1079.2020	1865.31	. . . V . Q .
18.750	1091.9449	1850.27	. . . V . Q .
18.833	1104.5100	1824.45	. . . V . Q .
18.917	1117.0516	1821.04	. . . V . Q .
19.000	1129.6271	1825.96	. . . V . Q .
19.083	1142.0935	1810.13	. . . V . Q .
19.167	1154.4525	1794.54	. . . V . Q .
19.250	1166.7151	1780.53	. . . V . Q .
19.333	1178.9691	1779.28	. . . V . Q .
19.417	1191.2355	1781.08	. . . V . Q .
19.500	1203.3291	1755.99	. . . V . Q .
19.583	1215.2892	1736.60	. . . V . Q .
19.667	1227.0234	1703.82	. . . V . Q .
19.750	1238.5996	1680.86	. . . V . Q .
19.833	1250.0540	1663.18	. . . V . Q .
19.917	1261.3960	1646.86	. . . V . Q .
20.000	1272.6182	1629.45	. . . V . Q .

END OF FLOODSCx ROUTING ANALYSIS

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**************************************************************************

             F L O O D    R O U T I N G    A N A L Y S I S
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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LE67002E.FLD
  TIME/DATE OF STUDY: 12:59 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1067.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   66611.203 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    3.770 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.020
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.140
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.620
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.220
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.590
         LOW LOSS FRACTION = 0.760
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.15
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.29
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.40
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.73
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.07
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.88

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.293
          30-MINUTE FACTOR = 0.352
           1-HOUR FACTOR = 0.397
           3-HOUR FACTOR = 0.740
           6-HOUR FACTOR = 0.887
          24-HOUR FACTOR = 0.933

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   2.210


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.215	1735.541
2	0.646	3471.079
3	1.077	3471.083
4	1.508	3471.076
5	1.936	3444.648
6	2.362	3431.208
7	2.805	3568.157
8	3.392	4733.944
9	4.032	5152.258
10	4.668	5125.437
11	5.314	5206.957
12	5.981	5373.941
13	6.663	5489.526
14	7.442	6278.737
15	8.370	7474.146
16	9.176	6490.093
17	10.244	8608.602
18	11.265	8219.631
19	12.299	8331.060
20	13.497	9655.548
21	14.734	9963.190
22	16.057	10659.933
23	17.614	12538.852
24	19.044	11523.350
25	20.359	10590.282
26	21.986	13109.438
27	23.828	14839.191
28	25.645	14630.501
29	27.146	12092.216
30	28.743	12867.190
31	30.009	10203.018
32	31.413	11308.897
33	32.833	11436.751
34	34.333	12087.775
35	35.591	10132.276
36	36.814	9852.660
37	38.081	10206.859
38	39.538	11738.586
39	40.812	10262.850
40	42.146	10741.998
41	43.381	9948.632
42	44.745	10989.562
43	46.337	12824.721
44	47.703	11006.956
45	49.069	11001.548
46	50.259	9584.999
47	51.278	8210.150
48	52.231	7674.428
49	53.132	7258.307
50	54.017	7132.989
51	54.847	6681.251
52	55.555	5705.869
53	56.242	5538.634
54	57.067	6639.919
55	57.876	6521.761
56	58.491	4952.205
57	59.062	4598.222
58	59.634	4611.774
59	60.200	4558.333
60	60.763	4532.182
61	61.325	4527.726
62	61.889	4549.914

63	62.462	4613.894
64	63.056	4779.654
65	63.519	3734.851
66	63.977	3687.465
67	64.515	4334.001
68	65.107	4769.113
69	65.550	3569.398
70	65.929	3050.546
71	66.352	3408.617
72	66.782	3469.770
73	67.205	3403.946
74	67.621	3351.274
75	68.071	3621.271
76	68.481	3308.313
77	68.844	2919.635
78	69.205	2910.108
79	69.569	2931.742
80	69.962	3163.327
81	70.299	2721.239
82	70.636	2711.037
83	70.972	2711.713
84	71.308	2705.997
85	71.642	2686.514
86	71.972	2659.102
87	72.289	2551.361
88	72.594	2458.801
89	72.897	2442.084
90	73.200	2437.597
91	73.523	2602.558
92	73.816	2359.051
93	74.099	2281.917
94	74.382	2278.721
95	74.665	2280.934
96	74.946	2264.401
97	75.230	2288.248
98	75.511	2261.143
99	75.781	2174.607
100	76.050	2171.165
101	76.314	2123.717
102	76.552	1917.823
103	76.791	1930.607
104	77.030	1921.757
105	77.269	1926.735
106	77.505	1897.295
107	77.727	1788.264
108	77.945	1758.947
109	78.163	1757.779
110	78.379	1737.743
111	78.580	1622.197
112	78.780	1608.552
113	78.979	1603.451
114	79.185	1663.314
115	79.402	1748.007
116	79.606	1643.216
117	79.802	1576.163
118	79.998	1579.789
119	80.193	1572.106
120	80.385	1541.929
121	80.568	1479.423
122	80.751	1470.204
123	80.934	1471.126
124	81.116	1470.143
125	81.298	1466.762
126	81.478	1450.291
127	81.657	1442.485
128	81.835	1431.668
129	82.012	1429.148
130	82.186	1396.636
131	82.354	1354.965
132	82.511	1269.104
133	82.668	1258.164
134	82.824	1258.226
135	82.980	1262.159
136	83.136	1254.231
137	83.287	1215.142
138	83.436	1197.994
139	83.585	1198.547
140	83.732	1191.910
141	83.883	1210.348
142	84.028	1169.722
143	84.172	1161.302
144	84.312	1130.326
145	84.450	1109.859
146	84.587	1103.283
147	84.725	1114.285
148	84.863	1108.261
149	85.000	1103.898
150	85.137	1105.373

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 7402.7007

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1989.2224

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 500.0 1000.0 1500.0 2000.0
14.000	493.6049	988.03	. V. Q. . .
14.083	500.5533	1008.91	. V Q . .
14.167	507.6793	1034.70	. V Q . .
14.250	514.9962	1062.42	. V .Q . .
14.333	522.5022	1089.87	. V .Q . .
14.417	530.1760	1114.24	. V . Q . .
14.500	538.0237	1139.49	. V . Q . .
14.583	546.0245	1161.70	. V . Q . .
14.667	554.1957	1186.46	. .V . Q . .
14.750	562.5407	1211.70	. .V . Q . .
14.833	571.0639	1237.56	. .V . Q . .
14.917	579.7491	1261.09	. .V . Q . .
15.000	588.5946	1284.37	. .V . Q . .
15.083	597.6030	1308.02	. . V . Q . .
15.167	606.7914	1334.17	. . V . Q . .
15.250	616.1556	1359.68	. . V . Q . .
15.333	625.6904	1384.44	. . V . Q . .
15.417	635.3856	1407.74	. . V . Q . .
15.500	645.2283	1429.17	. . V . Q . .
15.583	655.2355	1453.04	. . V . Q. .
15.667	665.4048	1476.59	. . V . Q. .
15.750	675.7333	1499.70	. . V . Q. .
15.833	686.2117	1521.45	. . V . Q .
15.917	696.8514	1544.89	. . V . Q .
16.000	707.6487	1567.77	. . V . .Q .
16.083	718.6766	1601.25	. . V . . Q .
16.167	729.9359	1634.84	. . V . . Q .
16.250	741.3364	1655.36	. . V . . Q .
16.333	752.8578	1672.90	. . V . . Q .
16.417	764.4872	1688.59	. . V . . Q .
16.500	776.2563	1708.86	. . V . . Q .
16.583	788.1484	1726.73	. . V . . Q .
16.667	800.2183	1752.55	. . V . . Q .
16.750	812.3977	1768.45	. . V . . Q .
16.833	824.6704	1782.00	. . V . . Q .
16.917	837.0247	1793.84	. . V . . Q .
17.000	849.4678	1806.75	. . V . . Q .
17.083	861.9925	1818.58	. . V . . Q .
17.167	874.6265	1834.46	. . V . . Q .
17.250	887.3555	1848.26	. . V . . Q .
17.333	900.0954	1849.83	. . V . . Q .
17.417	912.9911	1872.46	. . V . . Q .
17.500	925.8998	1874.34	. . V . . Q .
17.583	938.8682	1883.02	. . V . . Q .
17.667	951.9333	1897.05	. . V. . Q .
17.750	965.0901	1910.37	. . V. . Q .
17.833	978.3242	1921.59	. . V. . Q .
17.917	991.6833	1939.76	. . V. . Q .
18.000	1005.0222	1936.80	. . V . Q .
18.083	1018.3690	1937.96	. . V . Q .
18.167	1031.8671	1959.93	. . V . Q.
18.250	1045.4795	1976.53	. . .V . Q.
18.333	1059.0743	1973.98	. . .V . Q.
18.417	1072.5011	1949.57	. . .V . Q .
18.500	1085.9335	1950.39	. . .V . Q.
18.583	1099.2557	1934.39	. . . V . Q .
18.667	1112.6388	1943.22	. . . V . Q .
18.750	1125.9907	1938.71	. . . V . Q .
18.833	1139.3107	1934.06	. . . V . Q .
18.917	1152.4192	1903.35	. . . V . Q .
19.000	1165.4532	1892.54	. . . V . Q .
19.083	1178.4561	1888.01	. . . V . Q .
19.167	1191.4636	1888.70	. . . V . Q .
19.250	1204.2902	1862.41	. . . V . Q .
19.333	1217.0521	1853.04	. . . V . Q .
19.417	1229.6943	1835.65	. . . V . Q .
19.500	1242.3251	1833.99	. . . V . Q .
19.583	1254.9714	1836.26	. . . V . Q .
19.667	1267.4386	1810.23	. . . V . Q .
19.750	1279.7850	1792.70	. . . V . Q .
19.833	1291.9114	1760.74	. . . V . Q .
19.917	1303.8528	1733.88	. . . V . Q .
20.000	1315.6714	1716.06	. . . V . Q .

END OF FLOODSCx ROUTING ANALYSIS

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             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
          (c) Copyright 1989-2003 Advanced Engineering Software (aes)
              Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                           Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LE68002E.FLD
  TIME/DATE OF STUDY: 13:00 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1068.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   68205.203 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    3.950 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.020
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.140
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.610
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.230
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.580
         LOW LOSS FRACTION = 0.760
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.15
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.29
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.40
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.73
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.06
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.87

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.289
          30-MINUTE FACTOR = 0.350
           1-HOUR FACTOR = 0.393
           3-HOUR FACTOR = 0.736
           6-HOUR FACTOR = 0.885
          24-HOUR FACTOR = 0.932

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   2.110


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.205	1691.257
2	0.615	3382.514
3	1.025	3382.514
4	1.435	3382.517
5	1.843	3366.625
6	2.247	3332.124
7	2.663	3425.383
8	3.163	4123.412
9	3.776	5056.229
10	4.380	4983.020
11	4.988	5020.763
12	5.613	5156.428
13	6.257	5306.421
14	6.917	5444.772
15	7.737	6763.484
16	8.605	7158.474
17	9.371	6323.088
18	10.450	8897.831
19	11.383	7699.252
20	12.396	8354.905
21	13.539	9428.651
22	14.717	9717.673
23	15.973	10353.045
24	17.456	12235.690
25	18.833	11356.646
26	20.088	10352.133
27	21.542	11997.541
28	23.292	14433.040
29	25.046	14468.801
30	26.576	12615.655
31	28.047	12138.461
32	29.379	10987.254
33	30.651	10492.910
34	32.004	11162.109
35	33.376	11315.536
36	34.804	11773.584
37	35.916	9176.587
38	37.106	9813.014
39	38.373	10450.133
40	39.764	11475.980
41	40.959	9854.895
42	42.253	10677.190
43	43.421	9629.883
44	44.742	10901.037
45	46.278	12667.684
46	47.598	10886.469
47	48.905	10779.737
48	50.081	9708.139
49	51.077	8209.423
50	52.003	7641.780
51	52.884	7262.208
52	53.726	6944.782
53	54.562	6896.481
54	55.300	6090.706
55	55.920	5112.466
56	56.665	6143.442
57	57.466	6613.290
58	58.176	5849.741
59	58.728	4558.228
60	59.280	4552.753
61	59.826	4500.740
62	60.368	4471.917

63	60.905	4433.592
64	61.446	4456.625
65	61.987	4465.435
66	62.538	4541.897
67	63.111	4727.293
68	63.555	3664.474
69	63.989	3581.499
70	64.488	4118.242
71	65.058	4696.771
72	65.535	3936.181
73	65.882	2863.449
74	66.277	3253.751
75	66.689	3397.990
76	67.098	3373.698
77	67.497	3291.950
78	67.896	3294.845
79	68.347	3720.829
80	68.702	2925.248
81	69.047	2845.388
82	69.392	2845.828
83	69.746	2920.465
84	70.116	3055.705
85	70.435	2624.435
86	70.756	2652.062
87	71.077	2651.055
88	71.398	2646.398
89	71.717	2628.337
90	72.032	2597.500
91	72.337	2515.626
92	72.629	2407.636
93	72.919	2392.532
94	73.208	2387.498
95	73.510	2491.083
96	73.804	2421.166
97	74.074	2232.183
98	74.344	2228.344
99	74.615	2227.589
100	74.885	2228.344
101	75.153	2216.576
102	75.426	2244.454
103	75.689	2171.202
104	75.945	2114.626
105	76.201	2114.815
106	76.449	2037.976
107	76.674	1860.383
108	76.903	1891.534
109	77.132	1883.290
110	77.360	1884.045
111	77.586	1861.264
112	77.798	1749.057
113	78.006	1716.836
114	78.214	1717.088
115	78.422	1710.606
116	78.616	1604.000
117	78.806	1569.010
118	78.997	1570.646
119	79.188	1582.351
120	79.395	1700.474
121	79.599	1683.356
122	79.787	1550.319
123	79.973	1540.942
124	80.160	1540.942
125	80.346	1528.734
126	80.526	1488.646
127	80.700	1436.979
128	80.874	1436.979
129	81.049	1437.420
130	81.223	1436.979
131	81.396	1431.504
132	81.568	1413.254
133	81.739	1407.968
134	81.908	1399.976
135	82.077	1395.822
136	82.243	1363.601
137	82.406	1344.470
138	82.557	1246.045
139	82.707	1234.969
140	82.855	1225.152
141	83.005	1235.536
142	83.154	1228.739
143	83.301	1210.300
144	83.443	1171.219
145	83.584	1166.625
146	83.725	1164.737
147	83.867	1169.457
148	84.009	1173.170
149	84.147	1136.796
150	84.284	1127.922

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 7531.4829

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 2003.5396

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 500.0 1000.0 1500.0 2000.0
14.000	492.0358	971.90	. V. Q. . .
14.083	498.8754	993.12	. V. Q. . .
14.167	505.8671	1015.20	. V Q . .
14.250	513.0231	1039.04	. V Q . .
14.333	520.3620	1065.61	. V .Q . .
14.417	527.8834	1092.11	. V .Q . .
14.500	535.5728	1116.49	. V . Q . .
14.583	543.4264	1140.35	. V . Q . .
14.667	551.4409	1163.70	. .V . Q . .
14.750	559.6188	1187.43	. .V . Q . .
14.833	567.9642	1211.76	. .V . Q . .
14.917	576.4775	1236.14	. .V . Q . .
15.000	585.1628	1261.10	. .V . Q . .
15.083	593.9998	1283.13	. .V . Q . .
15.167	602.9938	1305.94	. . V . Q . .
15.250	612.1586	1330.72	. . V . Q . .
15.333	621.5037	1356.92	. . V . Q . .
15.417	630.9908	1377.52	. . V . Q . .
15.500	640.6285	1399.41	. . V . Q . .
15.583	650.4011	1418.97	. . V . Q . .
15.667	660.3254	1441.02	. . V . Q . .
15.750	670.4195	1465.66	. . V . Q. .
15.833	680.6689	1488.22	. . V . Q. .
15.917	691.0872	1512.73	. . V . Q .
16.000	701.6923	1539.87	. . V . Q .
16.083	712.5404	1575.14	. . V . .Q .
16.167	723.6019	1606.13	. . V . . Q .
16.250	734.7935	1625.01	. . V . . Q .
16.333	746.1219	1644.89	. . V . . Q .
16.417	757.5933	1665.65	. . V . . Q .
16.500	769.2053	1686.06	. . V . . Q .
16.583	780.9487	1705.14	. . V . . Q .
16.667	792.8500	1728.07	. . V . . Q .
16.750	804.9218	1752.81	. . V . . Q .
16.833	817.0833	1765.86	. . V . . Q .
16.917	829.3416	1779.91	. . V . . Q .
17.000	841.7059	1795.30	. . V . . Q .
17.083	854.1509	1807.01	. . V . . Q .
17.167	866.6660	1817.19	. . V . . Q .
17.250	879.3052	1835.22	. . V . . Q .
17.333	892.0096	1844.68	. . V . . Q .
17.417	904.7286	1846.80	. . V . . Q .
17.500	917.6339	1873.85	. . V . . Q .
17.583	930.5297	1872.46	. . V . . Q .
17.667	943.4893	1881.74	. . V . . Q .
17.750	956.5305	1893.59	. . V. . Q .
17.833	969.6633	1906.88	. . V. . Q .
17.917	982.8989	1921.82	. . V. . Q .
18.000	996.2675	1941.12	. . V. . Q .
18.083	1009.6124	1937.68	. . V . Q .
18.167	1022.9429	1935.58	. . V . Q .
18.250	1036.3888	1952.35	. . V . Q.
18.333	1049.9697	1971.94	. . V . Q.
18.417	1063.5675	1974.40	. . .V . Q.
18.500	1077.0393	1956.11	. . .V . Q.
18.583	1090.4589	1948.51	. . .V . Q .
18.667	1103.8049	1937.86	. . . V . Q .
18.750	1117.1433	1936.73	. . . V . Q .
18.833	1130.4974	1939.01	. . . V . Q .
18.917	1143.8185	1934.21	. . . V . Q .
19.000	1157.0629	1923.09	. . . V . Q .
19.083	1170.0807	1890.19	. . . V . Q .
19.167	1183.0775	1887.13	. . . V . Q .
19.250	1196.0294	1880.62	. . . V . Q .
19.333	1208.9326	1873.55	. . . V . Q .
19.417	1221.6489	1846.40	. . . V . Q .
19.500	1234.3080	1838.10	. . . V . Q .
19.583	1246.8523	1821.43	. . . V . Q .
19.667	1259.4060	1822.80	. . . V . Q .
19.750	1271.9445	1820.59	. . . V . Q .
19.833	1284.2987	1793.84	. . . V . Q .
19.917	1296.5387	1777.24	. . . V . Q .
20.000	1308.5797	1748.35	. . . V . Q .

END OF FLOODSCx ROUTING ANALYSIS

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

TECHNICAL APPENDIX I-B
HYDROLOGIC ANALYSIS
EXISTING CONDITION
10-YEAR EXPECTED VALUE

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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LE63010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.150
        FOOTHILL                           0.150
        MOUNTAIN                           0.640
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1062.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU62010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9034.05    Tc(MIN.) = 135.31
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.50
  TOTAL AREA(ACRES) =   46437.31
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1062.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9034.05    Tc(MIN.) = 135.31
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.50
  TOTAL AREA(ACRES) =   46437.31
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1062.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    345.00  DOWNSTREAM(FEET) =    319.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2852.00   CHANNEL SLOPE =  0.0091
  CHANNEL BASE(FEET) =   60.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.025   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   9034.05
  FLOW VELOCITY(FEET/SEC.) =  17.85   FLOW DEPTH(FEET) =   6.86
  TRAVEL TIME(MIN.) =   2.66   Tc(MIN.) = 137.97
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) = 137.97
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.607
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       79.80      0.40       1.00    40
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A        4.40      0.40       0.50    32
  NATURAL FAIR COVER
  "GRASS"                    A        8.00      0.40       1.00    50
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 A        6.40      0.40       1.00    44
  NATURAL FAIR COVER
  "OPEN BRUSH"               A      110.10      0.40       1.00    46
  COMMERCIAL                 A        1.70      0.40       0.10    32
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  210.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.33;30M= 0.64;1H= 0.88;3H= 1.66;6H= 2.48;24H= 4.38
```

```
  S-GRAPH: VALLEY(DEV.)=  1.1%;VALLEY(UNDEV.)/DESERT= 19.8%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.30; LAG(HR) = 1.84; Fm(INCH/HR) = 0.23; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.36; 30M = 0.40; 1HR = 0.44;
  3HR = 0.79; 6HR = 0.91; 24HR= 0.95
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  46647.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0338; Lca/L=0.4,n=.0303; Lca/L=0.5,n=.0278;Lca/L=0.6,n=.0260
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8133.74
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8964.06
  TOTAL AREA(ACRES) =  46647.70       PEAK FLOW RATE(CFS) =    9034.05
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.28; 30M = 0.60; 1HR = 0.81; 3HR = 1.40; 6HR = 1.98; 24HR = 3.37

****************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 137.97
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 A       56.90      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        7.50      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                    B        5.60      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 B        6.10      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       16.30      0.30      1.00    66
  COMMERCIAL                 B        1.90      0.30      0.10    56
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.36
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =   94.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.33;30M= 0.64;1H= 0.88;3H= 1.66;6H= 2.48;24H= 4.38
  S-GRAPH: VALLEY(DEV.)=  1.1%;VALLEY(UNDEV.)/DESERT= 19.8%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.30; LAG(HR) = 1.84; Fm(INCH/HR) = 0.23; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.36; 30M = 0.40; 1HR = 0.44;
  3HR = 0.79; 6HR = 0.91; 24HR= 0.95
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  46742.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0338; Lca/L=0.4,n=.0303; Lca/L=0.5,n=.0278;Lca/L=0.6,n=.0260
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8131.50
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8961.83
  TOTAL AREA(ACRES) =  46742.00       PEAK FLOW RATE(CFS) =    9034.05
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.28; 30M = 0.60; 1HR = 0.81; 3HR = 1.40; 6HR = 1.98; 24HR = 3.37

****************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 137.97
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 B       23.70      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      679.90      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        1.80      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C      161.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C     1099.40      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       58.20      0.25      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 2024.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.33;30M= 0.63;1H= 0.88;3H= 1.65;6H= 2.46;24H= 4.33
  S-GRAPH: VALLEY(DEV.)=  1.7%;VALLEY(UNDEV.)/DESERT= 19.2%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.30; LAG(HR) = 1.84; Fm(INCH/HR) = 0.23; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.35; 30M = 0.40; 1HR = 0.44;
  3HR = 0.79; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  48766.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0338; Lca/L=0.4,n=.0303; Lca/L=0.5,n=.0278;Lca/L=0.6,n=.0260
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8293.72
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9108.83
  TOTAL AREA(ACRES) =  48766.40       PEAK FLOW RATE(CFS) =    9108.83

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.28; 30M = 0.60; 1HR = 0.81; 3HR = 1.40; 6HR = 1.98; 24HR = 3.37

****************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 137.97
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C      196.50      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      421.30      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.60      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        0.10      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D       55.70      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      270.30      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  944.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.33;30M= 0.63;1H= 0.88;3H= 1.65;6H= 2.45;24H= 4.32
```

```
  S-GRAPH: VALLEY(DEV.)=  1.9%;VALLEY(UNDEV.)/DESERT= 18.9%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.30; LAG(HR) = 1.84; Fm(INCH/HR) = 0.23; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  49710.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0338; Lca/L=0.4,n=.0303; Lca/L=0.5,n=.0278;Lca/L=0.6,n=.0260
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8391.84
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9203.04
  TOTAL AREA(ACRES) =  49710.90       PEAK FLOW RATE(CFS) =    9203.04

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.28; 30M = 0.60; 1HR = 0.81; 3HR = 1.40; 6HR = 1.98; 24HR = 3.37

****************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 137.97
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D      140.70      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       40.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  181.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.33;30M= 0.63;1H= 0.88;3H= 1.64;6H= 2.45;24H= 4.31
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 18.9%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.30; LAG(HR) = 1.84; Fm(INCH/HR) = 0.23; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  49892.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0338; Lca/L=0.4,n=.0303; Lca/L=0.5,n=.0278;Lca/L=0.6,n=.0260
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8415.43
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9225.31
  TOTAL AREA(ACRES) =  49892.00       PEAK FLOW RATE(CFS) =    9225.31

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.28; 30M = 0.60; 1HR = 0.81; 3HR = 1.40; 6HR = 1.98; 24HR = 3.37
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  49892.00  TC(MIN.) =    137.97
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.51
  PEAK FLOW RATE(CFS)   =   9225.31
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LE64010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.020
        FOOTHILL                           0.150
        MOUNTAIN                           0.260
        VALLEY(UNDEVELOPED)/DESERT         0.570
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1063.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LE63010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9225.31    Tc(MIN.) = 137.97
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.51
  TOTAL AREA(ACRES) =   49892.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1063.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9225.31    Tc(MIN.) = 137.97
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.51
  TOTAL AREA(ACRES) =   49892.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1063.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    319.00  DOWNSTREAM(FEET) =    275.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  5418.00   CHANNEL SLOPE =  0.0081
  CHANNEL BASE(FEET) =   60.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.025   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   9225.31
  FLOW VELOCITY(FEET/SEC.) =  17.29   FLOW DEPTH(FEET) =   7.18
  TRAVEL TIME(MIN.) =   5.22   Tc(MIN.) = 143.19
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) = 143.19
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.594
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        0.60      0.40       1.00    40
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A        1.70      0.40       0.50    32
  NATURAL FAIR COVER
  "GRASS"                    A        1.30      0.40       1.00    50
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 A        0.90      0.40       1.00    44
  URBAN FAIR COVER
  "TURF"                     A       18.90      0.40       1.00    44
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        0.50      0.40       1.00    46
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.96
  SUBAREA AREA(ACRES) =   23.90
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.33;30M= 0.63;1H= 0.88;3H= 1.64;6H= 2.45;24H= 4.31
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 18.9%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.39; LAG(HR) = 1.91; Fm(INCH/HR) = 0.23; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  49915.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0334; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0275;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8413.89
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9169.87
  TOTAL AREA(ACRES) =  49915.90       PEAK FLOW RATE(CFS) =    9225.31
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 143.19
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 A        1.30      0.40      0.10    32
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A       15.30      0.40      1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A        8.20      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       22.20      0.30      1.00    63
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B        0.50      0.30      0.50    56
  NATURAL FAIR COVER
  "GRASS"                    B       65.20      0.30      1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.32
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  112.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.33;30M= 0.63;1H= 0.88;3H= 1.64;6H= 2.45;24H= 4.31
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 19.0%
           MOUNTAIN= 63.9%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.39; LAG(HR) = 1.91; Fm(INCH/HR) = 0.23; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  50028.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0334; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0275;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8413.37
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9169.57
  TOTAL AREA(ACRES) =  50028.60       PEAK FLOW RATE(CFS) =    9225.31
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 143.19
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 B        2.30      0.30      1.00    65
  URBAN FAIR COVER
  "TURF"                     B       18.50      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       30.20      0.30      1.00    66
  COMMERCIAL                 B        5.60      0.30      0.10    56
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B       19.10      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B       13.40      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.94
  SUBAREA AREA(ACRES) =   89.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.33;30M= 0.63;1H= 0.88;3H= 1.64;6H= 2.44;24H= 4.31
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 19.1%
           MOUNTAIN= 63.9%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.39; LAG(HR) = 1.91; Fm(INCH/HR) = 0.23; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  50117.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0334; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0275;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8414.60
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9171.12
  TOTAL AREA(ACRES) =  50117.70       PEAK FLOW RATE(CFS) =    9225.31
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 143.19
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      236.40      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        0.40      0.25      0.50    69
  NATURAL FAIR COVER
  "GRASS"                    C       74.30      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      195.50      0.25      1.00    77
  COMMERCIAL                 C        0.40      0.25      0.10    69
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        8.60      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  515.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.88;3H= 1.64;6H= 2.44;24H= 4.29
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  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 19.5%
           MOUNTAIN= 63.5%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.39; LAG(HR) = 1.91; Fm(INCH/HR) = 0.23; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  50633.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0334; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0275;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8444.23
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9200.78
  TOTAL AREA(ACRES) =  50633.30       PEAK FLOW RATE(CFS) =    9225.31
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 143.19
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        4.00      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C       61.90      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      139.90      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        5.20      0.20      0.50    75
  NATURAL FAIR COVER
  "GRASS"                    D       97.60      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                     D        5.60      0.20      1.00    82
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  314.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.88;3H= 1.64;6H= 2.43;24H= 4.29
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 19.7%
           MOUNTAIN= 63.2%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.39; LAG(HR) = 1.91; Fm(INCH/HR) = 0.23; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  50947.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0334; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0275;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8470.76
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9227.48
  TOTAL AREA(ACRES) =  50947.50       PEAK FLOW RATE(CFS) =    9227.48

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) = 143.19
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      191.80      0.20      1.00    83
  COMMERCIAL                 D        4.40      0.20      0.10    75
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D       17.10      0.20      1.00    84
  PUBLIC PARK                D        7.90      0.20      0.85    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        1.50      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       56.50      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  279.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.88;3H= 1.64;6H= 2.43;24H= 4.28
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 19.9%
           MOUNTAIN= 63.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.39; LAG(HR) = 1.91; Fm(INCH/HR) = 0.23; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  51226.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0334; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0275;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8497.54
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9254.24
  TOTAL AREA(ACRES) =  51226.70       PEAK FLOW RATE(CFS) =    9254.24

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  51226.70  TC(MIN.) =    143.19
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.51
  PEAK FLOW RATE(CFS)   =   9254.24
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LE65010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.020
        FOOTHILL                           0.150
        MOUNTAIN                           0.070
        VALLEY(UNDEVELOPED)/DESERT         0.760
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1064.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LE64010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9254.24    Tc(MIN.) = 143.19
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.51
  TOTAL AREA(ACRES) =   51226.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1064.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9254.24    Tc(MIN.) = 143.19
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.51
  TOTAL AREA(ACRES) =   51226.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1064.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    275.00  DOWNSTREAM(FEET) =    240.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  5738.00   CHANNEL SLOPE =  0.0061
  CHANNEL BASE(FEET) =   60.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.025   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   9254.24
  FLOW VELOCITY(FEET/SEC.) =  15.69   FLOW DEPTH(FEET) =   7.80
  TRAVEL TIME(MIN.) =   6.09   Tc(MIN.) = 149.29
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) = 149.29
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.580
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        3.80      0.40       1.00    40
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A       20.30      0.40       0.50    32
  NATURAL POOR COVER
  "BARREN"                   A        0.90      0.40       1.00    78
  NATURAL FAIR COVER
  "GRASS"                    A       29.30      0.40       1.00    50
  URBAN FAIR COVER
  "TURF"                     A        0.80      0.40       1.00    44
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        3.30      0.40       1.00    46
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.83
  SUBAREA AREA(ACRES) =   58.40
  UNIT-HYDROGRAPH DATA:
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  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.88;3H= 1.64;6H= 2.43;24H= 4.28
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 20.0%
           MOUNTAIN= 63.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.49; LAG(HR) = 1.99; Fm(INCH/HR) = 0.23; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  51285.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0332; Lca/L=0.4,n=.0298; Lca/L=0.5,n=.0274;Lca/L=0.6,n=.0255
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8496.62
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9140.87
  TOTAL AREA(ACRES) =  51285.10       PEAK FLOW RATE(CFS) =    9254.24
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 149.29
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 A        0.90      0.40      0.10    32
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A       47.10      0.40      1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A        9.80      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        8.90      0.30      1.00    63
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B       15.00      0.30      0.50    56
  NATURAL POOR COVER
  "BARREN"                   B        9.70      0.30      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.37
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.91
  SUBAREA AREA(ACRES) =   91.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.88;3H= 1.63;6H= 2.43;24H= 4.28
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 20.1%
           MOUNTAIN= 62.9%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.49; LAG(HR) = 1.99; Fm(INCH/HR) = 0.23; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  51376.49
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0332; Lca/L=0.4,n=.0298; Lca/L=0.5,n=.0274;Lca/L=0.6,n=.0255
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8495.39
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9139.91
  TOTAL AREA(ACRES) =  51376.49       PEAK FLOW RATE(CFS) =    9254.24
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 149.29
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B       61.80      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 B       30.20      0.30      1.00    65
  URBAN FAIR COVER
  "TURF"                     B        0.70      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       56.20      0.30      1.00    66
  COMMERCIAL                 B        3.90      0.30      0.10    56
  PUBLIC PARK                B       10.90      0.30      0.85    56
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =  163.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.88;3H= 1.63;6H= 2.43;24H= 4.27
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 20.2%
           MOUNTAIN= 62.7%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.49; LAG(HR) = 1.99; Fm(INCH/HR) = 0.23; Ybar = 0.52
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  51540.19
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0332; Lca/L=0.4,n=.0298; Lca/L=0.5,n=.0274;Lca/L=0.6,n=.0255
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8497.38
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9142.60
  TOTAL AREA(ACRES) =  51540.19       PEAK FLOW RATE(CFS) =    9254.24
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 149.29
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B        0.70      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B       65.20      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      210.40      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        9.60      0.25      0.50    69
  NATURAL POOR COVER
  "BARREN"                   C       14.70      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C      145.30      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  445.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.88;3H= 1.63;6H= 2.42;24H= 4.26
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  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 20.7%
           MOUNTAIN= 62.2%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.49; LAG(HR) = 1.99; Fm(INCH/HR) = 0.23; Ybar = 0.52
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  51986.09
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0332; Lca/L=0.4,n=.0298; Lca/L=0.5,n=.0274;Lca/L=0.6,n=.0255
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8520.16
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9166.16
  TOTAL AREA(ACRES) =  51986.09       PEAK FLOW RATE(CFS) =    9254.24
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 149.29
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 C        6.50      0.25      1.00    77
  URBAN FAIR COVER
  "TURF"                     C        0.70      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      350.80      0.25      1.00    77
  COMMERCIAL                 C        4.00      0.25      0.10    69
  PUBLIC PARK                C       47.00      0.25      0.85    69
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       60.40      0.25      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  469.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.87;3H= 1.63;6H= 2.42;24H= 4.25
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.2%
           MOUNTAIN= 61.7%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.49; LAG(HR) = 1.99; Fm(INCH/HR) = 0.23; Ybar = 0.52
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  52455.49
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0332; Lca/L=0.4,n=.0298; Lca/L=0.5,n=.0274;Lca/L=0.6,n=.0255
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8549.78
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9195.96
  TOTAL AREA(ACRES) =  52455.49       PEAK FLOW RATE(CFS) =    9254.24
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 149.29
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        0.40      0.25      1.00    79
  NATURAL FAIR COVER
  "WOODLAND"                 C      210.20      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       22.00      0.20      1.00    81
  PUBLIC PARK                D        4.50      0.20      0.85    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D       12.60      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D       21.40      0.20      1.00    93
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =  271.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.87;3H= 1.63;6H= 2.41;24H= 4.24
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.5%
           MOUNTAIN= 61.4%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.49; LAG(HR) = 1.99; Fm(INCH/HR) = 0.23; Ybar = 0.52
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  52726.59
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0332; Lca/L=0.4,n=.0298; Lca/L=0.5,n=.0274;Lca/L=0.6,n=.0255
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8565.68
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9212.45
  TOTAL AREA(ACRES) =  52726.59       PEAK FLOW RATE(CFS) =    9254.24
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 149.29
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D      136.70      0.20      1.00    84
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 D       10.20      0.20      1.00    82
  URBAN FAIR COVER
  "TURF"                     D        3.30      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       93.70      0.20      1.00    83
  COMMERCIAL                 D        0.40      0.20      0.10    75
  NATURAL GOOD COVER
  "MEADOWS"                  D       10.00      0.20      1.00    78
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  254.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.87;3H= 1.62;6H= 2.41;24H= 4.24
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.7%
           MOUNTAIN= 61.2%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
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  Tc(HR) = 2.49; LAG(HR) = 1.99; Fm(INCH/HR) = 0.23; Ybar = 0.52
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  52980.89
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0332; Lca/L=0.4,n=.0298; Lca/L=0.5,n=.0274;Lca/L=0.6,n=.0255
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8591.66
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9238.97
  TOTAL AREA(ACRES) =  52980.89       PEAK FLOW RATE(CFS) =    9254.24
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 149.29
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       70.40      0.20      1.00    86
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D        3.80      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                 D       68.20      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  142.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.87;3H= 1.62;6H= 2.41;24H= 4.23
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 61.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.49; LAG(HR) = 1.99; Fm(INCH/HR) = 0.23; Ybar = 0.52
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  53123.29
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0332; Lca/L=0.4,n=.0298; Lca/L=0.5,n=.0274;Lca/L=0.6,n=.0255
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8605.79
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9253.64
  TOTAL AREA(ACRES) =  53123.29       PEAK FLOW RATE(CFS) =    9254.24
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  53123.29  TC(MIN.) =    149.29
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.52
  PEAK FLOW RATE(CFS)   =   9254.24
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
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             RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
            (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                           Analysis prepared by:

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  FILE NAME: LE66010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
 ============================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
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                     --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ======  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.020
        FOOTHILL                           0.080
        MOUNTAIN                           0.680
        VALLEY(UNDEVELOPED)/DESERT         0.220
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


 ************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1065.00 IS CODE = 15.1
 ----------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
 ============================================================================
  PEAK FLOWRATE TABLE FILE NAME: LE65010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9254.24    Tc(MIN.) = 149.29
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.52
  TOTAL AREA(ACRES) =   53123.29
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.

 ************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1065.00 IS CODE = 14.0
 ----------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
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  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9254.24    Tc(MIN.) = 149.29
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.52
  TOTAL AREA(ACRES) =   53123.29
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.

 ************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1065.00 IS CODE =  12
 ----------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
 ============================================================================

 ************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  51
 ----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
 ============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    240.00  DOWNSTREAM(FEET) =    213.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  6295.00   CHANNEL SLOPE =  0.0043
  CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   9254.24
  FLOW VELOCITY(FEET/SEC.) =  11.49   FLOW DEPTH(FEET) =   7.98
  TRAVEL TIME(MIN.) =   9.13   Tc(MIN.) = 158.41
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.

 ************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) = 158.41
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.560
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  PUBLIC PARK                A       19.80      0.40       0.85    32
  AGRICULTURAL POOR COVER
  "FALLOW"                   A        2.20      0.40       1.00    77
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A       17.60      0.40       0.50    32
  NATURAL POOR COVER
  "BARREN"                   A       67.40      0.40       1.00    78
  NATURAL FAIR COVER
  "GRASS"                    A       59.40      0.40       1.00    50
  URBAN FAIR COVER
  "TURF"                     A       39.00      0.40       1.00    44
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.94
  SUBAREA AREA(ACRES) =  205.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.87;3H= 1.62;6H= 2.41;24H= 4.23
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  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 61.1%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.64; LAG(HR) = 2.11; Fm(INCH/HR) = 0.23; Ybar = 0.52
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  53328.69
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0335; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8566.50
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8892.97
  TOTAL AREA(ACRES) =  53328.69       PEAK FLOW RATE(CFS) =    9254.24
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 158.41
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        9.30      0.40      1.00    46
  COMMERCIAL                 A       17.30      0.40      0.10    32
  NATURAL GOOD COVER
  "MEADOWS"                  A        0.40      0.40      1.00    30
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A       69.80      0.40      1.00    49
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        3.60      0.40      1.00    40
  NATURAL FAIR COVER
  "WOODLAND"                 A      108.30      0.40      1.00    36
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
  SUBAREA AREA(ACRES) =  208.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.87;3H= 1.62;6H= 2.40;24H= 4.23
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 61.1%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.64; LAG(HR) = 2.11; Fm(INCH/HR) = 0.23; Ybar = 0.52
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  53537.39
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0335; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8556.07
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8881.21
  TOTAL AREA(ACRES) =  53537.39       PEAK FLOW RATE(CFS) =    9254.24
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 158.41
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B      104.10      0.30      1.00    63
  NATURAL GOOD COVER
  "MEADOWS"                  B       28.00      0.30      1.00    58
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B      179.50      0.30      0.50    56
  NATURAL POOR COVER
  "BARREN"                   B      235.20      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B      338.30      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 B       37.70      0.30      1.00    65
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.90
  SUBAREA AREA(ACRES) =  922.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.87;3H= 1.62;6H= 2.39;24H= 4.21
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 61.2%;FOOTHILL= 14.9%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.64; LAG(HR) = 2.11; Fm(INCH/HR) = 0.23; Ybar = 0.52
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  54460.19
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0335; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8603.76
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8916.67
  TOTAL AREA(ACRES) =  54460.19       PEAK FLOW RATE(CFS) =    9254.24
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 158.41
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  URBAN FAIR COVER
  "TURF"                     B      139.20      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B      151.00      0.30      1.00    66
  COMMERCIAL                 B      352.90      0.30      0.10    56
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B      215.10      0.30      1.00    69
  PUBLIC PARK                B       22.20      0.30      0.85    56
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        2.40      0.30      1.00    72
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.64
  SUBAREA AREA(ACRES) =  882.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.87;3H= 1.61;6H= 2.38;24H= 4.19
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
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          MOUNTAIN= 61.3%;FOOTHILL= 14.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.64; LAG(HR) = 2.11; Fm(INCH/HR) = 0.23; Ybar = 0.53
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  55342.99
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0335; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8679.53
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8984.93
  TOTAL AREA(ACRES) =  55342.99       PEAK FLOW RATE(CFS) =    9254.24
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 158.41
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 B      259.40      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      277.70      0.25      1.00    75
  AGRICULTURAL POOR COVER
  "FALLOW"                   C       90.50      0.25      1.00    91
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C      233.10      0.25      0.50    69
  NATURAL POOR COVER
  "BARREN"                   C      196.30      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C      706.70      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
  SUBAREA AREA(ACRES) = 1763.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.87;3H= 1.60;6H= 2.37;24H= 4.15
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 61.5%;FOOTHILL= 14.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.64; LAG(HR) = 2.11; Fm(INCH/HR) = 0.23; Ybar = 0.53
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.32; 30M = 0.37; 1HR = 0.42;
  3HR = 0.76; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  57106.69
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0335; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8810.93
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9089.56
  TOTAL AREA(ACRES) =  57106.69       PEAK FLOW RATE(CFS) =    9254.24
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 158.41
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 C       12.40      0.25      1.00    77
  URBAN FAIR COVER
  "TURF"                     C       53.80      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"               C     1739.10      0.25      1.00    77
  COMMERCIAL                 C      417.20      0.25      0.10    69
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C      258.40      0.25      1.00    79
  PUBLIC PARK                C        1.50      0.25      0.85    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.85
  SUBAREA AREA(ACRES) = 2482.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.63;1H= 0.86;3H= 1.59;6H= 2.34;24H= 4.10
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 61.8%;FOOTHILL= 14.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.64; LAG(HR) = 2.11; Fm(INCH/HR) = 0.23; Ybar = 0.53
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.37; 1HR = 0.41;
  3HR = 0.76; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  59589.09
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0335; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9034.36
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9285.73
  TOTAL AREA(ACRES) =  59589.09       PEAK FLOW RATE(CFS) =    9285.73

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 158.41
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL GOOD COVER
  "MEADOWS"                  C        4.00      0.25      1.00    71
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       29.00      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C      359.50      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      154.40      0.20      1.00    81
  PUBLIC PARK                D       46.70      0.20      0.85    75
  AGRICULTURAL POOR COVER
  "FALLOW"                   D       38.90      0.20      1.00    94
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  632.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.63;1H= 0.86;3H= 1.59;6H= 2.34;24H= 4.09
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 61.9%;FOOTHILL= 14.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.64; LAG(HR) = 2.11; Fm(INCH/HR) = 0.23; Ybar = 0.53
```

```
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.37; 1HR = 0.41;
  3HR = 0.76; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  60221.59
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0335; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9078.38
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9323.90
  TOTAL AREA(ACRES) =  60221.59       PEAK FLOW RATE(CFS) =    9323.90

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 158.41
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D       13.30      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D       33.60      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      223.80      0.20      1.00    84
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 D       87.20      0.20      1.00    82
  URBAN FAIR COVER
  "TURF"                     D        6.00      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      420.00      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  783.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.63;1H= 0.86;3H= 1.58;6H= 2.33;24H= 4.08
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 61.9%;FOOTHILL= 14.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.64; LAG(HR) = 2.11; Fm(INCH/HR) = 0.23; Ybar = 0.53
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.36; 1HR = 0.41;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  61005.48
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0335; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9163.34
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9399.96
  TOTAL AREA(ACRES) =  61005.48       PEAK FLOW RATE(CFS) =    9399.96

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 158.41
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 D       35.20      0.20      0.10    75
  NATURAL GOOD COVER
  "MEADOWS"                  D        1.60      0.20      1.00    78
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       20.20      0.20      1.00    86
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D      281.40      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                 D       83.00      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.92
  SUBAREA AREA(ACRES) =  421.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.62;1H= 0.86;3H= 1.58;6H= 2.33;24H= 4.07
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.64; LAG(HR) = 2.11; Fm(INCH/HR) = 0.23; Ybar = 0.53
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.36; 1HR = 0.41;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  61426.88
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0335; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9210.77
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9442.68
  TOTAL AREA(ACRES) =  61426.88       PEAK FLOW RATE(CFS) =    9442.68

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  61426.88  TC(MIN.) =    158.41
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.53
  PEAK FLOW RATE(CFS)   =   9442.68
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
        (c) Copyright 1983-2003 Advanced Engineering Software (aes)
            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: LE67010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.020
        FOOTHILL                           0.140
        MOUNTAIN                           0.620
        VALLEY(UNDEVELOPED)/DESERT         0.220
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1066.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LE66010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9442.68    Tc(MIN.) = 158.41
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.53
  TOTAL AREA(ACRES) =   61426.88
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1066.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9442.68    Tc(MIN.) = 158.41
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.53
  TOTAL AREA(ACRES) =   61426.88
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1066.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    213.00  DOWNSTREAM(FEET) =    176.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  6201.00   CHANNEL SLOPE =  0.0060
  CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   9442.68
  FLOW VELOCITY(FEET/SEC.) =  12.92   FLOW DEPTH(FEET) =   7.33
  TRAVEL TIME(MIN.) =   8.00   Tc(MIN.) = 166.41
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) = 166.41
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.545
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   A        0.20      0.40       1.00    77
  NATURAL FAIR COVER
  "GRASS"                    A        0.90      0.40       1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        8.90      0.40       1.00    46
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A        5.50      0.40       1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A       17.90      0.40       1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       11.60      0.30       1.00    63
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.37
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   45.00
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.31;30M= 0.62;1H= 0.86;3H= 1.58;6H= 2.33;24H= 4.07
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.77; LAG(HR) = 2.22; Fm(INCH/HR) = 0.23; Ybar = 0.53
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.36; 1HR = 0.41;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  61471.88
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0336; Lca/L=0.4,n=.0301; Lca/L=0.5,n=.0277;Lca/L=0.6,n=.0258
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9208.65
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9300.43
  TOTAL AREA(ACRES) =  61471.88       PEAK FLOW RATE(CFS) =    9442.68
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

********************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) = 166.41
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   B      450.40      0.30      1.00    86
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B       77.20      0.30      0.50    56
  NATURAL FAIR COVER
  "GRASS"                    B       47.20      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 B       22.50      0.30      1.00    65
  URBAN FAIR COVER
  "TURF"                     B        5.30      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B      156.70      0.30      1.00    66
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.95
  SUBAREA AREA(ACRES) =  759.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.62;1H= 0.86;3H= 1.58;6H= 2.32;24H= 4.06
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.77; LAG(HR) = 2.22; Fm(INCH/HR) = 0.23; Ybar = 0.53
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.30; 30M = 0.36; 1HR = 0.41;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  62231.18
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0336; Lca/L=0.4,n=.0301; Lca/L=0.5,n=.0277;Lca/L=0.6,n=.0258
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9271.84
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9351.80
  TOTAL AREA(ACRES) =  62231.18       PEAK FLOW RATE(CFS) =    9442.68
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

********************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) = 166.41
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 B        6.20      0.30      0.10    56
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B      529.80      0.30      1.00    69
  PUBLIC PARK                B        0.20      0.30      0.85    56
  NATURAL GOOD COVER
  "MEADOWS"                  B        1.80      0.30      1.00    58
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        1.60      0.30      1.00    72
  NATURAL FAIR COVER
  "WOODLAND"                 B       71.30      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  610.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.62;1H= 0.86;3H= 1.58;6H= 2.32;24H= 4.05
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.77; LAG(HR) = 2.22; Fm(INCH/HR) = 0.23; Ybar = 0.53
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.30; 30M = 0.36; 1HR = 0.40;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  62842.08
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0336; Lca/L=0.4,n=.0301; Lca/L=0.5,n=.0277;Lca/L=0.6,n=.0258
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9284.36
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9358.29
  TOTAL AREA(ACRES) =  62842.08       PEAK FLOW RATE(CFS) =    9442.68
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

********************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) = 166.41
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      132.80      0.25      1.00    75
  AGRICULTURAL POOR COVER
  "FALLOW"                   C      226.40      0.25      1.00    91
  NATURAL POOR COVER
  "BARREN"                   C        8.70      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C      379.30      0.25      1.00    79
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 C        0.70      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"               C     1062.60      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1810.50
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.31;30M= 0.62;1H= 0.86;3H= 1.57;6H= 2.30;24H= 4.02
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.77; LAG(HR) = 2.22; Fm(INCH/HR) = 0.23; Ybar = 0.54
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.30; 30M = 0.35; 1HR = 0.40;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  64652.58
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0336; Lca/L=0.4,n=.0301; Lca/L=0.5,n=.0277;Lca/L=0.6,n=.0258
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9427.64
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9477.56
  TOTAL AREA(ACRES) =  64652.58       PEAK FLOW RATE(CFS) =    9477.56

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 166.41
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 C       10.80      0.25      0.10    69
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C      206.00      0.25      1.00    79
  NATURAL GOOD COVER
  "MEADOWS"                  C        0.20      0.25      1.00    71
  NATURAL FAIR COVER
  "WOODLAND"                 C      116.80      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       30.80      0.20      1.00    81
  AGRICULTURAL POOR COVER
  "FALLOW"                   D      158.40      0.20      1.00    94
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  523.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.62;1H= 0.86;3H= 1.57;6H= 2.30;24H= 4.01
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.77; LAG(HR) = 2.22; Fm(INCH/HR) = 0.23; Ybar = 0.54
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.30; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  65175.58
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0336; Lca/L=0.4,n=.0301; Lca/L=0.5,n=.0277;Lca/L=0.6,n=.0258
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9481.65
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9524.10
  TOTAL AREA(ACRES) =  65175.58       PEAK FLOW RATE(CFS) =    9524.10

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 166.41
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D       59.00      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        0.60      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      444.70      0.20      1.00    84
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 D        5.30      0.20      1.00    82
  URBAN FAIR COVER
  "TURF"                     D        4.00      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      461.60      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =  975.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.62;1H= 0.86;3H= 1.56;6H= 2.29;24H= 4.00
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.77; LAG(HR) = 2.22; Fm(INCH/HR) = 0.23; Ybar = 0.54
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  66150.78
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0336; Lca/L=0.4,n=.0301; Lca/L=0.5,n=.0277;Lca/L=0.6,n=.0258
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9584.82
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9614.81
  TOTAL AREA(ACRES) =  66150.78       PEAK FLOW RATE(CFS) =    9614.81

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 166.41
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 D        2.70      0.20      0.10    75
  PUBLIC PARK                D        0.10      0.20      0.85    75
  NATURAL GOOD COVER
  "MEADOWS"                  D        0.60      0.20      1.00    78
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        9.10      0.20      1.00    86
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D      368.40      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                 D       79.50      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  460.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.62;1H= 0.85;3H= 1.56;6H= 2.29;24H= 3.99
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.77; LAG(HR) = 2.22; Fm(INCH/HR) = 0.23; Ybar = 0.54
```

```
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  66611.18
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0336; Lca/L=0.4,n=.0301; Lca/L=0.5,n=.0277;Lca/L=0.6,n=.0258
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9631.87
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9655.80
  TOTAL AREA(ACRES) =  66611.18       PEAK FLOW RATE(CFS) =    9655.80

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  66611.18  TC(MIN.) =    166.41
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.54
  PEAK FLOW RATE(CFS)   =   9655.80
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
        (c) Copyright 1983-2003 Advanced Engineering Software (aes)
            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LE68010E.DAT
  TIME/DATE OF STUDY: 08:56 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.020
        FOOTHILL                           0.140
        MOUNTAIN                           0.190
        VALLEY(UNDEVELOPED)/DESERT         0.650
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1067.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LE67010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9655.80    Tc(MIN.) = 166.41
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.54
  TOTAL AREA(ACRES) =   66611.18
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1067.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9655.80    Tc(MIN.) = 166.41
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.54
  TOTAL AREA(ACRES) =   66611.18
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1067.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    176.00  DOWNSTREAM(FEET) =    133.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  6324.00   CHANNEL SLOPE =  0.0068
  CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   9655.80
  FLOW VELOCITY(FEET/SEC.) =  13.60   FLOW DEPTH(FEET) =   7.15
  TRAVEL TIME(MIN.) =   7.75   Tc(MIN.) = 174.17
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) = 174.17
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.531
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        2.20      0.40       1.00    40
  AGRICULTURAL POOR COVER
  "FALLOW"                   A        5.20      0.40       1.00    77
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A        0.20      0.40       0.50    32
  NATURAL FAIR COVER
  "GRASS"                    A        6.20      0.40       1.00    50
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 A       15.80      0.40       1.00    44
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        3.10      0.40       1.00    46
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   32.70
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.31;30M= 0.62;1H= 0.85;3H= 1.56;6H= 2.29;24H= 3.99
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.90; LAG(HR) = 2.32; Fm(INCH/HR) = 0.23; Ybar = 0.54
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  66643.88
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0336; Lca/L=0.4,n=.0301; Lca/L=0.5,n=.0277;Lca/L=0.6,n=.0258
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9630.60
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9524.48
  TOTAL AREA(ACRES) =  66643.88       PEAK FLOW RATE(CFS) =    9655.80
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 174.17
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 A        4.90      0.40      0.10    32
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A       31.60      0.40      1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A       21.00      0.40      1.00    36
  AGRICULTURAL POOR COVER
  "FALLOW"                   B       22.40      0.30      1.00    86
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B       19.00      0.30      0.50    56
  NATURAL POOR COVER
  "BARREN"                   B        2.00      0.30      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.36
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.86
  SUBAREA AREA(ACRES) =  100.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.62;1H= 0.85;3H= 1.56;6H= 2.29;24H= 3.99
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 22.0%
           MOUNTAIN= 61.9%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.90; LAG(HR) = 2.32; Fm(INCH/HR) = 0.23; Ybar = 0.54
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  66744.78
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0336; Lca/L=0.4,n=.0301; Lca/L=0.5,n=.0277;Lca/L=0.6,n=.0258
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9633.17
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9526.19
  TOTAL AREA(ACRES) =  66744.78       PEAK FLOW RATE(CFS) =    9655.80
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
```

```
============================================================================
  MAINLINE Tc(MIN) = 174.17
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B       20.90      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 B       30.90      0.30      1.00    65
  URBAN FAIR COVER
  "TURF"                     B        0.70      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.10      0.30      1.00    66
  COMMERCIAL                 B        8.00      0.30      0.10    56
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B       65.80      0.30      1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.94
  SUBAREA AREA(ACRES) =  127.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.62;1H= 0.85;3H= 1.56;6H= 2.29;24H= 3.99
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 22.1%
           MOUNTAIN= 61.8%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.90; LAG(HR) = 2.32; Fm(INCH/HR) = 0.23; Ybar = 0.54
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  66872.18
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0336; Lca/L=0.4,n=.0301; Lca/L=0.5,n=.0277;Lca/L=0.6,n=.0258
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9636.68
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9528.81
  TOTAL AREA(ACRES) =  66872.18       PEAK FLOW RATE(CFS) =    9655.80
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 174.17
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  PUBLIC PARK                B        0.40      0.30      0.85    56
  NATURAL FAIR COVER
  "WOODLAND"                 B       11.80      0.30      1.00    60
  NATURAL FAIR COVER
  "GRASS"                    C      222.20      0.25      1.00    79
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 C        5.10      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       71.50      0.25      1.00    77
  COMMERCIAL                 C        2.90      0.25      0.10    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  313.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.62;1H= 0.85;3H= 1.56;6H= 2.28;24H= 3.98
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 22.3%
```

```
          MOUNTAIN= 61.6%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.90; LAG(HR) = 2.32; Fm(INCH/HR) = 0.23; Ybar = 0.54
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  67186.08
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0336; Lca/L=0.4,n=.0301; Lca/L=0.5,n=.0277;Lca/L=0.6,n=.0258
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9658.41
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9547.42
  TOTAL AREA(ACRES) =  67186.08       PEAK FLOW RATE(CFS) =    9655.80
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 174.17
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  PUBLIC PARK                C        0.70      0.25       0.85    69
  NATURAL FAIR COVER
  "WOODLAND"                 C       22.40      0.25       1.00    73
  AGRICULTURAL POOR COVER
  "FALLOW"                   D      104.40      0.20       1.00    94
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D      142.90      0.20       0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        0.60      0.20       1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      421.50      0.20       1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.90
  SUBAREA AREA(ACRES) =  692.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.62;1H= 0.85;3H= 1.56;6H= 2.28;24H= 3.97
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 22.7%
           MOUNTAIN= 61.2%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.90; LAG(HR) = 2.32; Fm(INCH/HR) = 0.23; Ybar = 0.54
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.39;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  67878.58
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0336; Lca/L=0.4,n=.0301; Lca/L=0.5,n=.0277;Lca/L=0.6,n=.0258
  TIME OF PEAK FLOW(HR) = 18.33  RUNOFF VOLUME(AF) =    9742.64
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9624.52
  TOTAL AREA(ACRES) =  67878.58       PEAK FLOW RATE(CFS) =    9655.80
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 174.17
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 D       18.30      0.20       1.00    82
  URBAN FAIR COVER
  "TURF"                     D        6.30      0.20       1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      188.90      0.20       1.00    83
  COMMERCIAL                 D       37.80      0.20       0.10    75
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D        9.80      0.20       1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                 D       65.50      0.20       1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.90
  SUBAREA AREA(ACRES) =  326.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.62;1H= 0.85;3H= 1.55;6H= 2.28;24H= 3.97
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 22.9%
           MOUNTAIN= 61.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.90; LAG(HR) = 2.32; Fm(INCH/HR) = 0.23; Ybar = 0.54
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.39;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  68205.18
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0336; Lca/L=0.4,n=.0301; Lca/L=0.5,n=.0277;Lca/L=0.6,n=.0258
  TIME OF PEAK FLOW(HR) = 18.33  RUNOFF VOLUME(AF) =    9777.41
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9657.28
  TOTAL AREA(ACRES) =  68205.18       PEAK FLOW RATE(CFS) =    9657.28

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  68205.18  TC(MIN.) =    174.17
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.54
  PEAK FLOW RATE(CFS)   =   9657.28
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

TECHNICAL APPENDIX I-B
HYDROLOGIC ANALYSIS
EXISTING CONDITION
100-YEAR EXPECTED VALUE

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
        (c) Copyright 1983-2003 Advanced Engineering Software (aes)
            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LE63100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.150
        FOOTHILL                           0.150
        MOUNTAIN                           0.640
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1062.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU62100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    17976.47    Tc(MIN.) = 115.61
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.38
  TOTAL AREA(ACRES) =   46437.31
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1062.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    17976.47    Tc(MIN.) = 115.61
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.38
  TOTAL AREA(ACRES) =   46437.31
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1062.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    345.00  DOWNSTREAM(FEET) =    319.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2852.00   CHANNEL SLOPE =  0.0091
  CHANNEL BASE(FEET) =   60.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.025   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  17976.47
  FLOW VELOCITY(FEET/SEC.) =  22.15   FLOW DEPTH(FEET) =  10.11
  TRAVEL TIME(MIN.) =   2.15   Tc(MIN.) = 117.76
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) = 117.76
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.012
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       79.80      0.40       1.00    40
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A        4.40      0.40       0.50    32
  NATURAL FAIR COVER
  "GRASS"                    A        8.00      0.40       1.00    50
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 A        6.40      0.40       1.00    44
  NATURAL FAIR COVER
  "OPEN BRUSH"               A      110.10      0.40       1.00    46
  COMMERCIAL                 A        1.70      0.40       0.10    32
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  210.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.52;30M= 0.96;1H= 1.33;3H= 2.51;6H= 3.77;24H= 6.64
```

```
  S-GRAPH: VALLEY(DEV.)=  1.1%;VALLEY(UNDEV.)/DESERT= 19.8%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.96; LAG(HR) = 1.57; Fm(INCH/HR) = 0.23; Ybar = 0.39
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.36; 30M = 0.40; 1HR = 0.44;
  3HR = 0.79; 6HR = 0.91; 24HR= 0.95
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  46647.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0288; Lca/L=0.4,n=.0258; Lca/L=0.5,n=.0237;Lca/L=0.6,n=.0222
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   15433.06
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  17952.51
  TOTAL AREA(ACRES) =  46647.70       PEAK FLOW RATE(CFS) =   17976.47
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.43; 30M = 0.89; 1HR = 1.20; 3HR = 2.09; 6HR = 2.98; 24HR = 5.03

****************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 117.76
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.212
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 A       56.90      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        7.50      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                    B        5.60      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 B        6.10      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       16.30      0.30      1.00    66
  COMMERCIAL                 B        1.90      0.30      0.10    56
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.36
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =   94.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.52;30M= 0.96;1H= 1.33;3H= 2.51;6H= 3.77;24H= 6.63
  S-GRAPH: VALLEY(DEV.)=  1.1%;VALLEY(UNDEV.)/DESERT= 19.8%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.96; LAG(HR) = 1.57; Fm(INCH/HR) = 0.23; Ybar = 0.39
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.36; 30M = 0.40; 1HR = 0.44;
  3HR = 0.79; 6HR = 0.91; 24HR= 0.95
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  46742.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0288; Lca/L=0.4,n=.0258; Lca/L=0.5,n=.0237;Lca/L=0.6,n=.0222
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   15434.53
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  17957.19
  TOTAL AREA(ACRES) =  46742.00       PEAK FLOW RATE(CFS) =   17976.47
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.43; 30M = 0.89; 1HR = 1.20; 3HR = 2.09; 6HR = 2.98; 24HR = 5.03

****************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 117.76
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.212
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 B       23.70      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      679.90      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        1.80      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C      161.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C     1099.40      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       58.20      0.25      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 2024.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.51;30M= 0.95;1H= 1.33;3H= 2.49;6H= 3.73;24H= 6.57
  S-GRAPH: VALLEY(DEV.)=  1.7%;VALLEY(UNDEV.)/DESERT= 19.2%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.96; LAG(HR) = 1.57; Fm(INCH/HR) = 0.23; Ybar = 0.39
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.35; 30M = 0.40; 1HR = 0.44;
  3HR = 0.79; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  48766.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0288; Lca/L=0.4,n=.0258; Lca/L=0.5,n=.0237;Lca/L=0.6,n=.0222
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   15798.28
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18329.91
  TOTAL AREA(ACRES) =  48766.40       PEAK FLOW RATE(CFS) =   18329.91

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.43; 30M = 0.89; 1HR = 1.20; 3HR = 2.09; 6HR = 2.98; 24HR = 5.03

****************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 117.76
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.212
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C      196.50      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      421.30      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.60      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        0.10      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D       55.70      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      270.30      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  944.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.51;30M= 0.95;1H= 1.32;3H= 2.49;6H= 3.72;24H= 6.54
  S-GRAPH: VALLEY(DEV.)=  1.9%;VALLEY(UNDEV.)/DESERT= 18.9%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.96; LAG(HR) = 1.57; Fm(INCH/HR) = 0.23; Ybar = 0.39
```

```
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  49710.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0288; Lca/L=0.4,n=.0258; Lca/L=0.5,n=.0237;Lca/L=0.6,n=.0222
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   15993.51
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18529.48
  TOTAL AREA(ACRES) =  49710.90       PEAK FLOW RATE(CFS) =   18529.48

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.43; 30M = 0.89; 1HR = 1.20; 3HR = 2.09; 6HR = 2.98; 24HR = 5.03

****************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 117.76
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.212
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D      140.70      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       40.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  181.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.51;30M= 0.95;1H= 1.32;3H= 2.49;6H= 3.72;24H= 6.53
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 18.9%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.96; LAG(HR) = 1.57; Fm(INCH/HR) = 0.23; Ybar = 0.39
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  49892.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0288; Lca/L=0.4,n=.0258; Lca/L=0.5,n=.0237;Lca/L=0.6,n=.0222
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16036.41
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18571.53
  TOTAL AREA(ACRES) =  49892.00       PEAK FLOW RATE(CFS) =   18571.53

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.43; 30M = 0.89; 1HR = 1.20; 3HR = 2.09; 6HR = 2.98; 24HR = 5.03
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  49892.00  TC(MIN.) =    117.76
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.39
  PEAK FLOW RATE(CFS)   =  18571.53
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
        (c) Copyright 1983-2003 Advanced Engineering Software (aes)
            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: LE64100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.020
        FOOTHILL                           0.150
        MOUNTAIN                           0.260
        VALLEY(UNDEVELOPED)/DESERT         0.570
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1063.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LE63100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    18571.53    Tc(MIN.) = 117.76
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.39
  TOTAL AREA(ACRES) =   49892.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1063.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    18571.53    Tc(MIN.) = 117.76
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.39
  TOTAL AREA(ACRES) =   49892.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1063.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    319.00  DOWNSTREAM(FEET) =    275.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  5418.00   CHANNEL SLOPE =  0.0081
  CHANNEL BASE(FEET) =   60.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.025   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  18571.53
  FLOW VELOCITY(FEET/SEC.) =  21.49   FLOW DEPTH(FEET) =  10.63
  TRAVEL TIME(MIN.) =   4.20   Tc(MIN.) = 121.96
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) = 121.96
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  0.992
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        0.60      0.40       1.00    40
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A        1.70      0.40       0.50    32
  NATURAL FAIR COVER
  "GRASS"                    A        1.30      0.40       1.00    50
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 A        0.90      0.40       1.00    44
  URBAN FAIR COVER
  "TURF"                     A       18.90      0.40       1.00    44
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        0.50      0.40       1.00    46
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.96
  SUBAREA AREA(ACRES) =   23.90
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.51;30M= 0.95;1H= 1.32;3H= 2.48;6H= 3.72;24H= 6.53
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 18.9%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.03; LAG(HR) = 1.63; Fm(INCH/HR) = 0.23; Ybar = 0.39
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  49915.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0285; Lca/L=0.4,n=.0255; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0219
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16035.24
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18463.30
  TOTAL AREA(ACRES) =  49915.90       PEAK FLOW RATE(CFS) =   18571.53
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

 ****************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) = 121.96
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 A        1.30      0.40      0.10    32
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A       15.30      0.40      1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A        8.20      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       22.20      0.30      1.00    63
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B        0.50      0.30      0.50    56
  NATURAL FAIR COVER
  "GRASS"                    B       65.20      0.30      1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.32
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  112.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.51;30M= 0.95;1H= 1.32;3H= 2.48;6H= 3.71;24H= 6.53
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 19.0%
           MOUNTAIN= 63.9%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.03; LAG(HR) = 1.63; Fm(INCH/HR) = 0.23; Ybar = 0.39
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  50028.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0285; Lca/L=0.4,n=.0255; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0219
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16040.85
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18471.54
  TOTAL AREA(ACRES) =  50028.60       PEAK FLOW RATE(CFS) =   18571.53
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

 ****************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) = 121.96
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 B        2.30      0.30      1.00    65
  URBAN FAIR COVER
  "TURF"                     B       18.50      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       30.20      0.30      1.00    66
  COMMERCIAL                 B        5.60      0.30      0.10    56
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B       19.10      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B       13.40      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.94
  SUBAREA AREA(ACRES) =   89.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.51;30M= 0.95;1H= 1.32;3H= 2.48;6H= 3.71;24H= 6.52
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 19.1%
           MOUNTAIN= 63.9%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.03; LAG(HR) = 1.63; Fm(INCH/HR) = 0.23; Ybar = 0.39
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  50117.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0285; Lca/L=0.4,n=.0255; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0219
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16047.77
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18480.56
  TOTAL AREA(ACRES) =  50117.70       PEAK FLOW RATE(CFS) =   18571.53
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

 ****************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) = 121.96
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      236.40      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        0.40      0.25      0.50    69
  NATURAL FAIR COVER
  "GRASS"                    C       74.30      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      195.50      0.25      1.00    77
  COMMERCIAL                 C        0.40      0.25      0.10    69
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        8.60      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  515.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.51;30M= 0.95;1H= 1.32;3H= 2.48;6H= 3.70;24H= 6.50
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  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 19.5%
           MOUNTAIN= 63.5%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.03; LAG(HR) = 1.63; Fm(INCH/HR) = 0.23; Ybar = 0.39
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  50633.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0285; Lca/L=0.4,n=.0255; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0219
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16118.74
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18557.12
  TOTAL AREA(ACRES) =  50633.30       PEAK FLOW RATE(CFS) =   18571.53
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 121.96
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        4.00      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C       61.90      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      139.90      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        5.20      0.20      0.50    75
  NATURAL FAIR COVER
  "GRASS"                    D       97.60      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                     D        5.60      0.20      1.00    82
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  314.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.51;30M= 0.95;1H= 1.32;3H= 2.47;6H= 3.70;24H= 6.49
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 19.7%
           MOUNTAIN= 63.2%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.03; LAG(HR) = 1.63; Fm(INCH/HR) = 0.23; Ybar = 0.40
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  50947.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0285; Lca/L=0.4,n=.0255; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0219
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16172.39
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18614.00
  TOTAL AREA(ACRES) =  50947.50       PEAK FLOW RATE(CFS) =   18614.00

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) = 121.96
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      191.80      0.20      1.00    83
  COMMERCIAL                 D        4.40      0.20      0.10    75
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D       17.10      0.20      1.00    84
  PUBLIC PARK                D        7.90      0.20      0.85    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        1.50      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       56.50      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  279.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.51;30M= 0.95;1H= 1.32;3H= 2.47;6H= 3.69;24H= 6.48
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 19.9%
           MOUNTAIN= 63.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.03; LAG(HR) = 1.63; Fm(INCH/HR) = 0.23; Ybar = 0.40
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  51226.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0285; Lca/L=0.4,n=.0255; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0219
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16223.98
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18667.86
  TOTAL AREA(ACRES) =  51226.70       PEAK FLOW RATE(CFS) =   18667.86

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  51226.70  TC(MIN.) =    121.96
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.40
  PEAK FLOW RATE(CFS)   =  18667.86
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
        (c) Copyright 1983-2003 Advanced Engineering Software (aes)
            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: LE65100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.020
        FOOTHILL                           0.150
        MOUNTAIN                           0.070
        VALLEY(UNDEVELOPED)/DESERT         0.760
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1064.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LE64100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    18667.86    Tc(MIN.) = 121.96
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.40
  TOTAL AREA(ACRES) =   51226.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1064.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    18667.86    Tc(MIN.) = 121.96
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.40
  TOTAL AREA(ACRES) =   51226.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1064.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    275.00  DOWNSTREAM(FEET) =    240.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  5738.00   CHANNEL SLOPE =  0.0061
  CHANNEL BASE(FEET) =   60.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.025   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  18667.86
  FLOW VELOCITY(FEET/SEC.) =  19.47   FLOW DEPTH(FEET) =  11.54
  TRAVEL TIME(MIN.) =   4.91   Tc(MIN.) = 126.87
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) = 126.87
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  0.970
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        3.80      0.40       1.00    40
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A       20.30      0.40       0.50    32
  NATURAL POOR COVER
  "BARREN"                   A        0.90      0.40       1.00    78
  NATURAL FAIR COVER
  "GRASS"                    A       29.30      0.40       1.00    50
  URBAN FAIR COVER
  "TURF"                     A        0.80      0.40       1.00    44
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        3.30      0.40       1.00    46
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.83
  SUBAREA AREA(ACRES) =   58.40
  UNIT-HYDROGRAPH DATA:
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  RAINFALL(INCH): 5M= 0.51;30M= 0.95;1H= 1.32;3H= 2.47;6H= 3.69;24H= 6.48
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 20.0%
           MOUNTAIN= 63.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.11; LAG(HR) = 1.69; Fm(INCH/HR) = 0.23; Ybar = 0.40
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  51285.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0282; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0232;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16224.84
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18450.98
  TOTAL AREA(ACRES) =  51285.10       PEAK FLOW RATE(CFS) =   18667.86
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

 ****************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) = 126.87
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 A        0.90      0.40      0.10    32
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A       47.10      0.40      1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A        9.80      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        8.90      0.30      1.00    63
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B       15.00      0.30      0.50    56
  NATURAL POOR COVER
  "BARREN"                   B        9.70      0.30      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.37
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.91
  SUBAREA AREA(ACRES) =   91.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.51;30M= 0.95;1H= 1.32;3H= 2.47;6H= 3.69;24H= 6.47
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 20.1%
           MOUNTAIN= 62.9%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.11; LAG(HR) = 1.69; Fm(INCH/HR) = 0.23; Ybar = 0.40
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  51376.49
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0282; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0232;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16227.16
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18455.88
  TOTAL AREA(ACRES) =  51376.49       PEAK FLOW RATE(CFS) =   18667.86
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

 ****************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) = 126.87
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B       61.80      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 B       30.20      0.30      1.00    65
  URBAN FAIR COVER
  "TURF"                     B        0.70      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       56.20      0.30      1.00    66
  COMMERCIAL                 B        3.90      0.30      0.10    56
  PUBLIC PARK                B       10.90      0.30      0.85    56
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =  163.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.51;30M= 0.95;1H= 1.32;3H= 2.47;6H= 3.68;24H= 6.47
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 20.2%
           MOUNTAIN= 62.7%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.11; LAG(HR) = 1.69; Fm(INCH/HR) = 0.23; Ybar = 0.40
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  51540.19
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0282; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0232;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16239.60
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18472.03
  TOTAL AREA(ACRES) =  51540.19       PEAK FLOW RATE(CFS) =   18667.86
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

 ****************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) = 126.87
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B        0.70      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B       65.20      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      210.40      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        9.60      0.25      0.50    69
  NATURAL POOR COVER
  "BARREN"                   C       14.70      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C      145.30      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  445.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.51;30M= 0.95;1H= 1.32;3H= 2.46;6H= 3.68;24H= 6.45
```

```
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 20.7%
           MOUNTAIN= 62.2%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.11; LAG(HR) = 1.69; Fm(INCH/HR) = 0.23; Ybar = 0.40
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  51986.09
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0282; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0232;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16296.38
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18535.01
  TOTAL AREA(ACRES) =  51986.09       PEAK FLOW RATE(CFS) =   18667.86
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 126.87
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                C        6.50      0.25      1.00    77
  URBAN FAIR COVER
  "TURF"                    C        0.70      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"              C      350.80      0.25      1.00    77
  COMMERCIAL                C        4.00      0.25      0.10    69
  PUBLIC PARK               C       47.00      0.25      0.85    69
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"    C       60.40      0.25      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  469.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.51;30M= 0.95;1H= 1.31;3H= 2.46;6H= 3.67;24H= 6.43
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.2%
           MOUNTAIN= 61.7%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.11; LAG(HR) = 1.69; Fm(INCH/HR) = 0.23; Ybar = 0.40
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  52455.49
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0282; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0232;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16363.74
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18607.00
  TOTAL AREA(ACRES) =  52455.49       PEAK FLOW RATE(CFS) =   18667.86
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 126.87
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"         C        0.40      0.25      1.00    79
  NATURAL FAIR COVER
  "WOODLAND"                C      210.20      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"     D       22.00      0.20      1.00    81
  PUBLIC PARK               D        4.50      0.20      0.85    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"      D       12.60      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                  D       21.40      0.20      1.00    93
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =  271.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.50;30M= 0.95;1H= 1.31;3H= 2.46;6H= 3.66;24H= 6.42
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.5%
           MOUNTAIN= 61.4%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.11; LAG(HR) = 1.69; Fm(INCH/HR) = 0.23; Ybar = 0.40
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  52726.59
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0282; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0232;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16400.94
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18648.07
  TOTAL AREA(ACRES) =  52726.59       PEAK FLOW RATE(CFS) =   18667.86
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 126.87
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                   D      136.70      0.20      1.00    84
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                D       10.20      0.20      1.00    82
  URBAN FAIR COVER
  "TURF"                    D        3.30      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"              D       93.70      0.20      1.00    83
  COMMERCIAL                D        0.40      0.20      0.10    75
  NATURAL GOOD COVER
  "MEADOWS"                 D       10.00      0.20      1.00    78
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  254.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.50;30M= 0.95;1H= 1.31;3H= 2.45;6H= 3.66;24H= 6.41
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.7%
           MOUNTAIN= 61.2%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
```

```
  Tc(HR) = 2.11; LAG(HR) = 1.69; Fm(INCH/HR) = 0.23; Ybar = 0.40
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  52980.89
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0282; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0232;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16449.93
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18699.89
  TOTAL AREA(ACRES) =  52980.89       PEAK FLOW RATE(CFS) =   18699.89

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 126.87
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       70.40      0.20      1.00    86
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D        3.80      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                 D       68.20      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  142.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.50;30M= 0.95;1H= 1.31;3H= 2.45;6H= 3.66;24H= 6.41
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 61.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.11; LAG(HR) = 1.69; Fm(INCH/HR) = 0.23; Ybar = 0.40
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  53123.29
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0282; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0232;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16476.89
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18728.97
  TOTAL AREA(ACRES) =  53123.29       PEAK FLOW RATE(CFS) =   18728.97

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  53123.29  TC(MIN.) =    126.87
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.40
  PEAK FLOW RATE(CFS)   =  18728.97
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: LE66100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.020
        FOOTHILL                           0.080
        MOUNTAIN                           0.680
        VALLEY(UNDEVELOPED)/DESERT         0.220
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1065.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LE65100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    18728.97    Tc(MIN.) = 126.87
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.40
  TOTAL AREA(ACRES) =   53123.29
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1065.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    18728.97    Tc(MIN.) = 126.87
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.40
  TOTAL AREA(ACRES) =   53123.29
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1065.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    240.00  DOWNSTREAM(FEET) =    213.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  6295.00   CHANNEL SLOPE =  0.0043
  CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  18728.97
  FLOW VELOCITY(FEET/SEC.) =  14.43   FLOW DEPTH(FEET) =  11.92
  TRAVEL TIME(MIN.) =   7.27   Tc(MIN.) = 134.14
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) = 134.14
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  0.940
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  PUBLIC PARK                A       19.80      0.40       0.85    32
  AGRICULTURAL POOR COVER
  "FALLOW"                   A        2.20      0.40       1.00    77
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A       17.60      0.40       0.50    32
  NATURAL POOR COVER
  "BARREN"                   A       67.40      0.40       1.00    78
  NATURAL FAIR COVER
  "GRASS"                    A       59.40      0.40       1.00    50
  URBAN FAIR COVER
  "TURF"                     A       39.00      0.40       1.00    44
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.94
  SUBAREA AREA(ACRES) =  205.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.50;30M= 0.95;1H= 1.31;3H= 2.45;6H= 3.65;24H= 6.40
```

```
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 61.1%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.24; LAG(HR) = 1.79; Fm(INCH/HR) = 0.23; Ybar = 0.40
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  53328.69
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0284; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16483.12
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18371.73
  TOTAL AREA(ACRES) =  53328.69       PEAK FLOW RATE(CFS) =   18728.97
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 134.14
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        9.30      0.40      1.00    46
  COMMERCIAL                 A       17.30      0.40      0.10    32
  NATURAL GOOD COVER
  "MEADOWS"                  A        0.40      0.40      1.00    30
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A       69.80      0.40      1.00    49
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        3.60      0.40      1.00    40
  NATURAL FAIR COVER
  "WOODLAND"                 A      108.30      0.40      1.00    36
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
  SUBAREA AREA(ACRES) =  208.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.50;30M= 0.95;1H= 1.31;3H= 2.45;6H= 3.65;24H= 6.39
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 61.1%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.24; LAG(HR) = 1.79; Fm(INCH/HR) = 0.23; Ybar = 0.40
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  53537.39
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0284; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16475.89
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18369.11
  TOTAL AREA(ACRES) =  53537.39       PEAK FLOW RATE(CFS) =   18728.97
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 134.14
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B      104.10      0.30      1.00    63
  NATURAL GOOD COVER
  "MEADOWS"                  B       28.00      0.30      1.00    58
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B      179.50      0.30      0.50    56
  NATURAL POOR COVER
  "BARREN"                   B      235.20      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B      338.30      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 B       37.70      0.30      1.00    65
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.90
  SUBAREA AREA(ACRES) =  922.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.50;30M= 0.94;1H= 1.31;3H= 2.44;6H= 3.63;24H= 6.36
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 61.2%;FOOTHILL= 14.9%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.24; LAG(HR) = 1.79; Fm(INCH/HR) = 0.23; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  54460.19
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0284; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16591.00
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18477.81
  TOTAL AREA(ACRES) =  54460.19       PEAK FLOW RATE(CFS) =   18728.97
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 134.14
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  URBAN FAIR COVER
  "TURF"                     B      139.20      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B      151.00      0.30      1.00    66
  COMMERCIAL                 B      352.90      0.30      0.10    56
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B      215.10      0.30      1.00    69
  PUBLIC PARK                B       22.20      0.30      0.85    56
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        2.40      0.30      1.00    72
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.64
  SUBAREA AREA(ACRES) =  882.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.50;30M= 0.94;1H= 1.31;3H= 2.43;6H= 3.62;24H= 6.33
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
```

```
          MOUNTAIN= 61.3%;FOOTHILL= 14.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.24; LAG(HR) = 1.79; Fm(INCH/HR) = 0.23; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  55342.99
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0284; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16736.24
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18622.94
  TOTAL AREA(ACRES) =  55342.99       PEAK FLOW RATE(CFS) =   18728.97
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 134.14
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 B      259.40      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      277.70      0.25      1.00    75
  AGRICULTURAL POOR COVER
  "FALLOW"                   C       90.50      0.25      1.00    91
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C      233.10      0.25      0.50    69
  NATURAL POOR COVER
  "BARREN"                   C      196.30      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C      706.70      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
  SUBAREA AREA(ACRES) = 1763.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.50;30M= 0.94;1H= 1.30;3H= 2.42;6H= 3.59;24H= 6.27
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 61.5%;FOOTHILL= 14.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.24; LAG(HR) = 1.79; Fm(INCH/HR) = 0.23; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.32; 30M = 0.37; 1HR = 0.42;
  3HR = 0.76; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  57106.69
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0284; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   17009.26
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18873.00
  TOTAL AREA(ACRES) =  57106.69       PEAK FLOW RATE(CFS) =   18873.00

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 134.14
```

```
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 C       12.40      0.25      1.00    77
  URBAN FAIR COVER
  "TURF"                     C       53.80      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"               C     1739.10      0.25      1.00    77
  COMMERCIAL                 C      417.20      0.25      0.10    69
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C      258.40      0.25      1.00    79
  PUBLIC PARK                C        1.50      0.25      0.85    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.85
  SUBAREA AREA(ACRES) = 2482.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.49;30M= 0.94;1H= 1.30;3H= 2.40;6H= 3.55;24H= 6.20
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 61.8%;FOOTHILL= 14.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.24; LAG(HR) = 1.79; Fm(INCH/HR) = 0.23; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.37; 1HR = 0.41;
  3HR = 0.76; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  59589.09
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0284; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   17443.23
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  19282.80
  TOTAL AREA(ACRES) =  59589.09       PEAK FLOW RATE(CFS) =   19282.80

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 134.14
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL GOOD COVER
  "MEADOWS"                  C        4.00      0.25      1.00    71
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       29.00      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C      359.50      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      154.40      0.20      1.00    81
  PUBLIC PARK                D       46.70      0.20      0.85    75
  AGRICULTURAL POOR COVER
  "FALLOW"                   D       38.90      0.20      1.00    94
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  632.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.49;30M= 0.94;1H= 1.29;3H= 2.39;6H= 3.54;24H= 6.18
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 61.9%;FOOTHILL= 14.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.24; LAG(HR) = 1.79; Fm(INCH/HR) = 0.23; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
```

```
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.37; 1HR = 0.41;
  3HR = 0.76; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  60221.59
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0284; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   17538.86
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  19373.94
  TOTAL AREA(ACRES) =  60221.59       PEAK FLOW RATE(CFS) =   19373.94

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 134.14
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D       13.30      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D       33.60      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      223.80      0.20      1.00    84
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 D       87.20      0.20      1.00    82
  URBAN FAIR COVER
  "TURF"                     D        6.00      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      420.00      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  783.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.49;30M= 0.94;1H= 1.29;3H= 2.39;6H= 3.53;24H= 6.16
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 61.9%;FOOTHILL= 14.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.24; LAG(HR) = 1.79; Fm(INCH/HR) = 0.23; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.36; 1HR = 0.41;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  61005.48
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0284; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   17693.77
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  19516.37
  TOTAL AREA(ACRES) =  61005.48       PEAK FLOW RATE(CFS) =   19516.37

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 134.14
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 D       35.20      0.20      0.10    75
  NATURAL GOOD COVER
  "MEADOWS"                  D        1.60      0.20      1.00    78
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       20.20      0.20      1.00    86
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D      281.40      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                 D       83.00      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.92
  SUBAREA AREA(ACRES) =  421.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.49;30M= 0.94;1H= 1.29;3H= 2.38;6H= 3.53;24H= 6.15
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.24; LAG(HR) = 1.79; Fm(INCH/HR) = 0.23; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.36; 1HR = 0.41;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  61426.88
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0284; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   17779.16
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  19595.49
  TOTAL AREA(ACRES) =  61426.88       PEAK FLOW RATE(CFS) =   19595.49

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  61426.88  TC(MIN.) =    134.14
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.41
  PEAK FLOW RATE(CFS)   =  19595.49
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LE67100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.020
        FOOTHILL                           0.140
        MOUNTAIN                           0.620
        VALLEY(UNDEVELOPED)/DESERT         0.220
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1066.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LE66100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    19595.49    Tc(MIN.) = 134.14
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.41
  TOTAL AREA(ACRES) =   61426.88
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1066.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    19595.49    Tc(MIN.) = 134.14
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.41
  TOTAL AREA(ACRES) =   61426.88
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1066.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    213.00  DOWNSTREAM(FEET) =    176.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  6201.00   CHANNEL SLOPE =  0.0060
  CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  19595.49
  FLOW VELOCITY(FEET/SEC.) =  16.39   FLOW DEPTH(FEET) =  11.14
  TRAVEL TIME(MIN.) =   6.30   Tc(MIN.) = 140.44
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) = 140.44
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  0.915
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   A        0.20      0.40       1.00    77
  NATURAL FAIR COVER
  "GRASS"                    A        0.90      0.40       1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        8.90      0.40       1.00    46
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A        5.50      0.40       1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A       17.90      0.40       1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       11.60      0.30       1.00    63
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.37
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   45.00
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.49;30M= 0.94;1H= 1.29;3H= 2.38;6H= 3.53;24H= 6.15
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.34; LAG(HR) = 1.87; Fm(INCH/HR) = 0.23; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.36; 1HR = 0.41;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  61471.88
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =   17778.02
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  19434.76
  TOTAL AREA(ACRES) =  61471.88       PEAK FLOW RATE(CFS) =   19595.49
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

********************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) = 140.44
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   B      450.40      0.30      1.00    86
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B       77.20      0.30      0.50    56
  NATURAL FAIR COVER
  "GRASS"                    B       47.20      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 B       22.50      0.30      1.00    65
  URBAN FAIR COVER
  "TURF"                     B        5.30      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B      156.70      0.30      1.00    66
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.95
  SUBAREA AREA(ACRES) =  759.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.49;30M= 0.94;1H= 1.29;3H= 2.38;6H= 3.52;24H= 6.13
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.34; LAG(HR) = 1.87; Fm(INCH/HR) = 0.23; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.30; 30M = 0.36; 1HR = 0.41;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  62231.18
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =   17897.19
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  19537.22
  TOTAL AREA(ACRES) =  62231.18       PEAK FLOW RATE(CFS) =   19595.49
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

********************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
--------------------------------------------------------------------------------
```

```
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) = 140.44
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 B        6.20      0.30      0.10    56
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B      529.80      0.30      1.00    69
  PUBLIC PARK                B        0.20      0.30      0.85    56
  NATURAL GOOD COVER
  "MEADOWS"                  B        1.80      0.30      1.00    58
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        1.60      0.30      1.00    72
  NATURAL FAIR COVER
  "WOODLAND"                 B       71.30      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  610.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.49;30M= 0.93;1H= 1.29;3H= 2.37;6H= 3.51;24H= 6.11
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.34; LAG(HR) = 1.87; Fm(INCH/HR) = 0.23; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.30; 30M = 0.36; 1HR = 0.40;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  62842.08
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =   17949.69
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  19588.50
  TOTAL AREA(ACRES) =  62842.08       PEAK FLOW RATE(CFS) =   19595.49
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

********************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) = 140.44
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      132.80      0.25      1.00    75
  AGRICULTURAL POOR COVER
  "FALLOW"                   C      226.40      0.25      1.00    91
  NATURAL POOR COVER
  "BARREN"                   C        8.70      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C      379.30      0.25      1.00    79
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 C        0.70      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"               C     1062.60      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1810.50
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.49;30M= 0.93;1H= 1.28;3H= 2.36;6H= 3.49;24H= 6.07
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.34; LAG(HR) = 1.87; Fm(INCH/HR) = 0.23; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.30; 30M = 0.35; 1HR = 0.40;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  64652.58
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =   18233.79
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  19846.29
  TOTAL AREA(ACRES) =  64652.58       PEAK FLOW RATE(CFS) =   19846.29

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 140.44
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 C       10.80      0.25      0.10    69
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C      206.00      0.25      1.00    79
  NATURAL GOOD COVER
  "MEADOWS"                  C        0.20      0.25      1.00    71
  NATURAL FAIR COVER
  "WOODLAND"                 C      116.80      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       30.80      0.20      1.00    81
  AGRICULTURAL POOR COVER
  "FALLOW"                   D      158.40      0.20      1.00    94
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  523.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.48;30M= 0.93;1H= 1.28;3H= 2.36;6H= 3.48;24H= 6.05
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.34; LAG(HR) = 1.87; Fm(INCH/HR) = 0.23; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.30; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  65175.58
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =   18328.79
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  19932.34
  TOTAL AREA(ACRES) =  65175.58       PEAK FLOW RATE(CFS) =   19932.34

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 140.44
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D       59.00      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        0.60      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      444.70      0.20      1.00    84
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 D        5.30      0.20      1.00    82
  URBAN FAIR COVER
  "TURF"                     D        4.00      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      461.60      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =  975.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.48;30M= 0.93;1H= 1.28;3H= 2.35;6H= 3.47;24H= 6.03
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.34; LAG(HR) = 1.87; Fm(INCH/HR) = 0.23; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  66150.78
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =   18515.30
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  20106.75
  TOTAL AREA(ACRES) =  66150.78       PEAK FLOW RATE(CFS) =   20106.75

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 140.44
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 D        2.70      0.20      0.10    75
  PUBLIC PARK                D        0.10      0.20      0.85    75
  NATURAL GOOD COVER
  "MEADOWS"                  D        0.60      0.20      1.00    78
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        9.10      0.20      1.00    86
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D      368.40      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                 D       79.50      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  460.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.48;30M= 0.93;1H= 1.28;3H= 2.35;6H= 3.46;24H= 6.02
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.34; LAG(HR) = 1.87; Fm(INCH/HR) = 0.23; Ybar = 0.42
```

```
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  66611.18
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =   18601.38
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  20186.73
  TOTAL AREA(ACRES) =  66611.18       PEAK FLOW RATE(CFS) =   20186.73

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  66611.18  TC(MIN.) =    140.44
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.42
  PEAK FLOW RATE(CFS)   =  20186.73
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LE68100E.DAT
  TIME/DATE OF STUDY: 09:31 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.020
        FOOTHILL                           0.140
        MOUNTAIN                           0.190
        VALLEY(UNDEVELOPED)/DESERT         0.650
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1067.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LE67100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    20186.73    Tc(MIN.) = 140.44
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.42
  TOTAL AREA(ACRES) =   66611.18
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1067.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    20186.73    Tc(MIN.) = 140.44
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.42
  TOTAL AREA(ACRES) =   66611.18
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1067.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    176.00  DOWNSTREAM(FEET) =    133.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  6324.00   CHANNEL SLOPE =  0.0068
  CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  20186.73
  FLOW VELOCITY(FEET/SEC.) =  17.30   FLOW DEPTH(FEET) =  10.92
  TRAVEL TIME(MIN.) =   6.09   Tc(MIN.) = 146.53
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) = 146.53
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  0.893
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        2.20      0.40       1.00    40
  AGRICULTURAL POOR COVER
  "FALLOW"                   A        5.20      0.40       1.00    77
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A        0.20      0.40       0.50    32
  NATURAL FAIR COVER
  "GRASS"                    A        6.20      0.40       1.00    50
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 A       15.80      0.40       1.00    44
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        3.10      0.40       1.00    46
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   32.70
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.48;30M= 0.93;1H= 1.28;3H= 2.35;6H= 3.46;24H= 6.02
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.44; LAG(HR) = 1.95; Fm(INCH/HR) = 0.23; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  66643.88
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =   18600.79
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  19979.84
  TOTAL AREA(ACRES) =  66643.88       PEAK FLOW RATE(CFS) =   20186.73
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 146.53
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 A        4.90      0.40      0.10    32
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A       31.60      0.40      1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A       21.00      0.40      1.00    36
  AGRICULTURAL POOR COVER
  "FALLOW"                   B       22.40      0.30      1.00    86
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B       19.00      0.30      0.50    56
  NATURAL POOR COVER
  "BARREN"                   B        2.00      0.30      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.36
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.86
  SUBAREA AREA(ACRES) =  100.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.48;30M= 0.93;1H= 1.28;3H= 2.35;6H= 3.46;24H= 6.02
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 22.0%
           MOUNTAIN= 61.9%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.44; LAG(HR) = 1.95; Fm(INCH/HR) = 0.23; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  66744.78
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =   18607.47
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  19987.47
  TOTAL AREA(ACRES) =  66744.78       PEAK FLOW RATE(CFS) =   20186.73
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
```

```
============================================================================
  MAINLINE Tc(MIN) = 146.53
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B       20.90      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 B       30.90      0.30      1.00    65
  URBAN FAIR COVER
  "TURF"                     B        0.70      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.10      0.30      1.00    66
  COMMERCIAL                 B        8.00      0.30      0.10    56
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B       65.80      0.30      1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.94
  SUBAREA AREA(ACRES) =  127.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.48;30M= 0.93;1H= 1.28;3H= 2.35;6H= 3.46;24H= 6.01
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 22.1%
           MOUNTAIN= 61.8%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.44; LAG(HR) = 1.95; Fm(INCH/HR) = 0.23; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  66872.18
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =   18619.09
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  20000.11
  TOTAL AREA(ACRES) =  66872.18       PEAK FLOW RATE(CFS) =   20186.73
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 146.53
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  PUBLIC PARK                B        0.40      0.30      0.85    56
  NATURAL FAIR COVER
  "WOODLAND"                 B       11.80      0.30      1.00    60
  NATURAL FAIR COVER
  "GRASS"                    C      222.20      0.25      1.00    79
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 C        5.10      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       71.50      0.25      1.00    77
  COMMERCIAL                 C        2.90      0.25      0.10    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  313.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.48;30M= 0.93;1H= 1.28;3H= 2.34;6H= 3.46;24H= 6.01
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 22.3%
```

```
          MOUNTAIN= 61.6%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.44; LAG(HR) = 1.95; Fm(INCH/HR) = 0.23; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  67186.08
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =   18664.58
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  20044.99
  TOTAL AREA(ACRES) =  67186.08       PEAK FLOW RATE(CFS) =   20186.73
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 146.53
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  PUBLIC PARK                C        0.70      0.25       0.85    69
  NATURAL FAIR COVER
  "WOODLAND"                 C       22.40      0.25       1.00    73
  AGRICULTURAL POOR COVER
  "FALLOW"                   D      104.40      0.20       1.00    94
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D      142.90      0.20       0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        0.60      0.20       1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      421.50      0.20       1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.90
  SUBAREA AREA(ACRES) =  692.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.48;30M= 0.93;1H= 1.28;3H= 2.34;6H= 3.45;24H= 5.99
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 22.7%
           MOUNTAIN= 61.2%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.44; LAG(HR) = 1.95; Fm(INCH/HR) = 0.23; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.39;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  67878.58
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =   18807.66
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  20184.10
  TOTAL AREA(ACRES) =  67878.58       PEAK FLOW RATE(CFS) =   20186.73
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 146.53
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 D       18.30      0.20       1.00    82
  URBAN FAIR COVER
  "TURF"                     D        6.30      0.20       1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      188.90      0.20       1.00    83
  COMMERCIAL                 D       37.80      0.20       0.10    75
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D        9.80      0.20       1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                 D       65.50      0.20       1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.90
  SUBAREA AREA(ACRES) =  326.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.48;30M= 0.93;1H= 1.28;3H= 2.34;6H= 3.45;24H= 5.98
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 22.9%
           MOUNTAIN= 61.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.44; LAG(HR) = 1.95; Fm(INCH/HR) = 0.23; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.39;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  68205.18
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =   18870.52
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  20246.57
  TOTAL AREA(ACRES) =  68205.18       PEAK FLOW RATE(CFS) =   20246.57

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  68205.18  TC(MIN.) =    146.53
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.42
  PEAK FLOW RATE(CFS)   =  20246.57
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

TECHNICAL APPENDIX I-B
HYDROLOGIC ANALYSIS
EXISTING CONDITION
100-YEAR HIGH CONFIDENCE

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************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: LE63100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.150
        FOOTHILL                           0.150
        MOUNTAIN                           0.640
        VALLEY(UNDEVELOPED)/DESERT         0.060
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1062.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU62100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    26077.13    Tc(MIN.) = 106.69
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.32
  TOTAL AREA(ACRES) =   46437.31
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1062.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    26077.13    Tc(MIN.) = 106.69
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.32
  TOTAL AREA(ACRES) =   46437.31
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1062.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    345.00  DOWNSTREAM(FEET) =    319.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2852.00   CHANNEL SLOPE =  0.0091
  CHANNEL BASE(FEET) =   60.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.025   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  26077.13
  FLOW VELOCITY(FEET/SEC.) =  24.77   FLOW DEPTH(FEET) =  12.41
  TRAVEL TIME(MIN.) =   1.92   Tc(MIN.) = 108.61
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) = 108.61
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.060
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       79.80      0.40       1.00    40
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A        4.40      0.40       0.50    32
  NATURAL FAIR COVER
  "GRASS"                    A        8.00      0.40       1.00    50
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 A        6.40      0.40       1.00    44
  NATURAL FAIR COVER
  "OPEN BRUSH"               A      110.10      0.40       1.00    46
  COMMERCIAL                 A        1.70      0.40       0.10    32
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  210.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.65;30M= 1.22;1H= 1.70;3H= 3.20;6H= 4.78;24H= 8.47
```

```
  S-GRAPH: VALLEY(DEV.)=  1.1%;VALLEY(UNDEV.)/DESERT= 19.8%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.81; LAG(HR) = 1.45; Fm(INCH/HR) = 0.23; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.36; 30M = 0.40; 1HR = 0.44;
  3HR = 0.79; 6HR = 0.91; 24HR= 0.95
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  46647.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0266; Lca/L=0.4,n=.0238; Lca/L=0.5,n=.0219;Lca/L=0.6,n=.0204
  TIME OF PEAK FLOW(HR) = 17.50  RUNOFF VOLUME(AF) =   21696.96
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26010.09
  TOTAL AREA(ACRES) =  46647.70       PEAK FLOW RATE(CFS) =   26077.13
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.55; 30M = 1.12; 1HR = 1.51; 3HR = 2.62; 6HR = 3.72; 24HR = 6.35

****************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 108.61
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.626
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 A       56.90      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        7.50      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                    B        5.60      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 B        6.10      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       16.30      0.30      1.00    66
  COMMERCIAL                 B        1.90      0.30      0.10    56
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.36
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =   94.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.65;30M= 1.22;1H= 1.70;3H= 3.20;6H= 4.78;24H= 8.46
  S-GRAPH: VALLEY(DEV.)=  1.1%;VALLEY(UNDEV.)/DESERT= 19.8%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.81; LAG(HR) = 1.45; Fm(INCH/HR) = 0.23; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.36; 30M = 0.40; 1HR = 0.44;
  3HR = 0.79; 6HR = 0.91; 24HR= 0.95
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  46742.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0266; Lca/L=0.4,n=.0238; Lca/L=0.5,n=.0219;Lca/L=0.6,n=.0204
  TIME OF PEAK FLOW(HR) = 17.50  RUNOFF VOLUME(AF) =   21703.18
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26023.51
  TOTAL AREA(ACRES) =  46742.00       PEAK FLOW RATE(CFS) =   26077.13
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.55; 30M = 1.12; 1HR = 1.51; 3HR = 2.62; 6HR = 3.72; 24HR = 6.35

****************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 108.61
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.626
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 B       23.70      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      679.90      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        1.80      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C      161.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C     1099.40      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       58.20      0.25      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 2024.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.64;30M= 1.21;1H= 1.69;3H= 3.18;6H= 4.74;24H= 8.37
  S-GRAPH: VALLEY(DEV.)=  1.7%;VALLEY(UNDEV.)/DESERT= 19.2%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.81; LAG(HR) = 1.45; Fm(INCH/HR) = 0.23; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.35; 30M = 0.40; 1HR = 0.44;
  3HR = 0.79; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  48766.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0266; Lca/L=0.4,n=.0238; Lca/L=0.5,n=.0219;Lca/L=0.6,n=.0204
  TIME OF PEAK FLOW(HR) = 17.50  RUNOFF VOLUME(AF) =   22242.15
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26584.84
  TOTAL AREA(ACRES) =  48766.40       PEAK FLOW RATE(CFS) =   26584.84

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.55; 30M = 1.12; 1HR = 1.51; 3HR = 2.62; 6HR = 3.72; 24HR = 6.35

****************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 108.61
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.626
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C      196.50      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      421.30      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.60      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        0.10      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D       55.70      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      270.30      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  944.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.64;30M= 1.21;1H= 1.69;3H= 3.17;6H= 4.72;24H= 8.34
  S-GRAPH: VALLEY(DEV.)=  1.9%;VALLEY(UNDEV.)/DESERT= 18.9%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.81; LAG(HR) = 1.45; Fm(INCH/HR) = 0.23; Ybar = 0.33
```

```
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  49710.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0266; Lca/L=0.4,n=.0238; Lca/L=0.5,n=.0219;Lca/L=0.6,n=.0204
  TIME OF PEAK FLOW(HR) = 17.50  RUNOFF VOLUME(AF) =   22520.65
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26871.62
  TOTAL AREA(ACRES) =  49710.90       PEAK FLOW RATE(CFS) =   26871.62

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.55; 30M = 1.12; 1HR = 1.51; 3HR = 2.62; 6HR = 3.72; 24HR = 6.35

****************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 108.61
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.626
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D      140.70      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       40.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  181.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.64;30M= 1.21;1H= 1.68;3H= 3.16;6H= 4.71;24H= 8.33
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 18.9%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.81; LAG(HR) = 1.45; Fm(INCH/HR) = 0.23; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  49892.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0266; Lca/L=0.4,n=.0238; Lca/L=0.5,n=.0219;Lca/L=0.6,n=.0204
  TIME OF PEAK FLOW(HR) = 17.50  RUNOFF VOLUME(AF) =   22579.84
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26929.66
  TOTAL AREA(ACRES) =  49892.00       PEAK FLOW RATE(CFS) =   26929.66

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.55; 30M = 1.12; 1HR = 1.51; 3HR = 2.62; 6HR = 3.72; 24HR = 6.35
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  49892.00  TC(MIN.) =    108.61
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.33
  PEAK FLOW RATE(CFS)   =  26929.66
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LE64100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.020
        FOOTHILL                           0.150
        MOUNTAIN                           0.260
        VALLEY(UNDEVELOPED)/DESERT         0.570
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1063.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LE63100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    26929.66    Tc(MIN.) = 108.61
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.33
  TOTAL AREA(ACRES) =   49892.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1063.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    26929.66    Tc(MIN.) = 108.61
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.33
  TOTAL AREA(ACRES) =   49892.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1063.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    319.00  DOWNSTREAM(FEET) =    275.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  5418.00   CHANNEL SLOPE =  0.0081
  CHANNEL BASE(FEET) =   60.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.025   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  26929.66
  FLOW VELOCITY(FEET/SEC.) =  24.00   FLOW DEPTH(FEET) =  13.04
  TRAVEL TIME(MIN.) =   3.76   Tc(MIN.) = 112.37
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) = 112.37
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.040
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        0.60      0.40      1.00    40
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A        1.70      0.40      0.50    32
  NATURAL FAIR COVER
  "GRASS"                    A        1.30      0.40      1.00    50
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 A        0.90      0.40      1.00    44
  URBAN FAIR COVER
  "TURF"                     A       18.90      0.40      1.00    44
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        0.50      0.40      1.00    46
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.96
  SUBAREA AREA(ACRES) =   23.90
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.64;30M= 1.21;1H= 1.68;3H= 3.16;6H= 4.71;24H= 8.33
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 18.9%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.87; LAG(HR) = 1.50; Fm(INCH/HR) = 0.23; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  49915.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0262; Lca/L=0.4,n=.0235; Lca/L=0.5,n=.0216;Lca/L=0.6,n=.0202
  TIME OF PEAK FLOW(HR) = 17.50  RUNOFF VOLUME(AF) =   22579.42
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26637.42
  TOTAL AREA(ACRES) =  49915.90       PEAK FLOW RATE(CFS) =   26929.66
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 112.37
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.601
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 A        1.30      0.40      0.10    32
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A       15.30      0.40      1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A        8.20      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       22.20      0.30      1.00    63
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B        0.50      0.30      0.50    56
  NATURAL FAIR COVER
  "GRASS"                    B       65.20      0.30      1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.32
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  112.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.64;30M= 1.21;1H= 1.68;3H= 3.16;6H= 4.71;24H= 8.32
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 19.0%
           MOUNTAIN= 63.9%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.87; LAG(HR) = 1.50; Fm(INCH/HR) = 0.23; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  50028.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0262; Lca/L=0.4,n=.0235; Lca/L=0.5,n=.0216;Lca/L=0.6,n=.0202
  TIME OF PEAK FLOW(HR) = 17.50  RUNOFF VOLUME(AF) =   22591.39
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26654.89
  TOTAL AREA(ACRES) =  50028.60       PEAK FLOW RATE(CFS) =   26929.66
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 112.37
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.601
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 B        2.30      0.30      1.00    65
  URBAN FAIR COVER
  "TURF"                     B       18.50      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       30.20      0.30      1.00    66
  COMMERCIAL                 B        5.60      0.30      0.10    56
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B       19.10      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B       13.40      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.94
  SUBAREA AREA(ACRES) =   89.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.64;30M= 1.21;1H= 1.68;3H= 3.16;6H= 4.71;24H= 8.32
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 19.1%
           MOUNTAIN= 63.9%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.87; LAG(HR) = 1.50; Fm(INCH/HR) = 0.23; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  50117.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0262; Lca/L=0.4,n=.0235; Lca/L=0.5,n=.0216;Lca/L=0.6,n=.0202
  TIME OF PEAK FLOW(HR) = 17.50  RUNOFF VOLUME(AF) =   22603.88
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26671.42
  TOTAL AREA(ACRES) =  50117.70       PEAK FLOW RATE(CFS) =   26929.66
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 112.37
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.601
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      236.40      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        0.40      0.25      0.50    69
  NATURAL FAIR COVER
  "GRASS"                    C       74.30      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      195.50      0.25      1.00    77
  COMMERCIAL                 C        0.40      0.25      0.10    69
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        8.60      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  515.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.64;30M= 1.21;1H= 1.68;3H= 3.15;6H= 4.69;24H= 8.29
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 19.5%
           MOUNTAIN= 63.5%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.87; LAG(HR) = 1.50; Fm(INCH/HR) = 0.23; Ybar = 0.33
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  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  50633.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0262; Lca/L=0.4,n=.0235; Lca/L=0.5,n=.0216;Lca/L=0.6,n=.0202
  TIME OF PEAK FLOW(HR) = 17.50  RUNOFF VOLUME(AF) =   22711.57
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26790.26
  TOTAL AREA(ACRES) =  50633.30       PEAK FLOW RATE(CFS) =   26929.66
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 112.37
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.601
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        4.00      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C       61.90      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      139.90      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        5.20      0.20      0.50    75
  NATURAL FAIR COVER
  "GRASS"                    D       97.60      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                     D        5.60      0.20      1.00    82
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  314.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.64;30M= 1.21;1H= 1.68;3H= 3.15;6H= 4.69;24H= 8.27
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 19.7%
           MOUNTAIN= 63.2%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.87; LAG(HR) = 1.50; Fm(INCH/HR) = 0.23; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  50947.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0262; Lca/L=0.4,n=.0235; Lca/L=0.5,n=.0216;Lca/L=0.6,n=.0202
  TIME OF PEAK FLOW(HR) = 17.50  RUNOFF VOLUME(AF) =   22788.50
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26873.03
  TOTAL AREA(ACRES) =  50947.50       PEAK FLOW RATE(CFS) =   26929.66
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 112.37
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.601
  SUBAREA LOSS RATE DATA(AMC  II):
```

```
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      191.80      0.20      1.00    83
  COMMERCIAL                 D        4.40      0.20      0.10    75
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D       17.10      0.20      1.00    84
  PUBLIC PARK                D        7.90      0.20      0.85    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        1.50      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       56.50      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  279.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.64;30M= 1.21;1H= 1.68;3H= 3.14;6H= 4.68;24H= 8.26
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 19.9%
           MOUNTAIN= 63.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.87; LAG(HR) = 1.50; Fm(INCH/HR) = 0.23; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  51226.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0262; Lca/L=0.4,n=.0235; Lca/L=0.5,n=.0216;Lca/L=0.6,n=.0202
  TIME OF PEAK FLOW(HR) = 17.50  RUNOFF VOLUME(AF) =   22861.11
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26949.73
  TOTAL AREA(ACRES) =  51226.70       PEAK FLOW RATE(CFS) =   26949.73

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  51226.70  TC(MIN.) =    112.37
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.33
  PEAK FLOW RATE(CFS)   =  26949.73
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LE65100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.020
        FOOTHILL                           0.150
        MOUNTAIN                           0.070
        VALLEY(UNDEVELOPED)/DESERT         0.760
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1064.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LE64100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    26949.73    Tc(MIN.) = 112.37
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.33
  TOTAL AREA(ACRES) =   51226.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1064.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    26949.73    Tc(MIN.) = 112.37
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.33
  TOTAL AREA(ACRES) =   51226.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1064.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    275.00  DOWNSTREAM(FEET) =    240.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  5738.00   CHANNEL SLOPE =  0.0061
  CHANNEL BASE(FEET) =   60.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.025   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  26949.73
  FLOW VELOCITY(FEET/SEC.) =  21.69   FLOW DEPTH(FEET) =  14.09
  TRAVEL TIME(MIN.) =   4.41   Tc(MIN.) = 116.78
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) = 116.78
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.017
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        3.80      0.40       1.00    40
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A       20.30      0.40       0.50    32
  NATURAL POOR COVER
  "BARREN"                   A        0.90      0.40       1.00    78
  NATURAL FAIR COVER
  "GRASS"                    A       29.30      0.40       1.00    50
  URBAN FAIR COVER
  "TURF"                     A        0.80      0.40       1.00    44
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        3.30      0.40       1.00    46
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.83
  SUBAREA AREA(ACRES) =   58.40
  UNIT-HYDROGRAPH DATA:
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```
  RAINFALL(INCH): 5M= 0.64;30M= 1.21;1H= 1.68;3H= 3.14;6H= 4.68;24H= 8.26
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 20.0%
           MOUNTAIN= 63.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.95; LAG(HR) = 1.56; Fm(INCH/HR) = 0.23; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  51285.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   22786.08
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26241.82
  TOTAL AREA(ACRES) =  51285.10       PEAK FLOW RATE(CFS) =   26949.73
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 116.78
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.571
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 A        0.90      0.40      0.10    32
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A       47.10      0.40      1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A        9.80      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        8.90      0.30      1.00    63
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B       15.00      0.30      0.50    56
  NATURAL POOR COVER
  "BARREN"                   B        9.70      0.30      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.37
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.91
  SUBAREA AREA(ACRES) =   91.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.64;30M= 1.21;1H= 1.68;3H= 3.14;6H= 4.67;24H= 8.25
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 20.1%
           MOUNTAIN= 62.9%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.95; LAG(HR) = 1.56; Fm(INCH/HR) = 0.23; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  51376.49
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   22792.33
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26253.27
  TOTAL AREA(ACRES) =  51376.49       PEAK FLOW RATE(CFS) =   26949.73
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
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```
  MAINLINE Tc(MIN) = 116.78
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.571
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B       61.80      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 B       30.20      0.30      1.00    65
  URBAN FAIR COVER
  "TURF"                     B        0.70      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       56.20      0.30      1.00    66
  COMMERCIAL                 B        3.90      0.30      0.10    56
  PUBLIC PARK                B       10.90      0.30      0.85    56
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =  163.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.64;30M= 1.21;1H= 1.68;3H= 3.14;6H= 4.67;24H= 8.24
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 20.2%
           MOUNTAIN= 62.7%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.95; LAG(HR) = 1.56; Fm(INCH/HR) = 0.23; Ybar = 0.34
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  51540.19
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   22814.58
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26282.35
  TOTAL AREA(ACRES) =  51540.19       PEAK FLOW RATE(CFS) =   26949.73
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 116.78
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.571
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B        0.70      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B       65.20      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      210.40      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        9.60      0.25      0.50    69
  NATURAL POOR COVER
  "BARREN"                   C       14.70      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C      145.30      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  445.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.64;30M= 1.21;1H= 1.68;3H= 3.13;6H= 4.66;24H= 8.22
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 20.7%
           MOUNTAIN= 62.2%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.95; LAG(HR) = 1.56; Fm(INCH/HR) = 0.23; Ybar = 0.34
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  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  51986.09
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   22901.34
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26381.02
  TOTAL AREA(ACRES) =  51986.09       PEAK FLOW RATE(CFS) =   26949.73
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 116.78
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.571
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                C        6.50      0.25      1.00    77
  URBAN FAIR COVER
  "TURF"                    C        0.70      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"              C      350.80      0.25      1.00    77
  COMMERCIAL                C        4.00      0.25      0.10    69
  PUBLIC PARK               C       47.00      0.25      0.85    69
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"    C       60.40      0.25      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  469.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.64;30M= 1.20;1H= 1.67;3H= 3.13;6H= 4.65;24H= 8.20
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.2%
           MOUNTAIN= 61.7%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.95; LAG(HR) = 1.56; Fm(INCH/HR) = 0.23; Ybar = 0.34
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  52455.49
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   23001.47
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26490.53
  TOTAL AREA(ACRES) =  52455.49       PEAK FLOW RATE(CFS) =   26949.73
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 116.78
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.571
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"         C        0.40      0.25      1.00    79
  NATURAL FAIR COVER
  "WOODLAND"                C      210.20      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"     D       22.00      0.20      1.00    81
  PUBLIC PARK               D        4.50      0.20      0.85    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"      D       12.60      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                  D       21.40      0.20      1.00    93
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =  271.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.64;30M= 1.20;1H= 1.67;3H= 3.12;6H= 4.64;24H= 8.18
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.5%
           MOUNTAIN= 61.4%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.95; LAG(HR) = 1.56; Fm(INCH/HR) = 0.23; Ybar = 0.34
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  52726.59
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   23057.20
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26553.54
  TOTAL AREA(ACRES) =  52726.59       PEAK FLOW RATE(CFS) =   26949.73
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 116.78
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.571
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                   D      136.70      0.20      1.00    84
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                D       10.20      0.20      1.00    82
  URBAN FAIR COVER
  "TURF"                    D        3.30      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"              D       93.70      0.20      1.00    83
  COMMERCIAL                D        0.40      0.20      0.10    75
  NATURAL GOOD COVER
  "MEADOWS"                 D       10.00      0.20      1.00    78
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  254.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.64;30M= 1.20;1H= 1.67;3H= 3.12;6H= 4.63;24H= 8.17
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.7%
           MOUNTAIN= 61.2%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.95; LAG(HR) = 1.56; Fm(INCH/HR) = 0.23; Ybar = 0.34
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  52980.89
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
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   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   23125.46
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26627.06
  TOTAL AREA(ACRES) =  52980.89       PEAK FLOW RATE(CFS) =   26949.73
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 116.78
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.571
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       70.40      0.20      1.00    86
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D        3.80      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                 D       68.20      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  142.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.64;30M= 1.20;1H= 1.67;3H= 3.12;6H= 4.63;24H= 8.16
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 61.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.95; LAG(HR) = 1.56; Fm(INCH/HR) = 0.23; Ybar = 0.34
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  53123.29
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   23163.23
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26668.55
  TOTAL AREA(ACRES) =  53123.29       PEAK FLOW RATE(CFS) =   26949.73
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  53123.29  TC(MIN.) =    116.78
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.34
  PEAK FLOW RATE(CFS)   =  26949.73
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
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 ************************************************************************
             RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
            (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                           Analysis prepared by:

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                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

 ------------------------------------------------------------------------
   FILE NAME: LE66100H.DAT
   TIME/DATE OF STUDY: 09:43 02/17/2004
 ========================================================================
   USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
 ========================================================================
                     --*TIME-OF-CONCENTRATION MODEL*--

   USER SPECIFIED STORM EVENT(YEAR) =  100.00
   SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
   SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
   *USER-DEFINED TABLED RAINFALL USED*
   NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
    1)   5.000; 10.000
    2)  10.000;  6.000
    3)  15.000;  4.500
    4)  20.000;  3.600
    5)  30.000;  2.750
    6)  60.000;  1.950
    7) 120.000;  1.550
   *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

   *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
      HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
      WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
 NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
 ===  =====  =========  ================  ======  =====  ======  =====  =======
   1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

   GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
     1. Relative Flow-Depth =  0.00 FEET
        as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
     2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
   *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
    OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
   *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

   UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
     WATERSHED LAG = 0.80 * Tc
           S-GRAPH TYPE                PERCENTAGE(DECIMAL)
         VALLEY(DEVELOPED)                  0.020
         FOOTHILL                           0.080
         MOUNTAIN                           0.680
         VALLEY(UNDEVELOPED)/DESERT         0.220
         DESERT(UNDEVELOPED)                0.000
     PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
     SIERRA MADRE DEPTH-AREA FACTORS USED.
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


 ************************************************************************
   FLOW PROCESS FROM NODE   1065.00 TO NODE   1065.00 IS CODE = 15.1
 ------------------------------------------------------------------------
   >>>>>DEFINE MEMORY BANK # 1 <<<<<
 ========================================================================
   PEAK FLOWRATE TABLE FILE NAME: LE65100H.DNA
   MEMORY BANK #  1 DEFINED AS FOLLOWS:
   PEAK FLOW RATE(CFS) =    26949.73    Tc(MIN.) = 116.78
   AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.34
   TOTAL AREA(ACRES) =   53123.29
   LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.

 ************************************************************************
   FLOW PROCESS FROM NODE   1065.00 TO NODE   1065.00 IS CODE = 14.0
 ------------------------------------------------------------------------
   >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
 ========================================================================

   MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
   PEAK FLOW RATE(CFS) =    26949.73    Tc(MIN.) = 116.78
   AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.34
   TOTAL AREA(ACRES) =   53123.29
   LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.

 ************************************************************************
   FLOW PROCESS FROM NODE   1065.00 TO NODE   1065.00 IS CODE =  12
 ------------------------------------------------------------------------
   >>>>>CLEAR MEMORY BANK # 1 <<<<<
 ========================================================================

 ************************************************************************
   FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  51
 ------------------------------------------------------------------------
   >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
   >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
 ========================================================================
   ELEVATION DATA: UPSTREAM(FEET) =    240.00  DOWNSTREAM(FEET) =    213.00
   CHANNEL LENGTH THRU SUBAREA(FEET) =  6295.00   CHANNEL SLOPE =  0.0043
   CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
   MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
   CHANNEL FLOW THRU SUBAREA(CFS) =  26949.73
   FLOW VELOCITY(FEET/SEC.) =  16.15   FLOW DEPTH(FEET) =  14.61
   TRAVEL TIME(MIN.) =   6.50   Tc(MIN.) = 123.27
   LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.

 ************************************************************************
   FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
 ------------------------------------------------------------------------
   >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ========================================================================
   MAINLINE Tc(MIN) = 123.27
   * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  0.986
   SUBAREA LOSS RATE DATA(AMC  II):
    DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
   PUBLIC PARK                A       19.80      0.40       0.85    32
   AGRICULTURAL POOR COVER
   "FALLOW"                   A        2.20      0.40       1.00    77
   RESIDENTIAL
   "5-7 DWELLINGS/ACRE"       A       17.60      0.40       0.50    32
   NATURAL POOR COVER
   "BARREN"                   A       67.40      0.40       1.00    78
   NATURAL FAIR COVER
   "GRASS"                    A       59.40      0.40       1.00    50
   URBAN FAIR COVER
   "TURF"                     A       39.00      0.40       1.00    44
   SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
   SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.94
   SUBAREA AREA(ACRES) =  205.40
   UNIT-HYDROGRAPH DATA:
   RAINFALL(INCH): 5M= 0.63;30M= 1.20;1H= 1.67;3H= 3.12;6H= 4.63;24H= 8.15
```

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  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 61.1%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.05; LAG(HR) = 1.64; Fm(INCH/HR) = 0.23; Ybar = 0.34
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  53328.69
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   23178.63
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26430.38
  TOTAL AREA(ACRES) =  53328.69       PEAK FLOW RATE(CFS) =   26949.73
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 123.27
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        9.30      0.40      1.00    46
  COMMERCIAL                 A       17.30      0.40      0.10    32
  NATURAL GOOD COVER
  "MEADOWS"                  A        0.40      0.40      1.00    30
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A       69.80      0.40      1.00    49
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        3.60      0.40      1.00    40
  NATURAL FAIR COVER
  "WOODLAND"                 A      108.30      0.40      1.00    36
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
  SUBAREA AREA(ACRES) =  208.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.63;30M= 1.20;1H= 1.67;3H= 3.11;6H= 4.62;24H= 8.14
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 61.1%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.05; LAG(HR) = 1.64; Fm(INCH/HR) = 0.23; Ybar = 0.34
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  53537.39
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   23176.88
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26440.02
  TOTAL AREA(ACRES) =  53537.39       PEAK FLOW RATE(CFS) =   26949.73
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 123.27
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B      104.10      0.30      1.00    63
  NATURAL GOOD COVER
  "MEADOWS"                  B       28.00      0.30      1.00    58
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B      179.50      0.30      0.50    56
  NATURAL POOR COVER
  "BARREN"                   B      235.20      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B      338.30      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 B       37.70      0.30      1.00    65
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.90
  SUBAREA AREA(ACRES) =  922.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.63;30M= 1.20;1H= 1.66;3H= 3.10;6H= 4.60;24H= 8.10
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 61.2%;FOOTHILL= 14.9%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.05; LAG(HR) = 1.64; Fm(INCH/HR) = 0.23; Ybar = 0.34
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  54460.19
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   23352.57
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26613.17
  TOTAL AREA(ACRES) =  54460.19       PEAK FLOW RATE(CFS) =   26949.73
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 123.27
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  URBAN FAIR COVER
  "TURF"                     B      139.20      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B      151.00      0.30      1.00    66
  COMMERCIAL                 B      352.90      0.30      0.10    56
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B      215.10      0.30      1.00    69
  PUBLIC PARK                B       22.20      0.30      0.85    56
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        2.40      0.30      1.00    72
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.64
  SUBAREA AREA(ACRES) =  882.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.63;30M= 1.20;1H= 1.66;3H= 3.09;6H= 4.58;24H= 8.06
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
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```
          MOUNTAIN= 61.3%;FOOTHILL= 14.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.05; LAG(HR) = 1.64; Fm(INCH/HR) = 0.23; Ybar = 0.34
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  55342.99
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   23558.20
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26825.03
  TOTAL AREA(ACRES) =  55342.99       PEAK FLOW RATE(CFS) =   26949.73
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 123.27
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  B      259.40      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C      277.70      0.25      1.00    75
  AGRICULTURAL POOR COVER
  "FALLOW"                    C       90.50      0.25      1.00    91
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        C      233.10      0.25      0.50    69
  NATURAL POOR COVER
  "BARREN"                    C      196.30      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                     C      706.70      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
  SUBAREA AREA(ACRES) = 1763.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.63;30M= 1.19;1H= 1.65;3H= 3.07;6H= 4.54;24H= 7.99
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
          MOUNTAIN= 61.5%;FOOTHILL= 14.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.05; LAG(HR) = 1.64; Fm(INCH/HR) = 0.23; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.32; 30M = 0.37; 1HR = 0.42;
  3HR = 0.76; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  57106.69
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   23954.83
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  27199.14
  TOTAL AREA(ACRES) =  57106.69       PEAK FLOW RATE(CFS) =   27199.14

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 123.27
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                  C       12.40      0.25      1.00    77
  URBAN FAIR COVER
  "TURF"                      C       53.80      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"                C     1739.10      0.25      1.00    77
  COMMERCIAL                  C      417.20      0.25      0.10    69
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C      258.40      0.25      1.00    79
  PUBLIC PARK                 C        1.50      0.25      0.85    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.85
  SUBAREA AREA(ACRES) = 2482.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.62;30M= 1.19;1H= 1.65;3H= 3.04;6H= 4.49;24H= 7.89
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
          MOUNTAIN= 61.8%;FOOTHILL= 14.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.05; LAG(HR) = 1.64; Fm(INCH/HR) = 0.23; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.37; 1HR = 0.41;
  3HR = 0.76; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  59589.09
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   24571.89
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  27795.62
  TOTAL AREA(ACRES) =  59589.09       PEAK FLOW RATE(CFS) =   27795.62

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 123.27
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL GOOD COVER
  "MEADOWS"                   C        4.00      0.25      1.00    71
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      C       29.00      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                  C      359.50      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D      154.40      0.20      1.00    81
  PUBLIC PARK                 D       46.70      0.20      0.85    75
  AGRICULTURAL POOR COVER
  "FALLOW"                    D       38.90      0.20      1.00    94
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  632.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.62;30M= 1.19;1H= 1.64;3H= 3.04;6H= 4.48;24H= 7.87
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
          MOUNTAIN= 61.9%;FOOTHILL= 14.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.05; LAG(HR) = 1.64; Fm(INCH/HR) = 0.23; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
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  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.37; 1HR = 0.41;
  3HR = 0.76; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  60221.59
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   24712.89
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  27934.25
  TOTAL AREA(ACRES) =  60221.59       PEAK FLOW RATE(CFS) =   27934.25

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 123.27
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D       13.30      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D       33.60      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      223.80      0.20      1.00    84
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 D       87.20      0.20      1.00    82
  URBAN FAIR COVER
  "TURF"                     D        6.00      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      420.00      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  783.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.62;30M= 1.19;1H= 1.64;3H= 3.03;6H= 4.47;24H= 7.84
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 61.9%;FOOTHILL= 14.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.05; LAG(HR) = 1.64; Fm(INCH/HR) = 0.23; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.36; 1HR = 0.41;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  61005.48
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   24928.08
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  28135.48
  TOTAL AREA(ACRES) =  61005.48       PEAK FLOW RATE(CFS) =   28135.48

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 123.27
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
```

```
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 D       35.20      0.20      0.10    75
  NATURAL GOOD COVER
  "MEADOWS"                  D        1.60      0.20      1.00    78
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       20.20      0.20      1.00    86
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D      281.40      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                 D       83.00      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.92
  SUBAREA AREA(ACRES) =  421.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.62;30M= 1.19;1H= 1.64;3H= 3.03;6H= 4.46;24H= 7.82
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.05; LAG(HR) = 1.64; Fm(INCH/HR) = 0.23; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.36; 1HR = 0.41;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  61426.88
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   25045.90
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  28246.52
  TOTAL AREA(ACRES) =  61426.88       PEAK FLOW RATE(CFS) =   28246.52

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  61426.88  TC(MIN.) =    123.27
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.35
  PEAK FLOW RATE(CFS)   =  28246.52
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
        (c) Copyright 1983-2003 Advanced Engineering Software (aes)
            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: LE67100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.020
        FOOTHILL                           0.140
        MOUNTAIN                           0.620
        VALLEY(UNDEVELOPED)/DESERT         0.220
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1066.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LE66100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    28246.52    Tc(MIN.) = 123.27
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.35
  TOTAL AREA(ACRES) =   61426.88
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1066.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    28246.52    Tc(MIN.) = 123.27
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.35
  TOTAL AREA(ACRES) =   61426.88
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1066.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    213.00  DOWNSTREAM(FEET) =    176.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  6201.00   CHANNEL SLOPE =  0.0060
  CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  28246.52
  FLOW VELOCITY(FEET/SEC.) =  18.37   FLOW DEPTH(FEET) =  13.68
  TRAVEL TIME(MIN.) =   5.63   Tc(MIN.) = 128.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) = 128.90
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  0.961
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   A        0.20      0.40       1.00    77
  NATURAL FAIR COVER
  "GRASS"                    A        0.90      0.40       1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        8.90      0.40       1.00    46
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A        5.50      0.40       1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A       17.90      0.40       1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       11.60      0.30       1.00    63
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.37
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   45.00
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.62;30M= 1.19;1H= 1.64;3H= 3.03;6H= 4.46;24H= 7.82
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.15; LAG(HR) = 1.72; Fm(INCH/HR) = 0.23; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.36; 1HR = 0.41;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  61471.88
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   25046.21
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  27865.75
  TOTAL AREA(ACRES) =  61471.88       PEAK FLOW RATE(CFS) =   28246.52
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

 ****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) = 128.90
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   B      450.40      0.30      1.00    86
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B       77.20      0.30      0.50    56
  NATURAL FAIR COVER
  "GRASS"                    B       47.20      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 B       22.50      0.30      1.00    65
  URBAN FAIR COVER
  "TURF"                     B        5.30      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B      156.70      0.30      1.00    66
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.95
  SUBAREA AREA(ACRES) =  759.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.62;30M= 1.19;1H= 1.64;3H= 3.02;6H= 4.45;24H= 7.79
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.15; LAG(HR) = 1.72; Fm(INCH/HR) = 0.23; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.30; 30M = 0.36; 1HR = 0.41;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  62231.18
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   25220.12
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  28021.79
  TOTAL AREA(ACRES) =  62231.18       PEAK FLOW RATE(CFS) =   28246.52
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

 ****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
 ----------------------------------------------------------------------------
```

```
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) = 128.90
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 B        6.20      0.30      0.10    56
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B      529.80      0.30      1.00    69
  PUBLIC PARK                B        0.20      0.30      0.85    56
  NATURAL GOOD COVER
  "MEADOWS"                  B        1.80      0.30      1.00    58
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        1.60      0.30      1.00    72
  NATURAL FAIR COVER
  "WOODLAND"                 B       71.30      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  610.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.62;30M= 1.19;1H= 1.64;3H= 3.01;6H= 4.43;24H= 7.77
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.15; LAG(HR) = 1.72; Fm(INCH/HR) = 0.23; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.30; 30M = 0.36; 1HR = 0.40;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  62842.08
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   25310.91
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  28113.49
  TOTAL AREA(ACRES) =  62842.08       PEAK FLOW RATE(CFS) =   28246.52
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

 ****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) = 128.90
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      132.80      0.25      1.00    75
  AGRICULTURAL POOR COVER
  "FALLOW"                   C      226.40      0.25      1.00    91
  NATURAL POOR COVER
  "BARREN"                   C        8.70      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C      379.30      0.25      1.00    79
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 C        0.70      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"               C     1062.60      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1810.50
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.61;30M= 1.18;1H= 1.63;3H= 3.00;6H= 4.40;24H= 7.71
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.15; LAG(HR) = 1.72; Fm(INCH/HR) = 0.23; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.30; 30M = 0.35; 1HR = 0.40;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  64652.58
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   25727.77
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  28502.73
  TOTAL AREA(ACRES) =  64652.58       PEAK FLOW RATE(CFS) =   28502.73

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 128.90
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 C       10.80      0.25      0.10    69
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C      206.00      0.25      1.00    79
  NATURAL GOOD COVER
  "MEADOWS"                  C        0.20      0.25      1.00    71
  NATURAL FAIR COVER
  "WOODLAND"                 C      116.80      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       30.80      0.20      1.00    81
  AGRICULTURAL POOR COVER
  "FALLOW"                   D      158.40      0.20      1.00    94
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  523.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.61;30M= 1.18;1H= 1.63;3H= 2.99;6H= 4.40;24H= 7.70
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.15; LAG(HR) = 1.72; Fm(INCH/HR) = 0.23; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.30; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  65175.58
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   25861.60
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  28627.29
  TOTAL AREA(ACRES) =  65175.58       PEAK FLOW RATE(CFS) =   28627.29

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 128.90
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D       59.00      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        0.60      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      444.70      0.20      1.00    84
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 D        5.30      0.20      1.00    82
  URBAN FAIR COVER
  "TURF"                     D        4.00      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      461.60      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =  975.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.61;30M= 1.18;1H= 1.63;3H= 2.98;6H= 4.38;24H= 7.67
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.15; LAG(HR) = 1.72; Fm(INCH/HR) = 0.23; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  66150.78
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   26122.21
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  28874.75
  TOTAL AREA(ACRES) =  66150.78       PEAK FLOW RATE(CFS) =   28874.75

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 128.90
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 D        2.70      0.20      0.10    75
  PUBLIC PARK                D        0.10      0.20      0.85    75
  NATURAL GOOD COVER
  "MEADOWS"                  D        0.60      0.20      1.00    78
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        9.10      0.20      1.00    86
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D      368.40      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                 D       79.50      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  460.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.61;30M= 1.18;1H= 1.63;3H= 2.98;6H= 4.37;24H= 7.65
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.15; LAG(HR) = 1.72; Fm(INCH/HR) = 0.23; Ybar = 0.35
```

```
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  66611.18
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   26243.14
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  28988.89
  TOTAL AREA(ACRES) =  66611.18       PEAK FLOW RATE(CFS) =   28988.89

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  66611.18  TC(MIN.) =    128.90
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.35
  PEAK FLOW RATE(CFS)   =  28988.89
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
        (c) Copyright 1983-2003 Advanced Engineering Software (aes)
            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: LE68100H.DAT
  TIME/DATE OF STUDY: 09:43 02/17/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.020
        FOOTHILL                           0.140
        MOUNTAIN                           0.190
        VALLEY(UNDEVELOPED)/DESERT         0.650
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1067.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LE67100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    28988.89    Tc(MIN.) = 128.90
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.35
  TOTAL AREA(ACRES) =   66611.18
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1067.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    28988.89    Tc(MIN.) = 128.90
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.35
  TOTAL AREA(ACRES) =   66611.18
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1067.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    176.00  DOWNSTREAM(FEET) =    133.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  6324.00   CHANNEL SLOPE =  0.0068
  CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  28988.89
  FLOW VELOCITY(FEET/SEC.) =  19.37   FLOW DEPTH(FEET) =  13.39
  TRAVEL TIME(MIN.) =   5.44   Tc(MIN.) = 134.34
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) = 134.34
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  0.939
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        2.20      0.40       1.00    40
  AGRICULTURAL POOR COVER
  "FALLOW"                   A        5.20      0.40       1.00    77
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A        0.20      0.40       0.50    32
  NATURAL FAIR COVER
  "GRASS"                    A        6.20      0.40       1.00    50
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 A       15.80      0.40       1.00    44
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        3.10      0.40       1.00    46
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   32.70
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.61;30M= 1.18;1H= 1.63;3H= 2.98;6H= 4.37;24H= 7.65
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 21.9%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.24; LAG(HR) = 1.79; Fm(INCH/HR) = 0.23; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  66643.88
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0259; Lca/L=0.4,n=.0232; Lca/L=0.5,n=.0213;Lca/L=0.6,n=.0199
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   26243.62
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  28594.47
  TOTAL AREA(ACRES) =  66643.88       PEAK FLOW RATE(CFS) =   28988.89
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 134.34
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 A        4.90      0.40      0.10    32
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A       31.60      0.40      1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A       21.00      0.40      1.00    36
  AGRICULTURAL POOR COVER
  "FALLOW"                   B       22.40      0.30      1.00    86
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B       19.00      0.30      0.50    56
  NATURAL POOR COVER
  "BARREN"                   B        2.00      0.30      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.36
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.86
  SUBAREA AREA(ACRES) =  100.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.61;30M= 1.18;1H= 1.63;3H= 2.98;6H= 4.37;24H= 7.65
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 22.0%
           MOUNTAIN= 61.9%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.24; LAG(HR) = 1.79; Fm(INCH/HR) = 0.23; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  66744.78
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0259; Lca/L=0.4,n=.0232; Lca/L=0.5,n=.0213;Lca/L=0.6,n=.0199
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   26254.98
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  28607.84
  TOTAL AREA(ACRES) =  66744.78       PEAK FLOW RATE(CFS) =   28988.89
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
```

```
============================================================================
  MAINLINE Tc(MIN) = 134.34
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B       20.90      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 B       30.90      0.30      1.00    65
  URBAN FAIR COVER
  "TURF"                     B        0.70      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.10      0.30      1.00    66
  COMMERCIAL                 B        8.00      0.30      0.10    56
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B       65.80      0.30      1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.94
  SUBAREA AREA(ACRES) =  127.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.61;30M= 1.18;1H= 1.62;3H= 2.98;6H= 4.37;24H= 7.64
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 22.1%
           MOUNTAIN= 61.8%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.24; LAG(HR) = 1.79; Fm(INCH/HR) = 0.23; Ybar = 0.36
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  66872.18
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0259; Lca/L=0.4,n=.0232; Lca/L=0.5,n=.0213;Lca/L=0.6,n=.0199
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   26274.48
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  28629.00
  TOTAL AREA(ACRES) =  66872.18       PEAK FLOW RATE(CFS) =   28988.89
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 134.34
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  PUBLIC PARK                B        0.40      0.30      0.85    56
  NATURAL FAIR COVER
  "WOODLAND"                 B       11.80      0.30      1.00    60
  NATURAL FAIR COVER
  "GRASS"                    C      222.20      0.25      1.00    79
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 C        5.10      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       71.50      0.25      1.00    77
  COMMERCIAL                 C        2.90      0.25      0.10    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  313.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.61;30M= 1.18;1H= 1.62;3H= 2.97;6H= 4.37;24H= 7.63
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 22.3%
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          MOUNTAIN= 61.6%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.24; LAG(HR) = 1.79; Fm(INCH/HR) = 0.23; Ybar = 0.36
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  67186.08
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0259; Lca/L=0.4,n=.0232; Lca/L=0.5,n=.0213;Lca/L=0.6,n=.0199
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   26342.26
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  28696.71
  TOTAL AREA(ACRES) =  67186.08       PEAK FLOW RATE(CFS) =   28988.89
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 134.34
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  PUBLIC PARK                C        0.70      0.25      0.85    69
  NATURAL FAIR COVER
  "WOODLAND"                 C       22.40      0.25      1.00    73
  AGRICULTURAL POOR COVER
  "FALLOW"                   D      104.40      0.20      1.00    94
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D      142.90      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        0.60      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      421.50      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.90
  SUBAREA AREA(ACRES) =  692.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.61;30M= 1.18;1H= 1.62;3H= 2.97;6H= 4.36;24H= 7.61
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 22.7%
           MOUNTAIN= 61.2%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.24; LAG(HR) = 1.79; Fm(INCH/HR) = 0.23; Ybar = 0.36
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.39;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  67878.58
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0259; Lca/L=0.4,n=.0232; Lca/L=0.5,n=.0213;Lca/L=0.6,n=.0199
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   26538.25
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  28888.66
  TOTAL AREA(ACRES) =  67878.58       PEAK FLOW RATE(CFS) =   28988.89
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 134.34
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 D       18.30      0.20      1.00    82
  URBAN FAIR COVER
  "TURF"                     D        6.30      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      188.90      0.20      1.00    83
  COMMERCIAL                 D       37.80      0.20      0.10    75
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D        9.80      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                 D       65.50      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.90
  SUBAREA AREA(ACRES) =  326.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.61;30M= 1.18;1H= 1.62;3H= 2.97;6H= 4.35;24H= 7.60
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 22.9%
           MOUNTAIN= 61.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.24; LAG(HR) = 1.79; Fm(INCH/HR) = 0.23; Ybar = 0.36
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.39;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  68205.18
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0259; Lca/L=0.4,n=.0232; Lca/L=0.5,n=.0213;Lca/L=0.6,n=.0199
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   26625.69
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  28975.75
  TOTAL AREA(ACRES) =  68205.18       PEAK FLOW RATE(CFS) =   28988.89
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  68205.18  TC(MIN.) =    134.34
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.36
  PEAK FLOW RATE(CFS)   =  28988.89
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
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PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

TECHNICAL APPENDIX I-C
HYDROLOGIC ANALYSIS
PROPOSED CONDITION
2-YEAR EXPECTED VALUE

Hydrologic Analyses of Upstream Areas not Contemplated to be Developed are not Duplicated in this Technical Appendix
See Technical Appendix I-A

Rainfall Depths
2-Year - Expected Value - Proposed Condition

	Area	< 2000	> 2000	Rainfall Depth							Area	< 2000	> 2000	Rainfall Depth					
Subarea	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr	Node	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr
		X		0.13	0.28	0.37	0.62	0.85	1.44			X		0.13	0.28	0.37	0.62	0.85	1.44
			X	0.18	0.32	0.46	0.94	1.46	2.67				X	0.18	0.32	0.46	0.94	1.46	2.67
1062	3,450.7	3,010.5	440.2	0.14	0.29	0.38	0.66	0.93	1.60	1063	49,889.3	26,015.3	23,874.0	0.15	0.30	0.41	0.77	1.14	2.03
1063	1,647.5	1,647.5	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1064	51,536.8	27,662.8	23,874.0	0.15	0.30	0.41	0.77	1.13	2.01
1064	1,712.0	1,712.0	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1065	53,248.8	29,374.8	23,874.0	0.15	0.30	0.41	0.76	1.12	1.99
1065	8,253.4	8,253.4	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1066	61,502.2	37,628.2	23,874.0	0.15	0.30	0.40	0.74	1.09	1.92
1066	5,184.3	5,184.3	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1067	66,686.5	42,812.5	23,874.0	0.15	0.29	0.40	0.73	1.07	1.88
1067	1,560.1	1,560.1	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1068	68,246.6	44,372.6	23,874.0	0.15	0.29	0.40	0.73	1.06	1.87

Channel Hydraulics, Travel Times, Times of Concentration, and Lag Estimates
2-Year - Expected Value - Proposed Condition

U/S Node	D/S Node	U/S Elevation	D/S Elevation	Length (ft)	Manning (n)	Base (ft)	Sideslope (z)	Height (ft)	Q(2) (cfs)	Dn (ft)	V (fps)	Tt (min)	Tc (min)	Lag (hr)
1062	1063	345	319	2852	0.025	60	2	15	1,943	2.81	10.56	4.50	233.98	3.12
1063	1064	319	275	5418	0.025	60	2	15	2,025	2.97	10.32	8.75	242.72	3.24
1064	1065	275	240	5738	0.025	60	2	15	2,054	3.26	9.46	10.11	252.83	3.37
1065	1066	240	213	6295	0.030	85	2	15	2,076	3.32	6.82	15.38	268.21	3.58
1066	1067	213	176	6201	0.030	85	2	15	2,252	3.16	7.80	13.25	281.46	3.75
1067	1068	176	133	6324	0.030	85	2	15	2,254	3.04	8.13	12.96	294.42	3.93

Losses

Node	P1063
Total Area (ac)	49,887.8
24-Hour Rainfall Depth (in)	2.03
Fm (in/hr)	0.59
Y-Bar	0.72

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	1.3	0.2	0.0	0.0	18.7	75.6	163.8	234.9
11+ Dwellings / Acre	20	32	56	69	75	0.0	6.9	80.9	1.9	0.0	6.9	80.9	1.9
5-7 Dwellings / Acre	50	32	56	69	75	4.4	0.0	0.0	0.6	15.2	3.6	49.7	28.8
3-4 Dwellings / Acre	60	32	56	69	75	12.9	4.2	28.7	16.7	12.9	4.2	28.7	16.7
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	6.2	8.9	3.6
Barren (Poor)	100	78	86	91	93	0.0	0.0	1.8	0.1	7.1	7.8	78.2	121.6
Chaparral, Broadleaf (Fair)	100	40	63	75	81	88.7	7.1	656.1	420.9	427.4	738.7	######	9,918.5
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	54.2	139.4	49.6	41.5	2,571.2	6,193.1
Grass (Fair)	100	50	69	79	84	6.5	5.6	156.5	48.3	70.8	76.4	545.9	1,058.8
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.3
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Open Brush (Fair)	100	46	66	77	83	98.1	11.6	1,039.1	261.4	486.0	299.9	5,015.2	4,824.9
Woodland (Fair)	100	36	60	73	79	48.4	19.0	189.0	40.0	750.3	410.4	1,501.1	2,087.4
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.2
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	1.3	10.0	87.0	57.8

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.11	0.19
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.11	0.19
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.11	0.19
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.11	0.19
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.11	0.19
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.25	0.43	0.59	0.66
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.05	0.19	0.31
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.01	0.15	0.31	0.43
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.11	0.27	0.38
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.12	0.29	0.38
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.02	0.14	0.25
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.08	0.23	0.35
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.03	0.16	0.27
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.23	0.43	0.59	0.70
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.07	0.23	0.33
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.11	0.27	0.38
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.07	0.23	0.33

Losses

Node	P1064
Total Area (ac)	51,534.9
24-Hour Rainfall Depth (in)	2.01
Fm (in/hr)	0.59
Y-Bar	0.72

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.2	33.0	38.3	51.3	18.9	108.6	202.1	286.2
11+ Dwellings / Acre	20	32	56	69	75	4.8	15.5	180.6	154.7	4.8	22.4	261.5	156.6
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	1.7	0.8	15.2	3.6	51.4	29.6
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	1.3	12.9	4.2	28.7	18.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	7.9	0.0	6.2	8.9	11.5
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	7.1	7.8	78.2	121.6
Chaparral, Broadleaf (Fair)	100	40	63	75	81	51.8	99.6	242.7	160.0	479.2	838.3	######	######
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	21.3	24.2	49.6	41.5	2,592.5	6,217.3
Grass (Fair)	100	50	69	79	84	0.2	14.7	27.2	28.0	71.0	91.1	573.1	1,086.8
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.3
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Open Brush (Fair)	100	46	66	77	83	0.0	20.0	172.2	171.4	486.0	319.9	5,187.4	4,996.3
Woodland (Fair)	100	36	60	73	79	1.6	7.4	48.4	53.6	751.9	417.8	1,549.5	2,141.0
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.2	0.0	0.0	0.0	2.4	0.0	0.0	0.2
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	12.1	0.4	1.3	10.0	99.1	58.2

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.11	0.19
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.11	0.19
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.11	0.19
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.11	0.19
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.11	0.19
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.24	0.43	0.58	0.66
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.05	0.19	0.30
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.01	0.15	0.30	0.43
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.11	0.26	0.37
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.12	0.28	0.37
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.02	0.13	0.24
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.08	0.23	0.35
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.03	0.16	0.26
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.23	0.43	0.58	0.70
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.07	0.23	0.33
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.11	0.26	0.37
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.07	0.23	0.33

Losses

Node	P1065
Total Area (ac)	53,246.8
24-Hour Rainfall Depth (in)	1.99
Fm (in/hr)	0.58
Y-Bar	0.72

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.9	3.9	4.2	0.4	19.8	112.5	206.3	286.6
11+ Dwellings / Acre	20	32	56	69	75	43.5	60.3	93.0	68.9	48.3	82.7	354.5	225.5
5-7 Dwellings / Acre	50	32	56	69	75	0.2	0.0	0.0	0.0	15.4	3.6	51.4	29.6
3-4 Dwellings / Acre	60	32	56	69	75	0.0	82.1	529.2	109.8	12.9	86.3	557.9	127.8
Public Park	85	32	56	69	75	0.0	0.2	0.0	1.8	0.0	6.4	8.9	13.3
Barren (Poor)	100	78	86	91	93	0.0	0.7	0.0	0.7	7.1	8.5	78.2	122.3
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	6.7	111.4	1.9	479.2	845.0	######	######
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	49.6	41.5	2,592.5	6,217.3
Grass (Fair)	100	50	69	79	84	11.3	36.1	42.1	39.6	82.3	127.2	615.2	1,126.4
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.3
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.2
Open Brush (Fair)	100	46	66	77	83	0.7	30.5	117.7	55.0	486.7	350.4	5,305.1	5,051.3
Woodland (Fair)	100	36	60	73	79	6.9	44.6	106.5	31.7	758.8	462.4	1,656.0	2,172.7
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.2
Pasture, Dryland (Fair)	100	49	69	79	84	49.5	1.8	0.2	11.7	49.5	1.8	0.2	11.7
Turf (Fair)	100	44	65	77	82	0.0	0.4	0.5	3.3	1.3	10.4	99.6	61.5

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.11	0.19
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.11	0.19
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.11	0.19
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.11	0.19
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.11	0.19
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.89	0.89	0.89	0.89
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.24	0.42	0.58	0.66
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.05	0.19	0.30
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.01	0.14	0.30	0.42
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.11	0.26	0.37
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.12	0.28	0.37
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.02	0.13	0.24
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.08	0.22	0.35
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.03	0.16	0.26
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.22	0.42	0.58	0.70
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.07	0.22	0.32
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.11	0.26	0.37
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.07	0.22	0.32

Losses

Node	P1066
Total Area (ac)	61,499.9
24-Hour Rainfall Depth (in)	1.92
Fm (in/hr)	0.57
Y-Bar	0.72

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	17.3	352.9	417.3	35.5	37.1	465.4	623.6	322.1
11+ Dwellings / Acre	20	32	56	69	75	7.1	85.9	460.8	357.3	55.4	168.6	815.3	582.8
5-7 Dwellings / Acre	50	32	56	69	75	13.3	201.9	322.3	91.5	28.7	205.5	373.7	121.1
3-4 Dwellings / Acre	60	32	56	69	75	0.0	76.7	228.4	309.7	12.9	163.0	786.3	437.5
Public Park	85	32	56	69	75	19.8	22.2	0.7	44.5	19.8	28.6	9.6	57.8
Barren (Poor)	100	78	86	91	93	56.0	189.5	117.8	9.6	63.1	198.0	196.0	131.9
Chaparral, Broadleaf (Fair)	100	40	63	75	81	1.3	119.3	252.2	112.9	480.5	964.3	######	######
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	2.4	26.1	11.3	49.6	43.9	2,618.6	6,228.6
Grass (Fair)	100	50	69	79	84	51.4	335.8	615.7	204.0	133.7	463.0	1,230.9	1,330.4
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.3
Meadows or Cienegas (Good)	100	30	58	71	78	0.4	0.0	4.0	1.6	0.4	0.0	4.0	3.8
Open Brush (Fair)	100	46	66	77	83	4.0	113.3	1,315.5	171.9	490.7	463.7	6,620.6	5,223.2
Woodland (Fair)	100	36	60	73	79	101.4	223.6	211.8	41.7	860.2	686.0	1,867.8	2,214.4
Fallow (Poor)	100	77	86	91	94	2.2	19.8	67.2	12.5	2.2	22.5	67.2	12.5
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.4	2.4	0.0	0.0	0.6
Pasture, Dryland (Fair)	100	49	69	79	84	120.0	174.0	183.9	95.9	169.5	175.8	184.1	107.6
Turf (Fair)	100	44	65	77	82	20.2	139.2	52.4	5.8	21.5	149.6	152.0	67.3

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.10	0.18
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.88	0.88	0.88	0.88
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.10	0.18
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.88	0.88	0.88	0.88
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.10	0.18
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.88	0.88	0.88	0.88
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.10	0.18
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.88	0.88	0.88	0.88
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.10	0.18
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.88	0.88	0.88	0.88
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.23	0.41	0.57	0.65
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.04	0.18	0.29
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.14	0.29	0.41
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.10	0.25	0.36
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.11	0.27	0.36
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.02	0.12	0.23
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.07	0.21	0.33
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.02	0.15	0.25
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.21	0.41	0.57	0.69
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.06	0.21	0.31
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.10	0.25	0.36
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.06	0.21	0.31

Losses

Node	P1067
Total Area (ac)	66,684.6
24-Hour Rainfall Depth (in)	1.88
Fm (in/hr)	0.57
Y-Bar	0.73

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	7.8	10.8	11.7	37.1	473.2	634.4	333.8
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	17.9	3.8	55.4	168.6	833.2	586.6
5-7 Dwellings / Acre	50	32	56	69	75	0.0	89.6	0.0	104.6	28.7	295.1	373.7	225.7
3-4 Dwellings / Acre	60	32	56	69	75	0.0	50.9	125.4	156.1	12.9	213.9	911.7	593.6
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.1	19.8	28.6	9.6	57.9
Barren (Poor)	100	78	86	91	93	0.0	0.0	7.6	0.6	63.1	198.0	203.6	132.5
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	23.9	203.6	159.9	480.5	988.2	######	######
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.4	0.0	7.8	49.6	44.3	2,618.6	6,236.4
Grass (Fair)	100	50	69	79	84	0.9	327.5	485.3	635.3	134.6	790.5	1,716.2	1,965.7
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.3
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.9	0.2	0.0	0.4	0.9	4.2	3.8
Open Brush (Fair)	100	46	66	77	83	8.9	118.9	940.0	334.5	499.6	582.6	7,560.6	5,557.7
Woodland (Fair)	100	36	60	73	79	17.9	51.7	94.1	63.8	878.1	737.7	1,961.9	2,278.2
Fallow (Poor)	100	77	86	91	94	0.2	180.4	124.3	77.9	2.4	202.9	191.5	90.4
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	6.0	0.7	0.9	2.4	6.0	0.7	1.5
Pasture, Dryland (Fair)	100	49	69	79	84	5.5	418.8	128.1	61.4	175.0	594.6	312.2	169.0
Turf (Fair)	100	44	65	77	82	0.0	105.0	4.9	8.2	21.5	254.6	156.9	75.5

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.09	0.17
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.88	0.88	0.88	0.88
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.09	0.17
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.88	0.88	0.88	0.88
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.09	0.17
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.88	0.88	0.88	0.88
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.09	0.17
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.88	0.88	0.88	0.88
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.09	0.17
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.88	0.88	0.88	0.88
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.22	0.40	0.56	0.64
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.04	0.17	0.28
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.13	0.28	0.40
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.09	0.24	0.35
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.10	0.26	0.35
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.01	0.12	0.22
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.06	0.20	0.33
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.02	0.14	0.24
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.20	0.40	0.56	0.68
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.06	0.20	0.30
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.09	0.24	0.35
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.06	0.20	0.30

Losses

Node	P1068
Total Area (ac)	68,244.9
24-Hour Rainfall Depth (in)	1.87
Fm (in/hr)	0.56
Y-Bar	0.73

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	23.3	42.8	12.9	60.2	60.4	516.0	647.3	394.0
11+ Dwellings / Acre	20	32	56	69	75	6.7	77.6	0.0	143.9	62.1	246.2	833.2	730.5
5-7 Dwellings / Acre	50	32	56	69	75	0.0	16.5	0.0	140.2	28.7	311.6	373.7	365.9
3-4 Dwellings / Acre	60	32	56	69	75	33.6	14.9	0.9	6.0	46.5	228.8	912.6	599.6
Public Park	85	32	56	69	75	0.0	0.0	0.2	0.0	19.8	28.6	9.8	57.9
Barren (Poor)	100	78	86	91	93	0.0	2.0	0.0	0.6	63.1	200.0	203.6	133.1
Chaparral, Broadleaf (Fair)	100	40	63	75	81	1.3	0.0	0.0	4.9	481.8	988.2	######	######
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	49.6	44.3	2,618.6	6,236.4
Grass (Fair)	100	50	69	79	84	1.8	7.1	218.6	332.2	136.4	797.6	1,934.8	2,297.9
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.3
Meadows or Cienegas (Good)	100	30	58	71	78	0.3	0.0	0.0	0.0	0.7	0.9	4.2	3.8
Open Brush (Fair)	100	46	66	77	83	3.1	0.7	70.8	172.8	502.7	583.3	7,631.4	5,730.5
Woodland (Fair)	100	36	60	73	79	19.3	6.9	19.5	61.3	897.4	744.6	1,981.4	2,339.5
Fallow (Poor)	100	77	86	91	94	0.0	4.1	0.0	35.6	2.4	207.0	191.5	126.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.9	0.4	0.0	1.1	3.3	6.4	0.7	2.6
Pasture, Dryland (Fair)	100	49	69	79	84	1.6	10.7	0.0	1.8	176.6	605.3	312.2	170.8
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	1.2	21.5	254.6	156.9	76.7

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.09	0.17
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.88	0.88	0.88	0.88
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.09	0.17
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.88	0.88	0.88	0.88
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.09	0.17
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.88	0.88	0.88	0.88
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.09	0.17
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.88	0.88	0.88	0.88
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.01	0.09	0.17
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.88	0.88	0.88	0.88
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.22	0.40	0.56	0.64
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.04	0.17	0.28
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.13	0.28	0.40
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.09	0.24	0.35
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.10	0.26	0.35
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.01	0.12	0.22
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.06	0.20	0.33
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.02	0.14	0.24
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.20	0.40	0.56	0.68
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.05	0.20	0.30
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.09	0.24	0.35
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.05	0.20	0.30

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                           Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LP63002E.FLD
  TIME/DATE OF STUDY: 15:45 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1063.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
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      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   49887.801 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    3.120 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.020
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.150
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.640
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.190
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.590
         LOW LOSS FRACTION = 0.730
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.15
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.30
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.41
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.77
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.14
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.03

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.343
          30-MINUTE FACTOR = 0.394
           1-HOUR FACTOR = 0.434
           3-HOUR FACTOR = 0.784
           6-HOUR FACTOR = 0.903
          24-HOUR FACTOR = 0.943

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   2.671


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.261	1576.609
2	0.784	3153.218
3	1.307	3153.218
4	1.827	3141.831
5	2.343	3112.965
6	2.891	3304.287
7	3.632	4469.873
8	4.405	4664.420
9	5.184	4700.477
10	5.989	4855.007
11	6.812	4967.741
12	7.829	6136.500
13	8.893	6418.659
14	10.041	6925.066
15	11.316	7693.297
16	12.608	7793.017
17	14.081	8886.960
18	15.619	9278.368
19	17.434	10955.126
20	19.181	10535.374
21	20.820	9894.031
22	22.939	12780.177
23	25.173	13483.200
24	27.079	11499.126
25	28.948	11275.061
26	30.513	9438.917
27	32.220	10302.840
28	33.975	10588.206
29	35.563	9581.864
30	37.017	8769.381
31	38.608	9601.657
32	40.274	10049.603
33	41.822	9337.534
34	43.349	9215.048
35	45.037	10182.884
36	46.900	11240.480
37	48.526	9810.130
38	50.046	9171.825
39	51.279	7436.269
40	52.417	6869.036
41	53.484	6435.382
42	54.527	6291.008
43	55.405	5300.110
44	56.226	4954.789
45	57.228	6040.763
46	58.119	5375.899
47	58.803	4129.463
48	59.490	4142.190
49	60.168	4093.996
50	60.841	4057.747
51	61.516	4073.006
52	62.192	4080.440
53	62.901	4276.024
54	63.467	3417.302
55	64.038	3446.279
56	64.725	4144.262
57	65.336	3682.622
58	65.795	2773.290
59	66.309	3096.654
60	66.828	3131.361
61	67.333	3048.920
62	67.853	3137.897

63	68.353	3017.666
64	68.793	2650.987
65	69.231	2643.070
66	69.690	2770.804
67	70.116	2570.894
68	70.522	2446.520
69	70.928	2453.838
70	71.334	2446.059
71	71.735	2419.316
72	72.123	2341.294
73	72.492	2228.657
74	72.859	2209.923
75	73.234	2266.264
76	73.608	2254.066
77	73.949	2060.370
78	74.291	2061.935
79	74.632	2056.458
80	74.972	2054.248
81	75.315	2065.617
82	75.645	1990.772
83	75.973	1978.988
84	76.284	1877.629
85	76.571	1735.119
86	76.859	1734.797
87	77.146	1733.231
88	77.428	1699.997
89	77.695	1612.401
90	77.960	1599.835
91	78.224	1590.123
92	78.470	1481.583
93	78.711	1454.931
94	78.954	1464.828
95	79.210	1547.222
96	79.461	1514.541
97	79.698	1430.259
98	79.936	1433.757
99	80.172	1423.124
100	80.397	1361.812
101	80.618	1331.523
102	80.839	1332.168
103	81.060	1334.746
104	81.279	1322.824
105	81.497	1313.664
106	81.713	1304.734
107	81.928	1294.423
108	82.137	1262.662
109	82.333	1183.950
110	82.522	1139.899
111	82.711	1139.346
112	82.901	1142.568
113	83.088	1128.713
114	83.269	1092.855
115	83.450	1092.487
116	83.631	1093.316
117	83.812	1091.429
118	83.987	1057.964
119	84.160	1040.933
120	84.327	1008.390
121	84.493	1004.707
122	84.660	1003.372
123	84.826	1002.682
124	84.993	1005.444
125	85.159	1003.556
126	85.325	1004.707
127	85.492	1006.226
128	85.659	1003.372
129	85.823	993.338
130	85.981	951.082
131	86.119	836.328
132	86.248	777.363
133	86.378	780.263
134	86.507	780.539
135	86.636	775.337
136	86.765	780.493
137	86.893	776.028
138	87.022	776.856
139	87.151	779.572
140	87.280	776.856
141	87.409	778.191
142	87.538	777.685
143	87.667	776.028
144	87.793	763.553
145	87.906	681.619
146	88.015	656.349
147	88.123	648.846
148	88.230	645.025
149	88.338	652.344
150	88.446	651.469

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 5812.1968

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1900.3475

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2 4 - H O U R S T O R M

R U N O F F H Y D R O G R A P H

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HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 500.0 1000.0 1500.0 2000.0
14.000	501.5004	1011.95	. V Q . .
14.083	508.6326	1035.60	. V Q . .
14.167	515.9290	1059.43	. V .Q . .
14.250	523.3969	1084.33	. .V .Q . .
14.333	531.0382	1109.53	. .V . Q . .
14.417	538.8441	1133.41	. .V . Q . .
14.500	546.8092	1156.54	. .V . Q . .
14.583	554.9529	1182.47	. .V . Q . .
14.667	563.2805	1209.16	. .V . Q . .
14.750	571.7853	1234.90	. . V . Q . .
14.833	580.4671	1260.60	. . V . Q . .
14.917	589.3345	1287.55	. . V . Q . .
15.000	598.4079	1317.45	. . V . Q . .
15.083	607.6765	1345.79	. . V . Q . .
15.167	617.1382	1373.84	. . V . Q . .
15.250	626.7845	1400.64	. . V . Q . .
15.333	636.6090	1426.52	. . V . Q . .
15.417	646.5952	1449.99	. . V . Q . .
15.500	656.7221	1470.44	. . V . Q. .
15.583	667.0005	1492.43	. . V . Q. .
15.667	677.4247	1513.59	. . V . Q .
15.750	687.9932	1534.55	. . V . Q .
15.833	698.7257	1558.36	. . V . .Q .
15.917	709.6141	1580.99	. . V . .Q .
16.000	720.6578	1603.54	. . V . . Q .
16.083	731.9606	1641.17	. . V . . Q .
16.167	743.4771	1672.20	. . V . . Q .
16.250	755.0926	1686.57	. . V . . Q .
16.333	766.7864	1697.94	. . V . . Q .

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  16.417    778.5690   1710.84  .          .     V   .          .   Q     .
  16.500    790.4644   1727.21  .          .     V   .          .   Q     .
  16.583    802.5300   1751.92  .          .     V   .          .    Q    .
  16.667    814.7026   1767.46  .          .      V  .          .    Q    .
  16.750    826.9449   1777.59  .          .      V  .          .    Q    .
  16.833    839.2587   1787.96  .          .      V  .          .    Q    .
  16.917    851.6570   1800.23  .          .      V  .          .     Q   .
  17.000    864.2322   1825.91  .          .       V .          .     Q   .
  17.083    876.9028   1839.77  .          .       V .          .     Q   .
  17.167    889.6234   1847.03  .          .       V .          .     Q   .
  17.250    902.3767   1851.79  .          .       V .          .      Q  .
  17.333    915.1668   1857.12  .          .        V.          .      Q  .
  17.417    928.0707   1873.64  .          .        V.          .      Q  .
  17.500    941.0627   1886.44  .          .        V.          .      Q  .
  17.583    954.1779   1904.32  .          .         V          .       Q .
  17.667    967.2741   1901.58  .          .         V          .       Q .
  17.750    980.4077   1906.99  .          .         V          .       Q .
  17.833    993.7963   1944.03  .          .         V          .       Q .
  17.917   1007.2429   1952.45  .          .         .V         .        Q.
  18.000   1020.5363   1930.20  .          .         .V         .       Q .
  18.083   1033.7765   1922.47  .          .         .V         .       Q .
  18.167   1046.9020   1905.81  .          .         . V        .       Q .
  18.250   1060.0858   1914.29  .          .         . V        .       Q .
  18.333   1073.2316   1908.76  .          .         . V        .       Q .
  18.417   1086.2729   1893.62  .          .         . V        .      Q  .
  18.500   1099.2131   1878.91  .          .         .  V       .      Q  .
  18.583   1112.1627   1880.27  .          .         .  V       .      Q  .
  18.667   1125.1001   1878.51  .          .         .  V       .      Q  .
  18.750   1137.9510   1865.96  .          .         .  V       .      Q  .
  18.833   1150.7153   1853.37  .          .         .   V      .      Q  .
  18.917   1163.4735   1852.48  .          .         .   V      .      Q  .
  19.000   1176.2157   1850.17  .          .         .   V      .      Q  .
  19.083   1188.7281   1816.81  .          .         .    V     .     Q   .
  19.167   1201.0729   1792.45  .          .         .    V     .    Q    .
  19.250   1213.1984   1760.62  .          .         .    V     .    Q    .
  19.333   1225.1998   1742.62  .          .         .    V     .   Q     .
  19.417   1237.0659   1722.95  .          .         .     V    .   Q     .
  19.500   1248.8143   1705.87  .          .         .     V    .   Q     .
  19.583   1260.3556   1675.79  .          .         .     V    .  Q      .
  19.667   1271.7314   1651.78  .          .         .     V    .  Q      .
  19.750   1283.0199   1639.09  .          .         .      V   . Q       .
  19.833   1294.0789   1605.76  .          .         .      V   . Q       .
  19.917   1304.8490   1563.83  .          .         .      V   .Q        .
  20.000   1315.4044   1532.65  .          .         .      V   Q         .
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  END OF FLOODSCx ROUTING ANALYSIS
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                           Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LP64002E.FLD
  TIME/DATE OF STUDY: 15:48 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1064.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   51534.898 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    3.240 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.030
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.150
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.630
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.190
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.590
         LOW LOSS FRACTION = 0.740
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.15
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.30
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.41
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.77
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.13
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.01

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.337
          30-MINUTE FACTOR = 0.389
           1-HOUR FACTOR = 0.429
           3-HOUR FACTOR = 0.779
           6-HOUR FACTOR = 0.901
          24-HOUR FACTOR = 0.942

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   2.572


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.250	1559.691
2	0.751	3119.380
3	1.251	3119.381
4	1.751	3112.347
5	2.244	3075.941
6	2.752	3164.611
7	3.424	4185.866
8	4.166	4627.461
9	4.908	4623.436
10	5.670	4750.567
11	6.452	4873.469
12	7.318	5397.713
13	8.386	6654.329
14	9.341	5951.665
15	10.626	8007.652
16	11.773	7152.688
17	13.118	8383.853
18	14.550	8922.103
19	16.087	9582.771
20	17.873	11129.497
21	19.494	10098.977
22	21.128	10186.219
23	23.222	13052.023
24	25.351	13267.069
25	27.137	11135.096
26	28.941	11238.708
27	30.441	9350.715
28	32.084	10238.750
29	33.766	10483.753
30	35.334	9774.280
31	36.729	8695.390
32	38.231	9357.051
33	39.883	10296.881
34	41.358	9194.048
35	42.882	9498.679
36	44.396	9434.818
37	46.243	11511.788
38	47.857	10058.772
39	49.444	9890.706
40	50.731	8023.267
41	51.873	7118.648
42	52.945	6679.807
43	53.978	6437.253
44	54.944	6023.353
45	55.741	4963.315
46	56.624	5505.103
47	57.603	6103.166
48	58.400	4967.286
49	59.068	4162.237
50	59.740	4185.346
51	60.403	4137.511
52	61.061	4097.568
53	61.722	4121.225
54	62.381	4106.342
55	63.072	4308.977
56	63.626	3448.960
57	64.176	3427.087
58	64.836	4114.282
59	65.464	3912.527
60	65.910	2782.591
61	66.404	3076.214
62	66.911	3160.425

63	67.405	3078.639
64	67.893	3042.786
65	68.415	3252.292
66	68.845	2684.828
67	69.270	2643.412
68	69.698	2668.233
69	70.143	2778.169
70	70.535	2439.326
71	70.928	2451.737
72	71.321	2450.073
73	71.712	2433.145
74	72.098	2408.038
75	72.466	2293.917
76	72.822	2219.311
77	73.175	2197.391
78	73.541	2280.984
79	73.895	2207.614
80	74.224	2050.365
81	74.553	2049.177
82	74.881	2047.275
83	75.208	2034.674
84	75.537	2051.507
85	75.854	1976.995
86	76.169	1961.589
87	76.474	1901.676
88	76.751	1728.070
89	77.028	1725.122
90	77.304	1719.321
91	77.578	1710.857
92	77.839	1622.699
93	78.092	1579.143
94	78.346	1581.568
95	78.589	1518.183
96	78.820	1437.158
97	79.051	1436.635
98	79.286	1470.490
99	79.534	1543.718
100	79.767	1451.233
101	79.994	1415.475
102	80.221	1412.622
103	80.445	1395.361
104	80.659	1332.975
105	80.869	1314.811
106	81.081	1316.047
107	81.292	1315.762
108	81.501	1305.729
109	81.709	1295.791
110	81.916	1288.563
111	82.121	1279.006
112	82.322	1250.428
113	82.512	1183.145
114	82.692	1125.181
115	82.873	1126.274
116	83.053	1124.896
117	83.234	1124.087
118	83.408	1086.855
119	83.581	1076.775
120	83.754	1077.012
121	83.927	1079.010
122	84.097	1062.795
123	84.264	1040.113
124	84.426	1006.258
125	84.585	991.707
126	84.744	991.517
127	84.903	992.230
128	85.062	990.804
129	85.221	990.138
130	85.380	991.565
131	85.539	990.804
132	85.698	993.134
133	85.857	987.618
134	86.015	985.954
135	86.164	930.605
136	86.296	823.475
137	86.420	767.698
138	86.542	763.752
139	86.665	766.272
140	86.788	765.844
141	86.910	761.231
142	87.033	768.935
143	87.156	764.227
144	87.279	764.940
145	87.402	765.083
146	87.524	765.083
147	87.647	764.275
148	87.770	767.888
149	87.892	762.135
150	88.006	708.451

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 6017.6094

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1859.7467

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2 4 - H O U R S T O R M

R U N O F F H Y D R O G R A P H

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HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 500.0 1000.0 1500.0 2000.0
14.000	484.9346	969.02	. V Q. . .
14.083	491.7618	991.31	. V Q. . .
14.167	498.7599	1016.12	. V Q . .
14.250	505.9138	1038.76	. V Q . .
14.333	513.2302	1062.34	. .V .Q . .
14.417	520.7108	1086.18	. .V .Q . .
14.500	528.3503	1109.26	. .V . Q . .
14.583	536.1510	1132.66	. .V . Q . .
14.667	544.1219	1157.38	. .V . Q . .
14.750	552.2701	1183.12	. .V . Q . .
14.833	560.5869	1207.61	. . V . Q . .
14.917	569.0757	1232.57	. . V . Q . .
15.000	577.7399	1258.05	. . V . Q . .
15.083	586.6086	1287.74	. . V . Q . .
15.167	595.6607	1314.36	. . V . Q . .
15.250	604.9149	1343.70	. . V . Q . .
15.333	614.3448	1369.23	. . V . Q . .
15.417	623.9328	1392.18	. . V . Q . .
15.500	633.6591	1412.26	. . V . Q . .
15.583	643.5297	1433.22	. . V . Q . .
15.667	653.5597	1456.35	. . V . Q. .
15.750	663.7258	1476.12	. . V . Q. .
15.833	674.0299	1496.15	. . V . Q. .
15.917	684.5041	1520.85	. . V . Q .
16.000	695.1577	1546.90	. . V . Q .
16.083	706.0607	1583.12	. . V . .Q .
16.167	717.1912	1616.15	. . V . . Q .
16.250	728.4125	1629.34	. . V . . Q .
16.333	739.7184	1641.61	. . V . . Q .

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  16.417    751.1147   1654.75  .          .     V   .          .  Q      .
  16.500    762.6423   1673.79  .          .     V   .          .  Q      .
  16.583    774.3204   1695.67  .          .     V   .          .  Q      .
  16.667    786.1164   1712.78  .          .     V   .          .   Q     .
  16.750    797.9930   1724.48  .          .      V  .          .   Q     .
  16.833    809.9502   1736.19  .          .      V  .          .   Q     .
  16.917    822.0004   1749.69  .          .      V  .          .   Q     .
  17.000    834.1528   1764.53  .          .      V  .          .    Q    .
  17.083    846.4711   1788.63  .          .       V .          .    Q    .
  17.167    858.8111   1791.76  .          .       V .          .    Q    .
  17.250    871.2928   1812.34  .          .       V .          .     Q   .
  17.333    883.7207   1804.53  .          .        V.          .     Q   .
  17.417    896.2773   1823.22  .          .        V.          .     Q   .
  17.500    908.9007   1832.91  .          .        V.          .     Q   .
  17.583    921.6265   1847.78  .          .        V.          .     Q   .
  17.667    934.4549   1862.69  .          .         V          .      Q  .
  17.750    947.2434   1856.90  .          .         V          .      Q  .
  17.833    960.1042   1867.39  .          .         V          .      Q  .
  17.917    973.2092   1902.83  .          .         V          .       Q .
  18.000    986.3450   1907.32  .          .         .V         .       Q .
  18.083    999.3008   1881.18  .          .         .V         .      Q  .
  18.167   1012.2252   1876.62  .          .         .V         .      Q  .
  18.250   1025.0280   1858.95  .          .         . V        .      Q  .
  18.333   1037.9017   1869.27  .          .         . V        .      Q  .
  18.417   1050.7220   1861.50  .          .         . V        .      Q  .
  18.500   1063.4520   1848.40  .          .         . V        .     Q   .
  18.583   1076.0540   1829.80  .          .         .  V       .     Q   .
  18.667   1088.6440   1828.09  .          .         .  V       .     Q   .
  18.750   1101.2428   1829.35  .          .         .  V       .     Q   .
  18.833   1113.7316   1813.37  .          .         .  V       .     Q   .
  18.917   1126.1620   1804.89  .          .         .   V      .     Q   .
  19.000   1138.5078   1792.61  .          .         .   V      .    Q    .
  19.083   1150.9127   1801.20  .          .         .   V      .     Q   .
  19.167   1163.1167   1772.02  .          .         .    V     .    Q    .
  19.250   1175.1780   1751.30  .          .         .    V     .    Q    .
  19.333   1186.9990   1716.42  .          .         .    V     .   Q     .
  19.417   1198.6832   1696.55  .          .         .    V     .  Q      .
  19.500   1210.2410   1678.18  .          .         .     V    .  Q      .
  19.583   1221.6853   1661.73  .          .         .     V    .  Q      .
  19.667   1232.9677   1638.21  .          .         .     V    . Q       .
  19.750   1244.0518   1609.42  .          .         .     V    . Q       .
  19.833   1255.0369   1595.04  .          .         .     V   .Q        .
  19.917   1265.8718   1573.24  .          .         .      V  .Q        .
  20.000   1276.4493   1535.86  .          .         .      V  Q         .
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  END OF FLOODSCx ROUTING ANALYSIS
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             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
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                          Analysis prepared by:

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                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LP65002E.FLD
  TIME/DATE OF STUDY: 15:49 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1065.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   53246.801 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    3.380 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.150
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.610
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.190
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.580
         LOW LOSS FRACTION = 0.740
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.15
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.30
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.41
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.76
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.12
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.99

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.332
          30-MINUTE FACTOR = 0.384
           1-HOUR FACTOR = 0.424
           3-HOUR FACTOR = 0.774
           6-HOUR FACTOR = 0.899
          24-HOUR FACTOR = 0.941

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   2.465


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.237	1527.615
2	0.712	3055.232
3	1.186	3055.230
4	1.660	3051.943
5	2.128	3013.689
6	2.604	3064.169
7	3.185	3739.959
8	3.890	4541.952
9	4.591	4516.350
10	5.304	4590.620
11	6.040	4735.792
12	6.795	4863.093
13	7.743	6104.873
14	8.718	6282.289
15	9.729	6504.356
16	10.937	7783.455
17	12.063	7250.029
18	13.393	8561.302
19	14.768	8856.369
20	16.285	9772.596
21	17.983	10932.856
22	19.509	9824.035
23	21.098	10235.472
24	23.100	12888.012
25	25.121	13016.277
26	26.830	11007.828
27	28.573	11221.052
28	30.012	9266.216
29	31.578	10086.191
30	33.166	10226.887
31	34.764	10286.689
32	36.093	8559.656
33	37.495	9025.406
34	39.106	10375.147
35	40.555	9332.369
36	42.050	9628.843
37	43.457	9060.337
38	45.119	10700.633
39	46.869	11268.940
40	48.404	9883.851
41	49.886	9547.237
42	51.079	7679.718
43	52.174	7052.109
44	53.204	6634.899
45	54.217	6523.670
46	55.153	6026.010
47	55.944	5089.130
48	56.834	5732.116
49	57.795	6188.286
50	58.587	5099.595
51	59.253	4292.344
52	59.923	4314.083
53	60.578	4214.768
54	61.231	4207.792
55	61.885	4209.093
56	62.529	4151.686
57	63.209	4373.555
58	63.795	3774.664
59	64.319	3378.555
60	64.915	3834.725
61	65.584	4305.683
62	66.089	3255.485

63	66.543	2920.469
64	67.036	3176.927
65	67.530	3178.793
66	68.006	3070.855
67	68.492	3129.516
68	68.981	3144.599
69	69.394	2660.622
70	69.805	2644.016
71	70.221	2680.716
72	70.649	2759.717
73	71.027	2430.007
74	71.407	2450.346
75	71.787	2446.662
76	72.164	2428.140
77	72.537	2403.427
78	72.898	2321.921
79	73.243	2222.188
80	73.582	2183.474
81	73.924	2197.820
82	74.281	2304.333
83	74.598	2036.379
84	74.913	2030.385
85	75.228	2031.270
86	75.541	2011.863
87	75.853	2009.063
88	76.163	1997.665
89	76.462	1927.802
90	76.762	1928.589
91	77.044	1815.246
92	77.307	1697.580
93	77.572	1701.756
94	77.835	1695.615
95	78.096	1682.006
96	78.343	1589.053
97	78.582	1541.937
98	78.821	1536.189
99	79.052	1489.565
100	79.270	1401.426
101	79.487	1399.412
102	79.708	1420.882
103	79.941	1499.833
104	80.165	1447.461
105	80.379	1378.090
106	80.593	1376.223
107	80.806	1373.570
108	81.012	1324.342
109	81.212	1284.399
110	81.411	1281.697
111	81.610	1281.451
112	81.809	1283.073
113	82.006	1266.270
114	82.201	1261.799
115	82.396	1252.121
116	82.589	1243.179
117	82.777	1210.115
118	82.953	1137.255
119	83.124	1098.492
120	83.295	1098.345
121	83.465	1098.050
122	83.635	1095.397
123	83.800	1062.185
124	83.963	1048.871
125	84.126	1052.163
126	84.290	1052.703
127	84.452	1044.007
128	84.609	1008.192
129	84.763	996.499
130	84.914	966.923
131	85.064	969.477
132	85.214	963.631
133	85.364	968.691
134	85.514	965.351
135	85.664	967.709
136	85.814	963.680
137	85.964	966.333
138	86.115	970.067
139	86.264	962.305
140	86.411	947.173
141	86.549	889.150
142	86.671	782.047
143	86.786	740.631
144	86.900	736.553
145	87.016	743.874
146	87.130	738.911
147	87.246	742.940
148	87.361	740.582
149	87.476	738.911
150	87.591	740.631

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 6146.9204

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1890.7423

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2 4 - H O U R S T O R M

R U N O F F H Y D R O G R A P H

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HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 500.0 1000.0 1500.0 2000.0
14.000	487.1143	968.26	. V Q. . .
14.083	493.9516	992.79	. V Q. . .
14.167	500.9566	1017.12	. V Q . .
14.250	508.1307	1041.69	. V Q . .
14.333	515.4578	1063.90	. V .Q . .
14.417	522.9442	1087.01	. .V .Q . .
14.500	530.5911	1110.34	. .V . Q . .
14.583	538.4058	1134.68	. .V . Q . .
14.667	546.3812	1158.04	. .V . Q . .
14.750	554.5205	1181.82	. .V . Q . .
14.833	562.8347	1207.21	. .V . Q . .
14.917	571.3158	1231.46	. . V . Q . .
15.000	579.9667	1256.12	. . V . Q . .
15.083	588.7940	1281.72	. . V . Q . .
15.167	597.8113	1309.31	. . V . Q . .
15.250	607.0239	1337.66	. . V . Q . .
15.333	616.4308	1365.90	. . V . Q . .
15.417	626.0024	1389.78	. . V . Q . .
15.500	635.7148	1410.25	. . V . Q . .
15.583	645.5679	1430.66	. . V . Q . .
15.667	655.5687	1452.11	. . V . Q. .
15.750	665.7249	1474.68	. . V . Q. .
15.833	676.0182	1494.61	. . V . Q. .
15.917	686.4478	1514.37	. . V . Q .
16.000	697.0555	1540.23	. . V . Q .
16.083	707.9421	1580.74	. . V . .Q .
16.167	719.0569	1613.87	. . V . . Q .
16.250	730.2845	1630.24	. . V . . Q .
16.333	741.5945	1642.20	. . V . . Q .

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  16.417    752.9946   1655.30  .          .    V    .          .  Q      .
  16.500    764.5187   1673.30  .          .     V   .          .  Q      .
  16.583    776.2064   1697.05  .          .     V   .          .  Q      .
  16.667    788.0234   1715.83  .          .     V   .          .   Q     .
  16.750    799.9264   1728.31  .          .     V   .          .   Q     .
  16.833    811.9154   1740.81  .          .      V  .          .   Q     .
  16.917    823.9919   1753.51  .          .      V  .          .    Q    .
  17.000    836.1692   1768.13  .          .      V  .          .    Q    .
  17.083    848.4830   1787.97  .          .      V  .          .    Q    .
  17.167    860.8759   1799.45  .          .       V .          .    Q    .
  17.250    873.3536   1811.77  .          .       V .          .     Q   .
  17.333    885.9246   1825.30  .          .       V .          .     Q   .
  17.417    898.4953   1825.28  .          .        V.          .     Q   .
  17.500    911.1982   1844.46  .          .        V.          .     Q   .
  17.583    923.9602   1853.04  .          .        V.          .      Q  .
  17.667    936.8357   1869.52  .          .        V.          .      Q  .
  17.750    949.7959   1881.83  .          .         V          .      Q  .
  17.833    962.7310   1878.18  .          .         V          .      Q  .
  17.917    975.7458   1889.75  .          .         V          .      Q  .
  18.000    988.9890   1922.91  .          .         V          .       Q .
  18.083   1002.2549   1926.22  .          .         .V         .       Q .
  18.167   1015.3513   1901.58  .          .         .V         .       Q .
  18.250   1028.4155   1896.93  .          .         .V         .      Q  .
  18.333   1041.3575   1879.18  .          .          . V       .      Q  .
  18.417   1054.3718   1889.67  .          .          . V       .      Q  .
  18.500   1067.3414   1883.19  .          .          . V       .      Q  .
  18.583   1080.2432   1873.34  .          .          . V       .      Q  .
  18.667   1092.9670   1847.51  .          .          .  V      .     Q   .
  18.750   1105.6649   1843.74  .          .          .  V      .     Q   .
  18.833   1118.3990   1848.99  .          .          .  V      .     Q   .
  18.917   1131.0187   1832.38  .          .          .  V      .     Q   .
  19.000   1143.5741   1823.05  .          .          .   V     .     Q   .
  19.083   1156.0203   1807.18  .          .          .   V     .     Q   .
  19.167   1168.5109   1813.64  .          .          .   V     .     Q   .
  19.250   1180.9399   1804.71  .          .          .   V     .     Q   .
  19.333   1193.1782   1777.00  .          .          .    V    .    Q    .
  19.417   1205.2551   1753.56  .          .          .    V    .    Q    .
  19.500   1217.1036   1720.40  .          .          .    V    .   Q     .
  19.583   1228.8302   1702.70  .          .          .    V    .   Q     .
  19.667   1240.4408   1685.86  .          .          .     V   .  Q      .
  19.750   1251.9290   1668.09  .          .          .     V   .  Q      .
  19.833   1263.2484   1643.58  .          .          .     V   . Q       .
  19.917   1274.3870   1617.31  .          .          .     V   . Q       .
  20.000   1285.4075   1600.18  .          .          .      V  . Q       .
================================================================================

  END OF FLOODSCx ROUTING ANALYSIS
```

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**************************************************************************

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             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
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                          Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LP66002E.FLD
  TIME/DATE OF STUDY: 15:49 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1066.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   61499.898 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    3.590 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.080
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.140
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.620
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.160
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.570
         LOW LOSS FRACTION = 0.770
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.15
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.30
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.40
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.74
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.09
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.92

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.307
          30-MINUTE FACTOR = 0.362
           1-HOUR FACTOR = 0.407
           3-HOUR FACTOR = 0.753
           6-HOUR FACTOR = 0.891
          24-HOUR FACTOR = 0.936

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   2.321


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.223	1655.578
2	0.668	3311.155
3	1.113	3311.156
4	1.558	3310.706
5	1.998	3274.564
6	2.440	3283.428
7	2.921	3581.560
8	3.565	4787.607
9	4.224	4897.335
10	4.885	4921.604
11	5.564	5050.716
12	6.255	5140.745
13	6.987	5442.343
14	7.928	6999.642
15	8.821	6640.515
16	9.820	7425.791
17	10.954	8440.400
18	12.022	7938.877
19	13.289	9426.553
20	14.594	9702.616
21	15.986	10352.812
22	17.594	11963.886
23	19.084	11081.137
24	20.512	10620.653
25	22.296	13269.341
26	24.212	14251.918
27	26.026	13490.574
28	27.589	11626.425
29	29.155	11641.576
30	30.538	10287.633
31	32.013	10975.393
32	33.515	11166.026
33	34.978	10886.219
34	36.222	9250.184
35	37.539	9792.890
36	39.051	11249.187
37	40.431	10263.956
38	41.787	10086.146
39	43.140	10061.576
40	44.591	10790.944
41	46.260	12413.390
42	47.715	10818.806
43	49.197	11024.619
44	50.452	9338.563
45	51.520	7941.650
46	52.536	7555.871
47	53.491	7099.218
48	54.455	7171.596
49	55.333	6532.026
50	56.095	5667.464
51	56.973	6529.615
52	57.894	6848.265
53	58.665	5737.203
54	59.310	4800.348
55	59.971	4909.524
56	60.604	4709.188
57	61.242	4746.866
58	61.874	4701.527
59	62.502	4669.892
60	63.119	4586.023
61	63.751	4707.258
62	64.269	3851.661

63	64.789	3866.415
64	65.394	4501.445
65	66.014	4609.771
66	66.470	3389.078
67	66.922	3359.911
68	67.398	3542.629
69	67.871	3522.599
70	68.326	3384.368
71	68.781	3378.240
72	69.253	3512.214
73	69.648	2936.993
74	70.038	2904.932
75	70.429	2903.684
76	70.840	3055.760
77	71.211	2763.922
78	71.572	2679.486
79	71.933	2685.728
80	72.292	2671.768
81	72.648	2646.857
82	73.001	2623.989
83	73.337	2504.939
84	73.663	2422.092
85	73.980	2356.948
86	74.298	2367.276
87	74.634	2497.335
88	74.932	2214.519
89	75.228	2202.603
90	75.524	2203.000
91	75.818	2187.963
92	76.107	2145.574
93	76.398	2164.130
94	76.680	2097.058
95	76.959	2081.737
96	77.237	2063.295
97	77.488	1866.617
98	77.734	1830.585
99	77.978	1816.512
100	78.223	1817.306
101	78.464	1795.516
102	78.693	1701.377
103	78.912	1633.624
104	79.132	1631.921
105	79.346	1592.143
106	79.546	1490.627
107	79.746	1485.123
108	79.946	1490.003
109	80.156	1557.302
110	80.366	1567.176
111	80.565	1479.221
112	80.762	1461.574
113	80.958	1462.482
114	81.153	1448.182
115	81.339	1382.585
116	81.522	1361.419
117	81.705	1362.157
118	81.888	1359.717
119	82.071	1359.547
120	82.252	1348.708
121	82.432	1338.665
122	82.612	1337.076
123	82.790	1324.819
124	82.964	1297.241
125	83.131	1236.581
126	83.288	1170.190
127	83.445	1166.898
128	83.602	1169.679
129	83.759	1163.494
130	83.914	1154.301
131	84.065	1126.269
132	84.216	1120.254
133	84.367	1128.085
134	84.518	1119.630
135	84.667	1111.572
136	84.813	1086.151
137	84.956	1060.843
138	85.095	1033.605
139	85.234	1032.697
140	85.373	1032.640
141	85.512	1033.775
142	85.651	1032.697
143	85.789	1032.697
144	85.928	1029.860
145	86.067	1037.407
146	86.206	1027.987
147	86.345	1037.407
148	86.482	1017.716
149	86.614	982.705
150	86.737	914.441

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 7093.1743

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1836.7836

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

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HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 475.0 950.0 1425.0 1900.0
14.000	462.7811	924.31	. V Q. . .
14.083	469.3048	947.24	. V Q. . .
14.167	476.0069	973.14	. V Q . .
14.250	482.8813	998.16	. V .Q . .
14.333	489.9133	1021.05	. V .Q . .
14.417	497.1026	1043.90	. V .Q . .
14.500	504.4387	1065.19	. V . Q . .
14.583	511.9288	1087.57	. .V . Q . .
14.667	519.5834	1111.45	. .V . Q . .
14.750	527.4007	1135.06	. .V . Q . .
14.833	535.3672	1156.75	. .V . Q . .
14.917	543.4877	1179.10	. .V . Q . .
15.000	551.7729	1203.01	. . V . Q . .
15.083	560.2169	1226.06	. . V . Q . .
15.167	568.8289	1250.46	. . V . Q . .
15.250	577.6048	1274.26	. . V . Q . .
15.333	586.5541	1299.44	. . V . Q . .
15.417	595.6772	1324.66	. . V . Q . .
15.500	604.9378	1344.64	. . V . Q . .
15.583	614.3511	1366.81	. . V . Q . .
15.667	623.9077	1387.62	. . V . Q. .
15.750	633.6006	1407.41	. . V . Q. .
15.833	643.4380	1428.39	. . V . Q .
15.917	653.4163	1448.85	. . V . Q .
16.000	663.5375	1469.59	. . V . Q .
16.083	673.9001	1504.66	. . V . .Q .
16.167	684.4865	1537.13	. . V . . Q .
16.250	695.1996	1555.55	. . V . . Q .
16.333	706.0154	1570.47	. . V . . Q .

```
  16.417    716.9354   1585.58  .          .    V    .          .  Q      .
  16.500    727.9518   1599.58  .          .    V    .          .  Q      .
  16.583    739.0979   1618.41  .          .     V   .          .   Q     .
  16.667    750.4047   1641.75  .          .     V   .          .   Q     .
  16.750    761.7980   1654.31  .          .     V   .          .   Q     .
  16.833    773.2639   1664.85  .          .     V   .          .    Q    .
  16.917    784.8004   1675.09  .          .      V  .          .    Q    .
  17.000    796.4349   1689.33  .          .      V  .          .    Q    .
  17.083    808.1606   1702.57  .          .      V  .          .    Q    .
  17.167    819.9963   1718.54  .          .      V  .          .     Q   .
  17.250    831.8611   1722.78  .          .       V .          .     Q   .
  17.333    843.8299   1737.87  .          .       V .          .     Q   .
  17.417    855.8921   1751.43  .          .       V .          .     Q   .
  17.500    867.9634   1752.76  .          .       V .          .     Q   .
  17.583    880.1504   1769.55  .          .        V.          .      Q  .
  17.667    892.4065   1779.59  .          .        V.          .      Q  .
  17.750    904.7433   1791.30  .          .        V.          .      Q  .
  17.833    917.1907   1807.37  .          .        V.          .       Q .
  17.917    929.6347   1806.87  .          .         V          .       Q .
  18.000    942.1247   1813.55  .          .         V          .       Q .
  18.083    954.7867   1838.53  .          .         V          .       Q .
  18.167    967.5125   1847.77  .          .         .V         .       Q .
  18.250    980.1885   1840.56  .          .         .V         .       Q .
  18.333    992.7336   1821.56  .          .         .V         .       Q .
  18.417   1005.2645   1819.48  .          .         .V         .       Q .
  18.500   1017.7437   1811.97  .          .         . V        .       Q .
  18.583   1030.2573   1816.99  .          .         . V        .       Q .
  18.667   1042.7261   1810.46  .          .         . V        .       Q .
  18.750   1055.0991   1796.57  .          .         . V        .      Q  .
  18.833   1067.3202   1774.49  .          .         .  V       .      Q  .
  18.917   1079.5160   1770.82  .          .         .  V       .      Q  .
  19.000   1091.7374   1774.56  .          .         .  V       .      Q  .
  19.083   1103.8496   1758.69  .          .         .   V      .      Q  .
  19.167   1115.8584   1743.67  .          .         .   V      .     Q   .
  19.250   1127.7957   1733.29  .          .         .   V      .     Q   .
  19.333   1139.7227   1731.79  .          .         .   V      .     Q   .
  19.417   1151.6482   1731.59  .          .         .    V     .     Q   .
  19.500   1163.4119   1708.08  .          .         .    V     .    Q    .
  19.583   1175.0557   1690.67  .          .         .    V     .    Q    .
  19.667   1186.4794   1658.72  .          .         .    V     .   Q     .
  19.750   1197.7384   1634.81  .          .         .     V    .   Q     .
  19.833   1208.8859   1618.61  .          .         .     V    .   Q     .
  19.917   1219.9249   1602.87  .          .         .     V    .  Q      .
  20.000   1230.8550   1587.04  .          .         .     V    .  Q      .
=============================================================================

  END OF FLOODSCx ROUTING ANALYSIS
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              Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                           Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LP67002E.FLD
  TIME/DATE OF STUDY: 15:50 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1067.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   66684.602 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    3.770 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.080
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.140
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.620
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.160
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.570
         LOW LOSS FRACTION = 0.770
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.15
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.29
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.40
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.73
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.07
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.88

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.293
          30-MINUTE FACTOR = 0.352
           1-HOUR FACTOR = 0.396
           3-HOUR FACTOR = 0.740
           6-HOUR FACTOR = 0.887
          24-HOUR FACTOR = 0.933

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   2.210


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.212	1709.440
2	0.636	3418.879
3	1.060	3418.881
4	1.484	3418.876
5	1.904	3392.417
6	2.323	3373.146
7	2.755	3482.873
8	3.328	4623.061
9	3.956	5067.567
10	4.584	5065.306
11	5.221	5133.542
12	5.875	5277.265
13	6.536	5329.341
14	7.302	6175.700
15	8.228	7467.008
16	9.025	6432.278
17	10.088	8573.379
18	11.118	8301.292
19	12.162	8422.903
20	13.378	9807.003
21	14.622	10029.222
22	15.944	10660.843
23	17.478	12372.959
24	18.909	11540.186
25	20.256	10864.556
26	21.879	13092.628
27	23.704	14712.920
28	25.502	14504.308
29	26.996	12042.735
30	28.585	12816.949
31	29.875	10402.016
32	31.270	11250.078
33	32.677	11347.493
34	34.146	11851.197
35	35.397	10083.790
36	36.624	9900.681
37	37.907	10346.763
38	39.364	11750.229
39	40.635	10251.271
40	41.953	10626.410
41	43.227	10276.374
42	44.620	11232.189
43	46.214	12858.604
44	47.604	11209.208
45	49.017	11394.747
46	50.259	10014.017
47	51.290	8313.891
48	52.269	7891.774
49	53.194	7461.689
50	54.109	7378.841
51	54.981	7038.158
52	55.751	6205.461
53	56.510	6123.936
54	57.385	7057.047
55	58.234	6846.711
56	58.888	5273.796
57	59.513	5036.173
58	60.132	4993.441
59	60.736	4869.430
60	61.343	4896.011
61	61.945	4854.817
62	62.541	4811.778

63	63.128	4734.560
64	63.734	4886.320
65	64.229	3988.188
66	64.720	3958.685
67	65.283	4541.729
68	65.886	4866.292
69	66.357	3793.296
70	66.773	3359.643
71	67.223	3628.092
72	67.678	3665.870
73	68.118	3549.151
74	68.548	3470.148
75	68.998	3628.892
76	69.411	3328.325
77	69.784	3008.069
78	70.156	2998.655
79	70.529	3012.130
80	70.922	3169.335
81	71.267	2781.828
82	71.611	2773.891
83	71.955	2774.445
84	72.297	2756.109
85	72.636	2732.667
86	72.972	2712.609
87	73.295	2605.180
88	73.606	2508.149
89	73.909	2442.560
90	74.209	2423.178
91	74.530	2589.798
92	74.822	2353.774
93	75.105	2277.356
94	75.387	2274.833
95	75.669	2275.141
96	75.945	2224.134
97	76.221	2231.702
98	76.496	2214.658
99	76.763	2152.699
100	77.030	2150.300
101	77.290	2103.107
102	77.526	1896.679
103	77.760	1890.834
104	77.992	1874.221
105	78.225	1878.651
106	78.456	1856.808
107	78.674	1761.624
108	78.883	1689.205
109	79.092	1685.821
110	79.299	1665.085
111	79.491	1549.965
112	79.682	1535.752
113	79.871	1531.261
114	80.067	1574.638
115	80.270	1636.721
116	80.463	1558.826
117	80.650	1511.633
118	80.838	1514.402
119	81.025	1508.003
120	81.208	1476.931
121	81.384	1414.357
122	81.558	1405.558
123	81.732	1406.112
124	81.907	1405.250
125	82.081	1402.912
126	82.253	1390.976
127	82.425	1385.254
128	82.595	1376.763
129	82.766	1374.117
130	82.932	1342.184
131	83.093	1300.036
132	83.244	1213.466
133	83.393	1202.883
134	83.542	1202.944
135	83.692	1206.636
136	83.841	1200.114
137	83.986	1171.565
138	84.130	1159.936
139	84.274	1160.121
140	84.417	1153.476
141	84.562	1169.350
142	84.702	1127.880
143	84.840	1119.389
144	84.975	1088.317
145	85.108	1067.520
146	85.239	1061.736
147	85.372	1071.889
148	85.504	1066.351
149	85.636	1061.860
150	85.768	1063.090

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 7508.0059

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1922.4806

==========

2 4 - H O U R S T O R M

R U N O F F H Y D R O G R A P H

==========

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 500.0 1000.0 1500.0 2000.0
14.000	477.0123	952.03	. V. Q. . .
14.083	483.7090	972.37	. V Q. . .
14.167	490.5758	997.06	. V Q. . .
14.250	497.6245	1023.48	. V Q . .
14.333	504.8535	1049.64	. V Q . .
14.417	512.2430	1072.95	. V .Q . .
14.500	519.7987	1097.09	. V .Q . .
14.583	527.5024	1118.57	. V . Q . .
14.667	535.3687	1142.18	. .V . Q . .
14.750	543.4007	1166.25	. .V . Q . .
14.833	551.6017	1190.79	. .V . Q . .
14.917	559.9578	1213.29	. .V . Q . .
15.000	568.4677	1235.63	. .V . Q . .
15.083	577.1342	1258.38	. . V . Q . .
15.167	585.9734	1283.45	. . V . Q . .
15.250	594.9816	1307.99	. . V . Q . .
15.333	604.1526	1331.64	. . V . Q . .
15.417	613.4808	1354.45	. . V . Q . .
15.500	622.9542	1375.53	. . V . Q . .
15.583	632.5873	1398.73	. . V . Q . .
15.667	642.3797	1421.85	. . V . Q . .
15.750	652.3293	1444.69	. . V . Q . .
15.833	662.4271	1466.20	. . V . Q. .
15.917	672.6806	1488.80	. . V . Q. .
16.000	683.0881	1511.17	. . V . Q .
16.083	693.7197	1543.72	. . V . Q .
16.167	704.5743	1576.08	. . V . .Q .
16.250	715.5673	1596.19	. . V . .Q .
16.333	726.6805	1613.64	. . V . . Q .

```
  16.417    737.9032   1629.53  .          .    V    .          . Q       .
  16.500    749.2626   1649.38  .          .    V    .          . Q       .
  16.583    760.7421   1666.83  .          .    V    .          .  Q      .
  16.667    772.3936   1691.79  .          .     V   .          .  Q      .
  16.750    784.1547   1707.71  .          .     V   .          .   Q     .
  16.833    796.0066   1720.90  .          .     V   .          .   Q     .
  16.917    807.9362   1732.18  .          .     V   .          .   Q     .
  17.000    819.9507   1744.51  .          .      V  .          .   Q     .
  17.083    832.0441   1755.96  .          .      V  .          .    Q    .
  17.167    844.2487   1772.10  .          .      V  .          .    Q    .
  17.250    856.5518   1786.41  .          .      V  .          .    Q    .
  17.333    868.8635   1787.66  .          .       V .          .    Q    .
  17.417    881.3282   1809.89  .          .       V .          .     Q   .
  17.500    893.8166   1813.31  .          .       V .          .     Q   .
  17.583    906.3682   1822.50  .          .       V .          .     Q   .
  17.667    919.0187   1836.86  .          .        V.          .     Q   .
  17.750    931.7559   1849.43  .          .        V.          .     Q   .
  17.833    944.5703   1860.65  .          .        V.          .      Q  .
  17.917    957.5011   1877.56  .          .        V.          .      Q  .
  18.000    970.4301   1877.28  .          .         V          .      Q  .
  18.083    983.3830   1880.77  .          .         V          .      Q  .
  18.167    996.4714   1900.45  .          .         V          .       Q .
  18.250   1009.6655   1915.78  .          .         .V         .       Q .
  18.333   1022.8476   1914.04  .          .         .V         .       Q .
  18.417   1035.8809   1892.44  .          .         .V         .      Q  .
  18.500   1048.9254   1894.08  .          .         .V         .      Q  .
  18.583   1061.8772   1880.59  .          .         . V        .      Q  .
  18.667   1074.8743   1887.17  .          .         . V        .      Q  .
  18.750   1087.8384   1882.40  .          .         . V        .      Q  .
  18.833   1100.7665   1877.16  .          .         . V        .      Q  .
  18.917   1113.5094   1850.28  .          .         .  V       .      Q  .
  19.000   1126.1882   1840.97  .          .         .  V       .     Q   .
  19.083   1138.8372   1836.62  .          .         .  V       .     Q   .
  19.167   1151.4794   1835.65  .          .         .  V       .     Q   .
  19.250   1163.9489   1810.58  .          .         .   V      .     Q   .
  19.333   1176.3556   1801.46  .          .         .   V      .     Q   .
  19.417   1188.6702   1788.09  .          .         .   V      .    Q    .
  19.500   1200.9667   1785.45  .          .         .   V      .    Q    .
  19.583   1213.2660   1785.87  .          .         .    V     .    Q    .
  19.667   1225.3979   1761.55  .          .         .    V     .    Q    .
  19.750   1237.4218   1745.85  .          .         .    V     .   Q     .
  19.833   1249.2362   1715.46  .          .         .    V     .   Q     .
  19.917   1260.8577   1687.44  .          .         .     V    .  Q      .
  20.000   1272.3663   1671.05  .          .         .     V    .  Q      .
================================================================================

  END OF FLOODSCx ROUTING ANALYSIS
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**************************************************************************

             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
          (c) Copyright 1989-2003 Advanced Engineering Software (aes)
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                           Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LP68002E.FLD
  TIME/DATE OF STUDY: 15:50 02/25/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1068.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   68244.898 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    3.950 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.090
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.140
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.610
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.160
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.560
         LOW LOSS FRACTION = 0.770
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.15
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.29
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.40
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.73
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.06
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.87

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.289
          30-MINUTE FACTOR = 0.350
           1-HOUR FACTOR = 0.393
           3-HOUR FACTOR = 0.736
           6-HOUR FACTOR = 0.885
          24-HOUR FACTOR = 0.932

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   2.110


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


==========================================================================
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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.201	1660.319
2	0.604	3320.638
3	1.006	3320.639
4	1.408	3320.641
5	1.809	3304.740
6	2.205	3268.240
7	2.608	3332.517
8	3.094	4005.250
9	3.691	4932.377
10	4.286	4910.317
11	4.885	4940.186
12	5.499	5065.547
13	6.123	5151.896
14	6.760	5259.371
15	7.572	6701.626
16	8.438	7146.386
17	9.191	6214.363
18	10.270	8907.858
19	11.213	7782.396
20	12.239	8466.412
21	13.401	9593.983
22	14.586	9779.031
23	15.840	10349.712
24	17.299	12037.952
25	18.671	11329.080
26	19.963	10659.319
27	21.422	12040.243
28	23.152	14279.439
29	24.886	14314.717
30	26.401	12503.830
31	27.864	12068.830
32	29.213	11135.374
33	30.491	10548.290
34	31.830	11052.540
35	33.184	11173.863
36	34.573	11463.202
37	35.693	9246.438
38	36.885	9838.434
39	38.175	10649.748
40	39.560	11426.177
41	40.749	9816.237
42	42.028	10556.303
43	43.245	10046.040
44	44.597	11152.832
45	46.134	12690.925
46	47.479	11099.058
47	48.836	11196.217
48	50.076	10240.045
49	51.087	8339.979
50	52.039	7854.621
51	52.948	7507.005
52	53.818	7178.532
53	54.698	7259.225
54	55.493	6563.616
55	56.195	5798.174
56	57.008	6707.341
57	57.858	7012.862
58	58.611	6214.300
59	59.210	4945.018
60	59.825	5077.377
61	60.417	4883.813
62	61.003	4834.855

63	61.590	4847.764
64	62.174	4818.452
65	62.749	4749.628
66	63.315	4671.358
67	63.902	4840.963
68	64.380	3948.736
69	64.851	3885.641
70	65.382	4378.997
71	65.965	4813.037
72	66.465	4125.928
73	66.855	3222.901
74	67.284	3535.727
75	67.722	3620.419
76	68.155	3570.989
77	68.570	3427.863
78	68.983	3411.113
79	69.425	3647.999
80	69.791	3016.554
81	70.148	2944.393
82	70.504	2944.645
83	70.867	2989.289
84	71.238	3067.622
85	71.565	2694.157
86	71.895	2721.800
87	72.224	2720.793
88	72.551	2700.643
89	72.876	2678.793
90	73.198	2656.628
91	73.510	2575.399
92	73.809	2465.583
93	74.100	2402.111
94	74.387	2369.367
95	74.687	2473.580
96	74.979	2410.737
97	75.248	2226.052
98	75.517	2221.581
99	75.787	2221.644
100	76.054	2207.224
101	76.315	2153.638
102	76.579	2178.951
103	76.837	2129.647
104	77.090	2089.096
105	77.343	2090.103
106	77.587	2012.715
107	77.809	1833.382
108	78.033	1842.386
109	78.254	1827.652
110	78.476	1828.470
111	78.695	1812.351
112	78.904	1720.354
113	79.102	1638.370
114	79.300	1633.080
115	79.497	1627.602
116	79.681	1519.926
117	79.861	1485.672
118	80.042	1486.238
119	80.222	1493.417
120	80.414	1577.668
121	80.603	1564.508
122	80.781	1471.000
123	80.959	1466.151
124	81.137	1466.214
125	81.313	1453.621
126	81.484	1413.573
127	81.649	1362.128
128	81.814	1362.128
129	81.979	1362.317
130	82.144	1362.128
131	82.309	1357.783
132	82.472	1345.064
133	82.634	1341.915
134	82.796	1335.807
135	82.958	1333.289
136	83.115	1299.601
137	83.270	1280.521
138	83.414	1183.424
139	83.556	1171.020
140	83.696	1161.700
141	83.838	1170.957
142	83.979	1165.289
143	84.119	1152.696
144	84.256	1125.871
145	84.392	1122.345
146	84.527	1120.015
147	84.663	1124.675
148	84.800	1124.612
149	84.932	1088.279
150	85.062	1079.338

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 7634.8193

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1938.8712

==========

2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

==========

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 500.0 1000.0 1500.0 2000.0
14.000	475.8686	936.98	. V. Q . . .
14.083	482.4615	957.30	. V. Q. . .
14.167	489.2023	978.76	. V Q. . .
14.250	496.1007	1001.65	. V Q . .
14.333	503.1732	1026.93	. V Q . .
14.417	510.4195	1052.15	. V .Q . .
14.500	517.8257	1075.39	. V .Q . .
14.583	525.3887	1098.14	. V .Q . .
14.667	533.1064	1120.62	. V . Q . .
14.750	540.9809	1143.37	. .V . Q . .
14.833	549.0151	1166.57	. .V . Q . .
14.917	557.2092	1189.78	. .V . Q . .
15.000	565.5657	1213.36	. .V . Q . .
15.083	574.0677	1234.49	. .V . Q . .
15.167	582.7198	1256.29	. . V . Q . .
15.250	591.5374	1280.30	. . V . Q . .
15.333	600.5281	1305.47	. . V . Q . .
15.417	609.6551	1325.23	. . V . Q . .
15.500	618.9272	1346.31	. . V . Q . .
15.583	628.3336	1365.82	. . V . Q . .
15.667	637.8896	1387.54	. . V . Q . .
15.750	647.6112	1411.57	. . V . Q . .
15.833	657.4852	1433.70	. . V . Q . .
15.917	667.5255	1457.85	. . V . Q. .
16.000	677.7488	1484.42	. . V . Q. .
16.083	688.2055	1518.31	. . V . Q .
16.167	698.8702	1548.51	. . V . Q .
16.250	709.6630	1567.11	. . V . .Q .
16.333	720.5890	1586.46	. . V . .Q .

```
  16.417    731.6554   1606.84  .          .    V    .          . Q       .
  16.500    742.8604   1626.97  .          .    V    .          . Q       .
  16.583    754.1946   1645.72  .          .    V    .          . Q       .
  16.667    765.6841   1668.27  .          .    V    .          .  Q      .
  16.750    777.3416   1692.67  .          .     V   .          .  Q      .
  16.833    789.0895   1705.81  .          .     V   .          .   Q     .
  16.917    800.9300   1719.24  .          .     V   .          .   Q     .
  17.000    812.8705   1733.77  .          .     V   .          .   Q     .
  17.083    824.8872   1744.82  .          .      V  .          .   Q     .
  17.167    836.9738   1754.98  .          .      V  .          .    Q    .
  17.250    849.1912   1773.96  .          .      V  .          .    Q    .
  17.333    861.4782   1784.07  .          .      V  .          .    Q    .
  17.417    873.7778   1785.90  .          .       V .          .    Q    .
  17.500    886.2596   1812.36  .          .       V .          .     Q   .
  17.583    898.7415   1812.37  .          .       V .          .     Q   .
  17.667    911.2945   1822.70  .          .       V .          .     Q   .
  17.750    923.9318   1834.94  .          .        V.          .     Q   .
  17.833    936.6547   1847.36  .          .        V.          .     Q   .
  17.917    949.4778   1861.92  .          .        V.          .      Q  .
  18.000    962.4279   1880.35  .          .        V.          .      Q  .
  18.083    975.3733   1879.68  .          .         V          .      Q  .
  18.167    988.3271   1880.90  .          .         V          .      Q  .
  18.250   1001.3829   1895.69  .          .         V          .      Q  .
  18.333   1014.5629   1913.74  .          .         V          .       Q .
  18.417   1027.7632   1916.69  .          .         .V         .       Q .
  18.500   1040.8542   1900.82  .          .         .V         .       Q .
  18.583   1053.9033   1894.73  .          .         .V         .      Q  .
  18.667   1066.8972   1886.72  .          .         . V        .      Q  .
  18.750   1079.8792   1884.97  .          .         . V        .      Q  .
  18.833   1092.8696   1886.22  .          .         . V        .      Q  .
  18.917   1105.8243   1881.03  .          .         . V        .      Q  .
  19.000   1118.7053   1870.33  .          .         .  V       .      Q  .
  19.083   1131.3949   1842.53  .          .         .  V       .     Q   .
  19.167   1144.0626   1839.35  .          .         .  V       .     Q   .
  19.250   1156.6912   1833.67  .          .         .  V       .     Q   .
  19.333   1169.2552   1824.30  .          .         .   V      .     Q   .
  19.417   1181.6465   1799.20  .          .         .   V      .    Q    .
  19.500   1193.9833   1791.29  .          .         .   V      .    Q    .
  19.583   1206.2352   1778.99  .          .         .   V      .    Q    .
  19.667   1218.4835   1778.45  .          .         .    V     .    Q    .
  19.750   1230.7056   1774.64  .          .         .    V     .    Q    .
  19.833   1242.7590   1750.16  .          .         .    V     .    Q    .
  19.917   1254.7113   1735.47  .          .         .    V     .   Q     .
  20.000   1266.4775   1708.46  .          .         .     V    .   Q     .
================================================================================

  END OF FLOODSCx ROUTING ANALYSIS
```

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

TECHNICAL APPENDIX I-C
HYDROLOGIC ANALYSIS
PROPOSED CONDITION
10-YEAR EXPECTED VALUE

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
        (c) Copyright 1983-2003 Advanced Engineering Software (aes)
            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LP63010E.DAT
  TIME/DATE OF STUDY: 16:00 02/24/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ======  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.180
        FOOTHILL                           0.150
        MOUNTAIN                           0.640
        VALLEY(UNDEVELOPED)/DESERT         0.030
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1062.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU62010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9034.05    Tc(MIN.) = 135.31
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.50
  TOTAL AREA(ACRES) =   46437.31
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1062.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9034.05    Tc(MIN.) = 135.31
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.50
  TOTAL AREA(ACRES) =   46437.31
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1062.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    345.00  DOWNSTREAM(FEET) =    319.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2852.00   CHANNEL SLOPE =  0.0091
  CHANNEL BASE(FEET) =   60.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.025   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   9034.05
  FLOW VELOCITY(FEET/SEC.) =  17.85   FLOW DEPTH(FEET) =   6.86
  TRAVEL TIME(MIN.) =   2.66   Tc(MIN.) = 137.97
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) = 137.97
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.607
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       88.70      0.40       1.00    40
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A        4.40      0.40       0.50    32
  NATURAL FAIR COVER
  "GRASS"                    A        6.50      0.40       1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A       98.10      0.40       1.00    46
  COMMERCIAL                 A        1.30      0.40       0.10    32
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       A       12.90      0.40       0.60    32
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.96
  SUBAREA AREA(ACRES) =  211.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.33;30M= 0.64;1H= 0.88;3H= 1.66;6H= 2.48;24H= 4.38
```

```
  S-GRAPH: VALLEY(DEV.)=  1.1%;VALLEY(UNDEV.)/DESERT= 19.8%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.30; LAG(HR) = 1.84; Fm(INCH/HR) = 0.23; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.36; 30M = 0.40; 1HR = 0.44;
  3HR = 0.79; 6HR = 0.91; 24HR= 0.95
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  46649.21
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0338; Lca/L=0.4,n=.0303; Lca/L=0.5,n=.0278;Lca/L=0.6,n=.0260
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8134.90
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8965.44
  TOTAL AREA(ACRES) =  46649.21       PEAK FLOW RATE(CFS) =    9034.05
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.28; 30M = 0.60; 1HR = 0.81; 3HR = 1.40; 6HR = 1.98; 24HR = 3.37

****************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 137.97
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  A       48.40      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        7.10      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                     B        5.60      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B       11.60      0.30      1.00    66
  COMMERCIAL                  B        0.20      0.30      0.10    56
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        B        6.90      0.30      0.20    56
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.37
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
  SUBAREA AREA(ACRES) =   79.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.33;30M= 0.64;1H= 0.88;3H= 1.66;6H= 2.48;24H= 4.38
  S-GRAPH: VALLEY(DEV.)=  1.1%;VALLEY(UNDEV.)/DESERT= 19.7%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.30; LAG(HR) = 1.84; Fm(INCH/HR) = 0.23; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.36; 30M = 0.40; 1HR = 0.44;
  3HR = 0.79; 6HR = 0.91; 24HR= 0.95
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  46729.02
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0338; Lca/L=0.4,n=.0303; Lca/L=0.5,n=.0278;Lca/L=0.6,n=.0260
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8133.91
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8964.52
  TOTAL AREA(ACRES) =  46729.02       PEAK FLOW RATE(CFS) =    9034.05
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.28; 30M = 0.60; 1HR = 0.81; 3HR = 1.40; 6HR = 1.98; 24HR = 3.37

****************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 137.97
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"        B        4.20      0.30      0.60    56
  NATURAL FAIR COVER
  "WOODLAND"                  B       19.00      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C      656.10      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                    C        1.80      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                     C      156.50      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C     1039.10      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1876.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.33;30M= 0.63;1H= 0.88;3H= 1.65;6H= 2.46;24H= 4.34
  S-GRAPH: VALLEY(DEV.)=  1.8%;VALLEY(UNDEV.)/DESERT= 19.1%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.30; LAG(HR) = 1.84; Fm(INCH/HR) = 0.23; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.35; 30M = 0.40; 1HR = 0.44;
  3HR = 0.79; 6HR = 0.91; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  48605.71
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0338; Lca/L=0.4,n=.0303; Lca/L=0.5,n=.0278;Lca/L=0.6,n=.0260
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8283.44
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9101.45
  TOTAL AREA(ACRES) =  48605.71       PEAK FLOW RATE(CFS) =    9101.45

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.28; 30M = 0.60; 1HR = 0.81; 3HR = 1.40; 6HR = 1.98; 24HR = 3.37

****************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 137.97
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        C       80.90      0.25      0.20    69
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      C       54.20      0.25      1.00    81
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"        C       28.70      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                  C      189.00      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D      420.90      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D        0.60      0.20      0.50    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.90
  SUBAREA AREA(ACRES) =  774.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.33;30M= 0.63;1H= 0.88;3H= 1.65;6H= 2.45;24H= 4.32
```

```
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 18.8%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.30; LAG(HR) = 1.84; Fm(INCH/HR) = 0.23; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.35; 30M = 0.40; 1HR = 0.44;
  3HR = 0.79; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  49380.01
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0338; Lca/L=0.4,n=.0303; Lca/L=0.5,n=.0278;Lca/L=0.6,n=.0260
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8367.00
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9182.62
  TOTAL AREA(ACRES) =  49380.01       PEAK FLOW RATE(CFS) =    9182.62

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.28; 30M = 0.60; 1HR = 0.81; 3HR = 1.40; 6HR = 1.98; 24HR = 3.37

****************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 137.97
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   D        0.10      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D       48.30      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      261.40      0.20      1.00    83
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D        1.90      0.20      0.20    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D      139.40      0.20      1.00    86
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D       16.70      0.20      0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  467.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.33;30M= 0.63;1H= 0.88;3H= 1.64;6H= 2.45;24H= 4.31
  S-GRAPH: VALLEY(DEV.)=  2.2%;VALLEY(UNDEV.)/DESERT= 18.7%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.30; LAG(HR) = 1.84; Fm(INCH/HR) = 0.23; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  49847.81
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0338; Lca/L=0.4,n=.0303; Lca/L=0.5,n=.0278;Lca/L=0.6,n=.0260
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8427.08
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9240.06
  TOTAL AREA(ACRES) =  49847.81       PEAK FLOW RATE(CFS) =    9240.06

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.28; 30M = 0.60; 1HR = 0.81; 3HR = 1.40; 6HR = 1.98; 24HR = 3.37

****************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 137.97
```

```
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 D       40.00      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   40.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.33;30M= 0.63;1H= 0.88;3H= 1.64;6H= 2.45;24H= 4.31
  S-GRAPH: VALLEY(DEV.)=  2.2%;VALLEY(UNDEV.)/DESERT= 18.7%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.30; LAG(HR) = 1.84; Fm(INCH/HR) = 0.23; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  49887.81
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0338; Lca/L=0.4,n=.0303; Lca/L=0.5,n=.0278;Lca/L=0.6,n=.0260
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8431.00
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9243.94
  TOTAL AREA(ACRES) =  49887.81       PEAK FLOW RATE(CFS) =    9243.94

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.28; 30M = 0.60; 1HR = 0.81; 3HR = 1.40; 6HR = 1.98; 24HR = 3.37
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  49887.81  TC(MIN.) =    137.97
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.51
  PEAK FLOW RATE(CFS)   =   9243.94
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LP64010E.DAT
  TIME/DATE OF STUDY: 16:00 02/24/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ======  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.390
        FOOTHILL                           0.150
        MOUNTAIN                           0.330
        VALLEY(UNDEVELOPED)/DESERT         0.130
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1063.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LP63010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9243.94    Tc(MIN.) = 137.97
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.51
  TOTAL AREA(ACRES) =   49887.81
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1063.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9243.94    Tc(MIN.) = 137.97
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.51
  TOTAL AREA(ACRES) =   49887.81
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1063.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    319.00  DOWNSTREAM(FEET) =    275.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  5418.00   CHANNEL SLOPE =  0.0081
  CHANNEL BASE(FEET) =   60.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.025   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   9243.94
  FLOW VELOCITY(FEET/SEC.) =  17.30   FLOW DEPTH(FEET) =   7.18
  TRAVEL TIME(MIN.) =   5.22   Tc(MIN.) = 143.19
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) = 143.19
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.594
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       51.80      0.40       1.00    40
  NATURAL FAIR COVER
  "GRASS"                    A        0.20      0.40       1.00    50
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 A        0.20      0.40       1.00    44
  COMMERCIAL                 A        0.20      0.40       0.10    32
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       A        4.80      0.40       0.20    32
  NATURAL FAIR COVER
  "WOODLAND"                 A        1.60      0.40       1.00    36
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
  SUBAREA AREA(ACRES) =   58.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.33;30M= 0.63;1H= 0.88;3H= 1.64;6H= 2.45;24H= 4.31
```

```
  S-GRAPH: VALLEY(DEV.)=  2.2%;VALLEY(UNDEV.)/DESERT= 18.7%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.39; LAG(HR) = 1.91; Fm(INCH/HR) = 0.23; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  49946.61
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0334; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0275;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8427.43
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9186.87
  TOTAL AREA(ACRES) =  49946.61       PEAK FLOW RATE(CFS) =    9243.94
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 143.19
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       99.60      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                    B       14.70      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       20.00      0.30      1.00    66
  COMMERCIAL                 B       33.00      0.30      0.10    56
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       B       15.50      0.30      0.20    56
  NATURAL FAIR COVER
  "WOODLAND"                 B        7.40      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.78
  SUBAREA AREA(ACRES) =  190.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.33;30M= 0.63;1H= 0.88;3H= 1.64;6H= 2.44;24H= 4.31
  S-GRAPH: VALLEY(DEV.)=  2.4%;VALLEY(UNDEV.)/DESERT= 18.7%
           MOUNTAIN= 63.9%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.39; LAG(HR) = 1.91; Fm(INCH/HR) = 0.23; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  50136.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0334; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0275;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8435.95
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9197.45
  TOTAL AREA(ACRES) =  50136.80       PEAK FLOW RATE(CFS) =    9243.94
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 143.19
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      242.70      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        1.70      0.25      0.50    69
  NATURAL FAIR COVER
  "GRASS"                    C       27.20      0.25      1.00    79
  URBAN FAIR COVER
  "TURF"                     C       12.10      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      172.20      0.25      1.00    77
  COMMERCIAL                 C       38.30      0.25      0.10    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
  SUBAREA AREA(ACRES) =  494.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.88;3H= 1.64;6H= 2.44;24H= 4.29
  S-GRAPH: VALLEY(DEV.)=  2.7%;VALLEY(UNDEV.)/DESERT= 18.6%
           MOUNTAIN= 63.6%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.39; LAG(HR) = 1.91; Fm(INCH/HR) = 0.23; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  50631.01
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0334; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0275;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8469.14
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9233.85
  TOTAL AREA(ACRES) =  50631.01       PEAK FLOW RATE(CFS) =    9243.94
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 143.19
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       C      180.60      0.25      0.20    69
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       21.30      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C       48.40      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      160.00      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.80      0.20      0.50    75
  NATURAL FAIR COVER
  "GRASS"                    D       28.00      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.67
  SUBAREA AREA(ACRES) =  439.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.88;3H= 1.64;6H= 2.43;24H= 4.28
```

```
  S-GRAPH: VALLEY(DEV.)=  3.0%;VALLEY(UNDEV.)/DESERT= 18.6%
           MOUNTAIN= 63.3%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.39; LAG(HR) = 1.91; Fm(INCH/HR) = 0.23; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  51070.11
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0334; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0275;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8523.03
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9291.37
  TOTAL AREA(ACRES) =  51070.11       PEAK FLOW RATE(CFS) =    9291.37

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 143.19
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  URBAN FAIR COVER
  "TURF"                     D        0.40      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      171.40      0.20      1.00    83
  COMMERCIAL                 D       51.30      0.20      0.10    75
  PUBLIC PARK                D        7.90      0.20      0.85    75
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D      154.70      0.20      0.20    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       24.20      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.58
  SUBAREA AREA(ACRES) =  409.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.88;3H= 1.63;6H= 2.43;24H= 4.27
  S-GRAPH: VALLEY(DEV.)=  3.3%;VALLEY(UNDEV.)/DESERT= 18.5%
           MOUNTAIN= 63.1%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.39; LAG(HR) = 1.91; Fm(INCH/HR) = 0.23; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  51480.01
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0334; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0275;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8583.50
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9354.92
  TOTAL AREA(ACRES) =  51480.01       PEAK FLOW RATE(CFS) =    9354.92

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 143.19
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D        1.30      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D       53.60      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   54.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.88;3H= 1.63;6H= 2.43;24H= 4.27
  S-GRAPH: VALLEY(DEV.)=  3.4%;VALLEY(UNDEV.)/DESERT= 18.5%
           MOUNTAIN= 63.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.39; LAG(HR) = 1.91; Fm(INCH/HR) = 0.23; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  51534.91
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0334; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0275;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8587.72
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9359.59
  TOTAL AREA(ACRES) =  51534.91       PEAK FLOW RATE(CFS) =    9359.59

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  51534.91  TC(MIN.) =    143.19
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.51
  PEAK FLOW RATE(CFS)   =   9359.59
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LP65010E.DAT
  TIME/DATE OF STUDY: 16:00 02/24/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.570
        FOOTHILL                           0.150
        MOUNTAIN                           0.010
        VALLEY(UNDEVELOPED)/DESERT         0.270
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1064.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LP64010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9359.59    Tc(MIN.) = 143.19
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.51
  TOTAL AREA(ACRES) =   51534.91
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1064.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9359.59    Tc(MIN.) = 143.19
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.51
  TOTAL AREA(ACRES) =   51534.91
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1064.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    275.00  DOWNSTREAM(FEET) =    240.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  5738.00   CHANNEL SLOPE =  0.0061
  CHANNEL BASE(FEET) =   60.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.025   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   9359.59
  FLOW VELOCITY(FEET/SEC.) =  15.76   FLOW DEPTH(FEET) =   7.85
  TRAVEL TIME(MIN.) =   6.07   Tc(MIN.) = 149.26
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) = 149.26
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.580
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A        0.20      0.40       0.50    32
  NATURAL FAIR COVER
  "GRASS"                    A       11.30      0.40       1.00    50
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A       49.50      0.40       1.00    49
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        0.70      0.40       1.00    46
  COMMERCIAL                 A        0.90      0.40       0.10    32
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       A       43.50      0.40       0.20    32
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.66
  SUBAREA AREA(ACRES) =  106.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.88;3H= 1.63;6H= 2.43;24H= 4.27
```

```
  S-GRAPH: VALLEY(DEV.)=  3.5%;VALLEY(UNDEV.)/DESERT= 18.5%
           MOUNTAIN= 62.9%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.49; LAG(HR) = 1.99; Fm(INCH/HR) = 0.23; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  51641.01
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0332; Lca/L=0.4,n=.0298; Lca/L=0.5,n=.0273;Lca/L=0.6,n=.0255
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8591.09
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9251.42
  TOTAL AREA(ACRES) =  51641.01       PEAK FLOW RATE(CFS) =    9359.59
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 149.26
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 A        6.90      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        6.70      0.30      1.00    63
  NATURAL POOR COVER
  "BARREN"                   B        0.70      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B       36.10      0.30      1.00    69
  URBAN FAIR COVER
  "TURF"                     B        0.40      0.30      1.00    65
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B        1.80      0.30      1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.31
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   52.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.88;3H= 1.63;6H= 2.43;24H= 4.27
  S-GRAPH: VALLEY(DEV.)=  3.5%;VALLEY(UNDEV.)/DESERT= 18.5%
           MOUNTAIN= 62.8%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.49; LAG(HR) = 1.99; Fm(INCH/HR) = 0.23; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  51693.61
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0332; Lca/L=0.4,n=.0298; Lca/L=0.5,n=.0273;Lca/L=0.6,n=.0255
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8591.13
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9252.21
  TOTAL AREA(ACRES) =  51693.61       PEAK FLOW RATE(CFS) =    9359.59
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 149.26
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       30.50      0.30      1.00    66
  COMMERCIAL                 B        3.90      0.30      0.10    56
  PUBLIC PARK                B        0.20      0.30      0.85    56
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       B       60.30      0.30      0.20    56
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B       82.10      0.30      0.60    56
  NATURAL FAIR COVER
  "WOODLAND"                 B       44.60      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.62
  SUBAREA AREA(ACRES) =  221.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.88;3H= 1.63;6H= 2.42;24H= 4.26
  S-GRAPH: VALLEY(DEV.)=  3.7%;VALLEY(UNDEV.)/DESERT= 18.6%
           MOUNTAIN= 62.6%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.49; LAG(HR) = 1.99; Fm(INCH/HR) = 0.23; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  51915.21
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0332; Lca/L=0.4,n=.0298; Lca/L=0.5,n=.0273;Lca/L=0.6,n=.0255
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8607.23
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9272.45
  TOTAL AREA(ACRES) =  51915.21       PEAK FLOW RATE(CFS) =    9359.59
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 149.26
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      111.40      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                    C       42.10      0.25      1.00    79
  URBAN FAIR COVER
  "TURF"                     C        0.50      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        0.20      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      117.70      0.25      1.00    77
  COMMERCIAL                 C        4.20      0.25      0.10    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  276.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.88;3H= 1.63;6H= 2.42;24H= 4.26
  S-GRAPH: VALLEY(DEV.)=  4.0%;VALLEY(UNDEV.)/DESERT= 18.6%
```

```
          MOUNTAIN= 62.3%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.49; LAG(HR) = 1.99; Fm(INCH/HR) = 0.23; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  52191.31
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0332; Lca/L=0.4,n=.0298; Lca/L=0.5,n=.0273;Lca/L=0.6,n=.0255
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8623.63
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9292.22
  TOTAL AREA(ACRES) =  52191.31       PEAK FLOW RATE(CFS) =    9359.59
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 149.26
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       C       93.00      0.25      0.20    69
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C      529.20      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C      106.50      0.25      1.00    73
  PUBLIC PARK                D        1.80      0.20      0.85    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.90      0.20      1.00    81
  NATURAL POOR COVER
  "BARREN"                   D        0.70      0.20      1.00    93
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.61
  SUBAREA AREA(ACRES) =  733.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.87;3H= 1.63;6H= 2.41;24H= 4.24
  S-GRAPH: VALLEY(DEV.)=  4.8%;VALLEY(UNDEV.)/DESERT= 18.7%
           MOUNTAIN= 61.4%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.49; LAG(HR) = 1.99; Fm(INCH/HR) = 0.23; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  52924.41
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0332; Lca/L=0.4,n=.0298; Lca/L=0.5,n=.0273;Lca/L=0.6,n=.0255
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8699.58
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9380.91
  TOTAL AREA(ACRES) =  52924.41       PEAK FLOW RATE(CFS) =    9380.91

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 149.26
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
```

```
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D       39.60      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                     D        3.30      0.20      1.00    82
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D       11.70      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       55.00      0.20      1.00    83
  COMMERCIAL                 D        0.40      0.20      0.10    75
  NATURAL GOOD COVER
  "MEADOWS"                  D        2.00      0.20      1.00    78
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  112.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.87;3H= 1.62;6H= 2.41;24H= 4.24
  S-GRAPH: VALLEY(DEV.)=  4.9%;VALLEY(UNDEV.)/DESERT= 18.7%
           MOUNTAIN= 61.3%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.49; LAG(HR) = 1.99; Fm(INCH/HR) = 0.23; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  53036.41
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0332; Lca/L=0.4,n=.0298; Lca/L=0.5,n=.0273;Lca/L=0.6,n=.0255
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8711.14
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9394.08
  TOTAL AREA(ACRES) =  53036.41       PEAK FLOW RATE(CFS) =    9394.08

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 149.26
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D       68.90      0.20      0.20    75
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D      109.80      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D       31.70      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.53
  SUBAREA AREA(ACRES) =  210.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.87;3H= 1.62;6H= 2.41;24H= 4.23
  S-GRAPH: VALLEY(DEV.)=  5.1%;VALLEY(UNDEV.)/DESERT= 18.8%
           MOUNTAIN= 61.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.49; LAG(HR) = 1.99; Fm(INCH/HR) = 0.23; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  53246.81
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
```

```
 Lca/L=0.3,n=.0332; Lca/L=0.4,n=.0298; Lca/L=0.5,n=.0273;Lca/L=0.6,n=.0255
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8740.50
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9427.79
  TOTAL AREA(ACRES) =  53246.81       PEAK FLOW RATE(CFS) =    9427.79

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  53246.81  TC(MIN.) =    149.26
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.51
  PEAK FLOW RATE(CFS)   =   9427.79
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LP66010E.DAT
  TIME/DATE OF STUDY: 16:00 02/24/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.240
        FOOTHILL                           0.080
        MOUNTAIN                           0.680
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1065.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LP65010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9427.79    Tc(MIN.) = 149.26
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.51
  TOTAL AREA(ACRES) =   53246.81
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1065.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9427.79    Tc(MIN.) = 149.26
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.51
  TOTAL AREA(ACRES) =   53246.81
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1065.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    240.00  DOWNSTREAM(FEET) =    213.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  6295.00   CHANNEL SLOPE =  0.0043
  CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   9427.79
  FLOW VELOCITY(FEET/SEC.) =  11.57   FLOW DEPTH(FEET) =   8.06
  TRAVEL TIME(MIN.) =   9.07   Tc(MIN.) = 158.33
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) = 158.33
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.561
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  PUBLIC PARK                A       19.80      0.40       0.85    32
  AGRICULTURAL POOR COVER
  "FALLOW"                   A        2.20      0.40       1.00    77
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A       13.30      0.40       0.50    32
  NATURAL POOR COVER
  "BARREN"                   A       56.00      0.40       1.00    78
  NATURAL FAIR COVER
  "GRASS"                    A       51.40      0.40       1.00    50
  URBAN FAIR COVER
  "TURF"                     A       20.20      0.40       1.00    44
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.94
  SUBAREA AREA(ACRES) =  162.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.87;3H= 1.62;6H= 2.41;24H= 4.23
```

```
  S-GRAPH: VALLEY(DEV.)=  5.1%;VALLEY(UNDEV.)/DESERT= 18.7%
           MOUNTAIN= 61.1%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.64; LAG(HR) = 2.11; Fm(INCH/HR) = 0.23; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  53409.71
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0335; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8702.96
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9071.48
  TOTAL AREA(ACRES) =  53409.71       PEAK FLOW RATE(CFS) =    9427.79
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 158.33
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A      120.00      0.40      1.00    49
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        4.00      0.40      1.00    46
  COMMERCIAL                 A       17.30      0.40      0.10    32
  NATURAL GOOD COVER
  "MEADOWS"                  A        0.40      0.40      1.00    30
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       A        7.10      0.40      0.20    32
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        1.30      0.40      1.00    40
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.86
  SUBAREA AREA(ACRES) =  150.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.87;3H= 1.62;6H= 2.40;24H= 4.22
  S-GRAPH: VALLEY(DEV.)=  5.2%;VALLEY(UNDEV.)/DESERT= 18.7%
           MOUNTAIN= 61.1%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.64; LAG(HR) = 2.11; Fm(INCH/HR) = 0.23; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  53559.81
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0335; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8699.84
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9067.57
  TOTAL AREA(ACRES) =  53559.81       PEAK FLOW RATE(CFS) =    9427.79
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 158.33
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 A      101.40      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B      119.30      0.30      1.00    63
  AGRICULTURAL POOR COVER
  "FALLOW"                   B       19.80      0.30      1.00    86
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B      201.90      0.30      0.50    56
  NATURAL POOR COVER
  "BARREN"                   B      189.50      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B      335.80      0.30      1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.31
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.90
  SUBAREA AREA(ACRES) =  967.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.87;3H= 1.62;6H= 2.39;24H= 4.20
  S-GRAPH: VALLEY(DEV.)=  5.5%;VALLEY(UNDEV.)/DESERT= 18.3%
           MOUNTAIN= 61.2%;FOOTHILL= 14.9%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.64; LAG(HR) = 2.11; Fm(INCH/HR) = 0.23; Ybar = 0.52
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  54527.51
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0335; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8739.13
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9098.45
  TOTAL AREA(ACRES) =  54527.51       PEAK FLOW RATE(CFS) =    9427.79
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 158.33
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  URBAN FAIR COVER
  "TURF"                     B      139.20      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B      113.30      0.30      1.00    66
  COMMERCIAL                 B      352.90      0.30      0.10    56
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B      174.00      0.30      1.00    69
  PUBLIC PARK                B       22.20      0.30      0.85    56
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       B       85.90      0.30      0.20    56
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.56
  SUBAREA AREA(ACRES) =  887.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.87;3H= 1.61;6H= 2.38;24H= 4.18
  S-GRAPH: VALLEY(DEV.)=  5.8%;VALLEY(UNDEV.)/DESERT= 18.0%
```

```
          MOUNTAIN= 61.3%;FOOTHILL= 14.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.64; LAG(HR) = 2.11; Fm(INCH/HR) = 0.23; Ybar = 0.52
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.32; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  55415.01
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0335; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8828.64
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9183.95
  TOTAL AREA(ACRES) =  55415.01       PEAK FLOW RATE(CFS) =    9427.79
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 158.33
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        2.40      0.30      1.00    72
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B       76.70      0.30      0.60    56
  NATURAL FAIR COVER
  "WOODLAND"                 B      223.60      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      252.20      0.25      1.00    75
  AGRICULTURAL POOR COVER
  "FALLOW"                   C       67.20      0.25      1.00    91
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C      322.30      0.25      0.50    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.80
  SUBAREA AREA(ACRES) =  944.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.87;3H= 1.61;6H= 2.37;24H= 4.17
  S-GRAPH: VALLEY(DEV.)=  6.1%;VALLEY(UNDEV.)/DESERT= 17.7%
           MOUNTAIN= 61.4%;FOOTHILL= 14.7%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.64; LAG(HR) = 2.11; Fm(INCH/HR) = 0.23; Ybar = 0.52
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.32; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  56359.41
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0335; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    8893.07
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9243.05
  TOTAL AREA(ACRES) =  56359.41       PEAK FLOW RATE(CFS) =    9427.79
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 158.33
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   C      117.80      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C      615.70      0.25      1.00    79
  URBAN FAIR COVER
  "TURF"                     C       52.40      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C      183.90      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C     1315.50      0.25      1.00    77
  COMMERCIAL                 C      417.30      0.25      0.10    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.86
  SUBAREA AREA(ACRES) = 2702.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.32;30M= 0.63;1H= 0.86;3H= 1.59;6H= 2.35;24H= 4.11
  S-GRAPH: VALLEY(DEV.)=  6.9%;VALLEY(UNDEV.)/DESERT= 16.9%
           MOUNTAIN= 61.7%;FOOTHILL= 14.4%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.64; LAG(HR) = 2.11; Fm(INCH/HR) = 0.23; Ybar = 0.52
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.37; 1HR = 0.41;
  3HR = 0.76; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  59062.01
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0335; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9139.22
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9460.02
  TOTAL AREA(ACRES) =  59062.01       PEAK FLOW RATE(CFS) =    9460.02

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 158.33
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  PUBLIC PARK                C        0.70      0.25      0.85    69
  NATURAL GOOD COVER
  "MEADOWS"                  C        4.00      0.25      1.00    71
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       C      460.80      0.25      0.20    69
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       26.10      0.25      1.00    81
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C      228.40      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C      211.80      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.51
  SUBAREA AREA(ACRES) =  931.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.63;1H= 0.86;3H= 1.59;6H= 2.34;24H= 4.10
  S-GRAPH: VALLEY(DEV.)=  7.2%;VALLEY(UNDEV.)/DESERT= 16.7%
           MOUNTAIN= 61.8%;FOOTHILL= 14.3%;DESERT(UNDEV.)=  0.0%
```

```
  Tc(HR) = 2.64; LAG(HR) = 2.11; Fm(INCH/HR) = 0.23; Ybar = 0.52
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.37; 1HR = 0.41;
  3HR = 0.76; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  59993.81
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0335; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9261.02
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9577.42
  TOTAL AREA(ACRES) =  59993.81       PEAK FLOW RATE(CFS) =    9577.42

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 158.33
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      112.90      0.20      1.00    81
  PUBLIC PARK                D       44.50      0.20      0.85    75
  AGRICULTURAL POOR COVER
  "FALLOW"                   D       12.50      0.20      1.00    94
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D       91.50      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        9.60      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      204.00      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.89
  SUBAREA AREA(ACRES) =  475.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.63;1H= 0.86;3H= 1.59;6H= 2.34;24H= 4.09
  S-GRAPH: VALLEY(DEV.)=  7.3%;VALLEY(UNDEV.)/DESERT= 16.5%
           MOUNTAIN= 61.9%;FOOTHILL= 14.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.64; LAG(HR) = 2.11; Fm(INCH/HR) = 0.22; Ybar = 0.52
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.36; 1HR = 0.41;
  3HR = 0.76; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  60468.81
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0335; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9313.86
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9625.87
  TOTAL AREA(ACRES) =  60468.81       PEAK FLOW RATE(CFS) =    9625.87

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 158.33
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
```

```
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 D        0.40      0.20      1.00    82
  URBAN FAIR COVER
  "TURF"                     D        5.80      0.20      1.00    82
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D       95.90      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      171.90      0.20      1.00    83
  COMMERCIAL                 D       35.50      0.20      0.10    75
  NATURAL GOOD COVER
  "MEADOWS"                  D        1.60      0.20      1.00    78
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.90
  SUBAREA AREA(ACRES) =  311.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.63;1H= 0.86;3H= 1.58;6H= 2.33;24H= 4.08
  S-GRAPH: VALLEY(DEV.)=  7.4%;VALLEY(UNDEV.)/DESERT= 16.5%
           MOUNTAIN= 61.9%;FOOTHILL= 14.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.64; LAG(HR) = 2.11; Fm(INCH/HR) = 0.22; Ybar = 0.52
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.36; 1HR = 0.41;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  60779.91
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0335; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9349.88
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9658.56
  TOTAL AREA(ACRES) =  60779.91       PEAK FLOW RATE(CFS) =    9658.56

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 158.33
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D      357.30      0.20      0.20    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       11.30      0.20      1.00    86
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D      309.70      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D       41.70      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.43
  SUBAREA AREA(ACRES) =  720.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.62;1H= 0.86;3H= 1.58;6H= 2.33;24H= 4.07
  S-GRAPH: VALLEY(DEV.)=  7.6%;VALLEY(UNDEV.)/DESERT= 16.3%
           MOUNTAIN= 62.0%;FOOTHILL= 14.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.64; LAG(HR) = 2.11; Fm(INCH/HR) = 0.22; Ybar = 0.52
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.36; 1HR = 0.41;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  61499.91
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
```

```
 Lca/L=0.3,n=.0335; Lca/L=0.4,n=.0300; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0257
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9461.70
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9766.93
  TOTAL AREA(ACRES) =  61499.91       PEAK FLOW RATE(CFS) =    9766.93

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  61499.91  TC(MIN.) =    158.33
  AREA-AVERAGED Fm(INCH/HR)=  0.22   Ybar =  0.52
  PEAK FLOW RATE(CFS)   =   9766.93
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LP67010E.DAT
  TIME/DATE OF STUDY: 16:00 02/24/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.160
        FOOTHILL                           0.140
        MOUNTAIN                           0.620
        VALLEY(UNDEVELOPED)/DESERT         0.080
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1066.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LP66010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9766.93    Tc(MIN.) = 158.33
  AREA-AVERAGED Fm(INCH/HR) =  0.22    Ybar = 0.52
  TOTAL AREA(ACRES) =   61499.91
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1066.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9766.93    Tc(MIN.) = 158.33
  AREA-AVERAGED Fm(INCH/HR) =  0.22    Ybar = 0.52
  TOTAL AREA(ACRES) =   61499.91
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1066.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    213.00  DOWNSTREAM(FEET) =    176.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  6201.00   CHANNEL SLOPE =  0.0060
  CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   9766.93
  FLOW VELOCITY(FEET/SEC.) =  13.06   FLOW DEPTH(FEET) =   7.48
  TRAVEL TIME(MIN.) =   7.91   Tc(MIN.) = 166.24
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) = 166.24
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.545
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   A        0.20      0.40       1.00    77
  NATURAL FAIR COVER
  "GRASS"                    A        0.90      0.40       1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        8.90      0.40       1.00    46
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A        5.50      0.40       1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A       17.90      0.40       1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       23.90      0.30       1.00    63
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.36
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   57.30
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.31;30M= 0.62;1H= 0.86;3H= 1.58;6H= 2.33;24H= 4.07
  S-GRAPH: VALLEY(DEV.)=  7.6%;VALLEY(UNDEV.)/DESERT= 16.3%
           MOUNTAIN= 62.0%;FOOTHILL= 14.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.77; LAG(HR) = 2.22; Fm(INCH/HR) = 0.22; Ybar = 0.52
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.36; 1HR = 0.41;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  61557.22
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0335; Lca/L=0.4,n=.0301; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0258
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9459.53
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9627.46
  TOTAL AREA(ACRES) =  61557.22       PEAK FLOW RATE(CFS) =    9766.93
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 166.24
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   B      180.40      0.30      1.00    86
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B       89.60      0.30      0.50    56
  NATURAL FAIR COVER
  "GRASS"                    B      327.50      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 B        6.00      0.30      1.00    65
  URBAN FAIR COVER
  "TURF"                     B      105.00      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B      118.90      0.30      1.00    66
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.95
  SUBAREA AREA(ACRES) =  827.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.62;1H= 0.86;3H= 1.58;6H= 2.32;24H= 4.06
  S-GRAPH: VALLEY(DEV.)=  7.7%;VALLEY(UNDEV.)/DESERT= 16.1%
           MOUNTAIN= 62.0%;FOOTHILL= 14.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.77; LAG(HR) = 2.22; Fm(INCH/HR) = 0.22; Ybar = 0.52
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.30; 30M = 0.36; 1HR = 0.41;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  62384.62
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0335; Lca/L=0.4,n=.0301; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0258
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9498.12
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9656.73
  TOTAL AREA(ACRES) =  62384.62       PEAK FLOW RATE(CFS) =    9766.93
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
----------------------------------------------------------------------------
```

```
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 166.24
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 B        7.80      0.30      0.10    56
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B      418.80      0.30      1.00    69
  NATURAL GOOD COVER
  "MEADOWS"                  B        0.90      0.30      1.00    58
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        0.40      0.30      1.00    72
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B       50.90      0.30      0.60    56
  NATURAL FAIR COVER
  "WOODLAND"                 B       51.70      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.95
  SUBAREA AREA(ACRES) =  530.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.62;1H= 0.86;3H= 1.58;6H= 2.32;24H= 4.05
  S-GRAPH: VALLEY(DEV.)=  7.8%;VALLEY(UNDEV.)/DESERT= 16.1%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.77; LAG(HR) = 2.22; Fm(INCH/HR) = 0.22; Ybar = 0.52
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.30; 30M = 0.36; 1HR = 0.40;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  62915.12
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0335; Lca/L=0.4,n=.0301; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0258
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9512.32
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9666.58
  TOTAL AREA(ACRES) =  62915.12       PEAK FLOW RATE(CFS) =    9766.93
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 166.24
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      203.60      0.25      1.00    75
  AGRICULTURAL POOR COVER
  "FALLOW"                   C      124.30      0.25      1.00    91
  NATURAL POOR COVER
  "BARREN"                   C        7.60      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C      485.30      0.25      1.00    79
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 C        0.70      0.25      1.00    77
  URBAN FAIR COVER
  "TURF"                     C        4.90      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  826.40
```

```
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.62;1H= 0.86;3H= 1.57;6H= 2.31;24H= 4.03
  S-GRAPH: VALLEY(DEV.)=  7.9%;VALLEY(UNDEV.)/DESERT= 16.0%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.77; LAG(HR) = 2.22; Fm(INCH/HR) = 0.22; Ybar = 0.52
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.30; 30M = 0.36; 1HR = 0.40;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  63741.52
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0335; Lca/L=0.4,n=.0301; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0258
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9581.09
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9725.38
  TOTAL AREA(ACRES) =  63741.52       PEAK FLOW RATE(CFS) =    9766.93
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 166.24
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      940.00      0.25      1.00    77
  COMMERCIAL                 C       10.80      0.25      0.10    69
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C      128.10      0.25      1.00    79
  NATURAL GOOD COVER
  "MEADOWS"                  C        0.20      0.25      1.00    71
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       C       17.90      0.25      0.20    69
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C      125.40      0.25      0.60    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.94
  SUBAREA AREA(ACRES) = 1222.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.62;1H= 0.86;3H= 1.57;6H= 2.30;24H= 4.02
  S-GRAPH: VALLEY(DEV.)=  8.1%;VALLEY(UNDEV.)/DESERT= 15.8%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.77; LAG(HR) = 2.22; Fm(INCH/HR) = 0.22; Ybar = 0.53
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.30; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  64963.91
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0335; Lca/L=0.4,n=.0301; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0258
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9667.83
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9800.48
  TOTAL AREA(ACRES) =  64963.91       PEAK FLOW RATE(CFS) =    9800.48

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 166.24
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C       94.10      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      159.90      0.20      1.00    81
  AGRICULTURAL POOR COVER
  "FALLOW"                   D       77.90      0.20      1.00    94
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D      104.60      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        0.60      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      635.30      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.95
  SUBAREA AREA(ACRES) = 1072.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.62;1H= 0.86;3H= 1.56;6H= 2.29;24H= 4.00
  S-GRAPH: VALLEY(DEV.)=  8.2%;VALLEY(UNDEV.)/DESERT= 15.7%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.77; LAG(HR) = 2.22; Fm(INCH/HR) = 0.22; Ybar = 0.53
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  66036.31
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0335; Lca/L=0.4,n=.0301; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0258
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9780.79
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9901.89
  TOTAL AREA(ACRES) =  66036.31       PEAK FLOW RATE(CFS) =    9901.89

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 166.24
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 D        0.90      0.20      1.00    82
  URBAN FAIR COVER
  "TURF"                     D        8.20      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      334.50      0.20      1.00    83
  COMMERCIAL                 D       11.70      0.20      0.10    75
  PUBLIC PARK                D        0.10      0.20      0.85    75
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D        3.80      0.20      0.20    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.96
  SUBAREA AREA(ACRES) =  359.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.62;1H= 0.85;3H= 1.56;6H= 2.29;24H= 3.99
  S-GRAPH: VALLEY(DEV.)=  8.2%;VALLEY(UNDEV.)/DESERT= 15.7%
```

```
          MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.77; LAG(HR) = 2.22; Fm(INCH/HR) = 0.22; Ybar = 0.53
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  66395.52
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0335; Lca/L=0.4,n=.0301; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0258
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9817.78
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9934.98
  TOTAL AREA(ACRES) =  66395.52       PEAK FLOW RATE(CFS) =    9934.98

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

**************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) = 166.24
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        7.80      0.20      1.00    86
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D       61.40      0.20      1.00    84
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D      156.10      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D       63.80      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.78
  SUBAREA AREA(ACRES) =  289.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.62;1H= 0.85;3H= 1.56;6H= 2.29;24H= 3.99
  S-GRAPH: VALLEY(DEV.)=  8.3%;VALLEY(UNDEV.)/DESERT= 15.6%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.77; LAG(HR) = 2.22; Fm(INCH/HR) = 0.22; Ybar = 0.53
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  66684.62
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0335; Lca/L=0.4,n=.0301; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0258
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9848.72
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9963.32
  TOTAL AREA(ACRES) =  66684.62       PEAK FLOW RATE(CFS) =    9963.32

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
==========================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  66684.62  TC(MIN.) =    166.24
  AREA-AVERAGED Fm(INCH/HR)=  0.22   Ybar =  0.53
  PEAK FLOW RATE(CFS)   =   9963.32
==========================================================================
==========================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LP68010E.DAT
  TIME/DATE OF STUDY: 16:00 02/24/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.100
   2)  10.000;  3.100
   3)  15.000;  2.500
   4)  20.000;  1.800
   5)  30.000;  1.350
   6)  60.000;  1.000
   7) 120.000;  0.770
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.250
        FOOTHILL                           0.140
        MOUNTAIN                           0.180
        VALLEY(UNDEVELOPED)/DESERT         0.430
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1067.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LP67010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9963.32    Tc(MIN.) = 166.24
  AREA-AVERAGED Fm(INCH/HR) =  0.22    Ybar = 0.53
  TOTAL AREA(ACRES) =   66684.62
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1067.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     9963.32    Tc(MIN.) = 166.24
  AREA-AVERAGED Fm(INCH/HR) =  0.22    Ybar = 0.53
  TOTAL AREA(ACRES) =   66684.62
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1067.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    176.00  DOWNSTREAM(FEET) =    133.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  6324.00   CHANNEL SLOPE =  0.0068
  CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   9963.32
  FLOW VELOCITY(FEET/SEC.) =  13.74   FLOW DEPTH(FEET) =   7.28
  TRAVEL TIME(MIN.) =   7.67   Tc(MIN.) = 173.91
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) = 173.91
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.531
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        1.30      0.40       1.00    40
  NATURAL GOOD COVER
  "MEADOWS"                  A        0.30      0.40       1.00    30
  NATURAL FAIR COVER
  "GRASS"                    A        1.80      0.40       1.00    50
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 A        0.90      0.40       1.00    44
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        3.10      0.40       1.00    46
  COMMERCIAL                 A       23.30      0.40       0.10    32
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.32
  SUBAREA AREA(ACRES) =   30.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.62;1H= 0.85;3H= 1.56;6H= 2.29;24H= 3.99
```

```
  S-GRAPH: VALLEY(DEV.)=  8.3%;VALLEY(UNDEV.)/DESERT= 15.6%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.90; LAG(HR) = 2.32; Fm(INCH/HR) = 0.22; Ybar = 0.53
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  66715.32
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0336; Lca/L=0.4,n=.0301; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0258
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9852.73
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9842.53
  TOTAL AREA(ACRES) =  66715.32       PEAK FLOW RATE(CFS) =    9963.32
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 173.91
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A        1.60      0.40      1.00    49
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       A        6.70      0.40      0.20    32
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       A       33.60      0.40      0.60    32
  NATURAL FAIR COVER
  "WOODLAND"                 A       19.30      0.40      1.00    36
  AGRICULTURAL POOR COVER
  "FALLOW"                   B        4.10      0.30      1.00    86
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B       16.50      0.30      0.50    56
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.38
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.67
  SUBAREA AREA(ACRES) =   81.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.62;1H= 0.85;3H= 1.56;6H= 2.29;24H= 3.99
  S-GRAPH: VALLEY(DEV.)=  8.3%;VALLEY(UNDEV.)/DESERT= 15.7%
           MOUNTAIN= 61.9%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.90; LAG(HR) = 2.32; Fm(INCH/HR) = 0.22; Ybar = 0.53
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  66797.12
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0336; Lca/L=0.4,n=.0301; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0258
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9856.00
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9845.57
  TOTAL AREA(ACRES) =  66797.12       PEAK FLOW RATE(CFS) =    9963.32
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 173.91
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   B        2.00      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B        7.10      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 B        0.40      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        0.70      0.30      1.00    66
  COMMERCIAL                 B       42.80      0.30      0.10    56
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B       10.70      0.30      1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.40
  SUBAREA AREA(ACRES) =   63.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.62;1H= 0.85;3H= 1.56;6H= 2.29;24H= 3.99
  S-GRAPH: VALLEY(DEV.)=  8.3%;VALLEY(UNDEV.)/DESERT= 15.7%
           MOUNTAIN= 61.9%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.90; LAG(HR) = 2.32; Fm(INCH/HR) = 0.22; Ybar = 0.53
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  66860.82
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0336; Lca/L=0.4,n=.0301; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0258
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9864.94
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9854.18
  TOTAL AREA(ACRES) =  66860.82       PEAK FLOW RATE(CFS) =    9963.32
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 173.91
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       B       77.60      0.30      0.20    56
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B       14.90      0.30      0.60    56
  NATURAL FAIR COVER
  "WOODLAND"                 B        6.90      0.30      1.00    60
  NATURAL FAIR COVER
  "GRASS"                    C      218.60      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       70.80      0.25      1.00    77
  COMMERCIAL                 C       12.90      0.25      0.10    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.80
  SUBAREA AREA(ACRES) =  401.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.62;1H= 0.85;3H= 1.56;6H= 2.28;24H= 3.98
```

```
  S-GRAPH: VALLEY(DEV.)=  8.4%;VALLEY(UNDEV.)/DESERT= 15.9%
           MOUNTAIN= 61.6%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.90; LAG(HR) = 2.32; Fm(INCH/HR) = 0.22; Ybar = 0.53
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  67262.52
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0336; Lca/L=0.4,n=.0301; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0258
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9902.20
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9889.17
  TOTAL AREA(ACRES) =  67262.52       PEAK FLOW RATE(CFS) =    9963.32
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 173.91
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  PUBLIC PARK                C        0.20      0.25      0.85    69
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        0.90      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C       19.50      0.25      1.00    73
  AGRICULTURAL POOR COVER
  "FALLOW"                   D       35.60      0.20      1.00    94
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D      140.20      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        0.60      0.20      1.00    93
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.64
  SUBAREA AREA(ACRES) =  197.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.62;1H= 0.85;3H= 1.56;6H= 2.28;24H= 3.98
  S-GRAPH: VALLEY(DEV.)=  8.5%;VALLEY(UNDEV.)/DESERT= 15.9%
           MOUNTAIN= 61.5%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.90; LAG(HR) = 2.32; Fm(INCH/HR) = 0.22; Ybar = 0.53
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.39;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  67459.52
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0336; Lca/L=0.4,n=.0301; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0258
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9928.78
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9914.60
  TOTAL AREA(ACRES) =  67459.52       PEAK FLOW RATE(CFS) =    9963.32
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 173.91
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D      332.20      0.20      1.00    84
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 D        1.10      0.20      1.00    82
  URBAN FAIR COVER
  "TURF"                     D        1.20      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      172.80      0.20      1.00    83
  COMMERCIAL                 D       60.20      0.20      0.10    75
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D        1.80      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.90
  SUBAREA AREA(ACRES) =  569.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.62;1H= 0.85;3H= 1.56;6H= 2.28;24H= 3.97
  S-GRAPH: VALLEY(DEV.)=  8.6%;VALLEY(UNDEV.)/DESERT= 16.2%
           MOUNTAIN= 61.1%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.90; LAG(HR) = 2.32; Fm(INCH/HR) = 0.22; Ybar = 0.53
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.39;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  68028.82
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0336; Lca/L=0.4,n=.0301; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0258
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =    9993.86
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9975.71
  TOTAL AREA(ACRES) =  68028.82       PEAK FLOW RATE(CFS) =    9975.71

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 173.91
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.770
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D      143.90      0.20      0.20    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        4.90      0.20      1.00    81
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D        6.00      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D       61.30      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.46
  SUBAREA AREA(ACRES) =  216.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.31;30M= 0.62;1H= 0.85;3H= 1.55;6H= 2.28;24H= 3.97
  S-GRAPH: VALLEY(DEV.)=  8.7%;VALLEY(UNDEV.)/DESERT= 16.2%
           MOUNTAIN= 61.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.90; LAG(HR) = 2.32; Fm(INCH/HR) = 0.22; Ybar = 0.52
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.39;
```

```
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 20.00   TOTAL AREA(ACRES) =  68244.92
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0336; Lca/L=0.4,n=.0301; Lca/L=0.5,n=.0276;Lca/L=0.6,n=.0258
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =   10026.41
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  10007.13
  TOTAL AREA(ACRES) =  68244.92       PEAK FLOW RATE(CFS) =   10007.13

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  68244.92  TC(MIN.) =    173.91
  AREA-AVERAGED Fm(INCH/HR)=  0.22   Ybar =  0.52
  PEAK FLOW RATE(CFS)   =  10007.13
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

TECHNICAL APPENDIX I-C
HYDROLOGIC ANALYSIS
PROPOSED CONDITION
100-YEAR EXPECTED VALUE

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
        (c) Copyright 1983-2003 Advanced Engineering Software (aes)
            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LP63100E.DAT
  TIME/DATE OF STUDY: 08:03 02/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.180
        FOOTHILL                           0.150
        MOUNTAIN                           0.640
        VALLEY(UNDEVELOPED)/DESERT         0.030
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1062.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU62100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    17976.47    Tc(MIN.) = 115.61
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.38
  TOTAL AREA(ACRES) =   46437.31
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1062.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    17976.47    Tc(MIN.) = 115.61
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.38
  TOTAL AREA(ACRES) =   46437.31
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1062.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    345.00  DOWNSTREAM(FEET) =    319.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2852.00   CHANNEL SLOPE =  0.0091
  CHANNEL BASE(FEET) =   60.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.025   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  17976.47
  FLOW VELOCITY(FEET/SEC.) =  22.15   FLOW DEPTH(FEET) =  10.11
  TRAVEL TIME(MIN.) =   2.15   Tc(MIN.) = 117.76
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) = 117.76
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.012
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       88.70      0.40       1.00    40
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A        4.40      0.40       0.50    32
  NATURAL FAIR COVER
  "GRASS"                    A        6.50      0.40       1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A       98.10      0.40       1.00    46
  COMMERCIAL                 A        1.30      0.40       0.10    32
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       A       12.90      0.40       0.60    32
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.96
  SUBAREA AREA(ACRES) =  211.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.52;30M= 0.96;1H= 1.33;3H= 2.51;6H= 3.77;24H= 6.64
```

```
  S-GRAPH: VALLEY(DEV.)=  1.1%;VALLEY(UNDEV.)/DESERT= 19.8%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.96; LAG(HR) = 1.57; Fm(INCH/HR) = 0.23; Ybar = 0.39
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.36; 30M = 0.40; 1HR = 0.44;
  3HR = 0.79; 6HR = 0.91; 24HR= 0.95
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  46649.21
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0288; Lca/L=0.4,n=.0258; Lca/L=0.5,n=.0237;Lca/L=0.6,n=.0222
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   15434.30
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  17954.15
  TOTAL AREA(ACRES) =  46649.21       PEAK FLOW RATE(CFS) =   17976.47
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.43; 30M = 0.89; 1HR = 1.20; 3HR = 2.09; 6HR = 2.98; 24HR = 5.03

****************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 117.76
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.212
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 A       48.40      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        7.10      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                    B        5.60      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       11.60      0.30      1.00    66
  COMMERCIAL                 B        0.20      0.30      0.10    56
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       B        6.90      0.30      0.20    56
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.37
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
  SUBAREA AREA(ACRES) =   79.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.52;30M= 0.96;1H= 1.33;3H= 2.51;6H= 3.77;24H= 6.63
  S-GRAPH: VALLEY(DEV.)=  1.1%;VALLEY(UNDEV.)/DESERT= 19.7%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.96; LAG(HR) = 1.57; Fm(INCH/HR) = 0.23; Ybar = 0.39
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.36; 30M = 0.40; 1HR = 0.44;
  3HR = 0.79; 6HR = 0.91; 24HR= 0.95
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  46729.02
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0288; Lca/L=0.4,n=.0258; Lca/L=0.5,n=.0237;Lca/L=0.6,n=.0222
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   15436.59
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  17959.25
  TOTAL AREA(ACRES) =  46729.02       PEAK FLOW RATE(CFS) =   17976.47
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.43; 30M = 0.89; 1HR = 1.20; 3HR = 2.09; 6HR = 2.98; 24HR = 5.03

****************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 117.76
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.212
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B        4.20      0.30      0.60    56
  NATURAL FAIR COVER
  "WOODLAND"                 B       19.00      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      656.10      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        1.80      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C      156.50      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C     1039.10      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1876.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.51;30M= 0.95;1H= 1.33;3H= 2.50;6H= 3.74;24H= 6.57
  S-GRAPH: VALLEY(DEV.)=  1.8%;VALLEY(UNDEV.)/DESERT= 19.1%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.96; LAG(HR) = 1.57; Fm(INCH/HR) = 0.23; Ybar = 0.39
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.35; 30M = 0.40; 1HR = 0.44;
  3HR = 0.79; 6HR = 0.91; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  48605.71
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0288; Lca/L=0.4,n=.0258; Lca/L=0.5,n=.0237;Lca/L=0.6,n=.0222
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   15773.01
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18306.46
  TOTAL AREA(ACRES) =  48605.71       PEAK FLOW RATE(CFS) =   18306.46

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.43; 30M = 0.89; 1HR = 1.20; 3HR = 2.09; 6HR = 2.98; 24HR = 5.03

****************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 117.76
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.212
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       C       80.90      0.25      0.20    69
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       54.20      0.25      1.00    81
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C       28.70      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C      189.00      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      420.90      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.60      0.20      0.50    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.90
  SUBAREA AREA(ACRES) =  774.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.51;30M= 0.95;1H= 1.32;3H= 2.49;6H= 3.72;24H= 6.55
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 18.8%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.96; LAG(HR) = 1.57; Fm(INCH/HR) = 0.23; Ybar = 0.39
```

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  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.35; 30M = 0.40; 1HR = 0.44;
  3HR = 0.79; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  49380.01
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0288; Lca/L=0.4,n=.0258; Lca/L=0.5,n=.0237;Lca/L=0.6,n=.0222
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   15936.11
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18476.17
  TOTAL AREA(ACRES) =  49380.01       PEAK FLOW RATE(CFS) =   18476.17

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.43; 30M = 0.89; 1HR = 1.20; 3HR = 2.09; 6HR = 2.98; 24HR = 5.03

****************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 117.76
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.212
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   D        0.10      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D       48.30      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      261.40      0.20      1.00    83
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D        1.90      0.20      0.20    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D      139.40      0.20      1.00    86
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D       16.70      0.20      0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  467.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.51;30M= 0.95;1H= 1.32;3H= 2.49;6H= 3.72;24H= 6.53
  S-GRAPH: VALLEY(DEV.)=  2.2%;VALLEY(UNDEV.)/DESERT= 18.7%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.96; LAG(HR) = 1.57; Fm(INCH/HR) = 0.23; Ybar = 0.39
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  49847.81
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0288; Lca/L=0.4,n=.0258; Lca/L=0.5,n=.0237;Lca/L=0.6,n=.0222
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16046.13
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18585.46
  TOTAL AREA(ACRES) =  49847.81       PEAK FLOW RATE(CFS) =   18585.46

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.43; 30M = 0.89; 1HR = 1.20; 3HR = 2.09; 6HR = 2.98; 24HR = 5.03

****************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 117.76
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.212
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
```

```
  NATURAL FAIR COVER
  "WOODLAND"                 D       40.00      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   40.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.51;30M= 0.95;1H= 1.32;3H= 2.49;6H= 3.72;24H= 6.53
  S-GRAPH: VALLEY(DEV.)=  2.2%;VALLEY(UNDEV.)/DESERT= 18.7%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.96; LAG(HR) = 1.57; Fm(INCH/HR) = 0.23; Ybar = 0.39
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  49887.81
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0288; Lca/L=0.4,n=.0258; Lca/L=0.5,n=.0237;Lca/L=0.6,n=.0222
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16054.15
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18593.85
  TOTAL AREA(ACRES) =  49887.81       PEAK FLOW RATE(CFS) =   18593.85

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.43; 30M = 0.89; 1HR = 1.20; 3HR = 2.09; 6HR = 2.98; 24HR = 5.03
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  49887.81  TC(MIN.) =    117.76
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.39
  PEAK FLOW RATE(CFS)   =  18593.85
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LP64100E.DAT
  TIME/DATE OF STUDY: 08:03 02/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ======  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.390
        FOOTHILL                           0.150
        MOUNTAIN                           0.330
        VALLEY(UNDEVELOPED)/DESERT         0.130
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1063.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LP63100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    18593.85    Tc(MIN.) = 117.76
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.39
  TOTAL AREA(ACRES) =   49887.81
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1063.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    18593.85    Tc(MIN.) = 117.76
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.39
  TOTAL AREA(ACRES) =   49887.81
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1063.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    319.00  DOWNSTREAM(FEET) =    275.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  5418.00   CHANNEL SLOPE =  0.0081
  CHANNEL BASE(FEET) =   60.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.025   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  18593.85
  FLOW VELOCITY(FEET/SEC.) =  21.50   FLOW DEPTH(FEET) =  10.64
  TRAVEL TIME(MIN.) =   4.20   Tc(MIN.) = 121.96
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) = 121.96
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  0.992
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       51.80      0.40       1.00    40
  NATURAL FAIR COVER
  "GRASS"                    A        0.20      0.40       1.00    50
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 A        0.20      0.40       1.00    44
  COMMERCIAL                 A        0.20      0.40       0.10    32
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       A        4.80      0.40       0.20    32
  NATURAL FAIR COVER
  "WOODLAND"                 A        1.60      0.40       1.00    36
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
  SUBAREA AREA(ACRES) =   58.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.51;30M= 0.95;1H= 1.32;3H= 2.48;6H= 3.72;24H= 6.53
```

```
  S-GRAPH: VALLEY(DEV.)=  2.2%;VALLEY(UNDEV.)/DESERT= 18.7%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.03; LAG(HR) = 1.63; Fm(INCH/HR) = 0.23; Ybar = 0.39
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  49946.61
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0285; Lca/L=0.4,n=.0255; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0219
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16051.12
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18485.89
  TOTAL AREA(ACRES) =  49946.61       PEAK FLOW RATE(CFS) =   18593.85
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 121.96
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       99.60      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                    B       14.70      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       20.00      0.30      1.00    66
  COMMERCIAL                 B       33.00      0.30      0.10    56
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       B       15.50      0.30      0.20    56
  NATURAL FAIR COVER
  "WOODLAND"                 B        7.40      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.78
  SUBAREA AREA(ACRES) =  190.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.51;30M= 0.95;1H= 1.32;3H= 2.48;6H= 3.71;24H= 6.52
  S-GRAPH: VALLEY(DEV.)=  2.4%;VALLEY(UNDEV.)/DESERT= 18.7%
           MOUNTAIN= 63.9%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.03; LAG(HR) = 1.63; Fm(INCH/HR) = 0.23; Ybar = 0.39
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  50136.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0285; Lca/L=0.4,n=.0255; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0219
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16072.68
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18514.11
  TOTAL AREA(ACRES) =  50136.80       PEAK FLOW RATE(CFS) =   18593.85
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 121.96
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      242.70      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        1.70      0.25      0.50    69
  NATURAL FAIR COVER
  "GRASS"                    C       27.20      0.25      1.00    79
  URBAN FAIR COVER
  "TURF"                     C       12.10      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      172.20      0.25      1.00    77
  COMMERCIAL                 C       38.30      0.25      0.10    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
  SUBAREA AREA(ACRES) =  494.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.51;30M= 0.95;1H= 1.32;3H= 2.48;6H= 3.70;24H= 6.50
  S-GRAPH: VALLEY(DEV.)=  2.7%;VALLEY(UNDEV.)/DESERT= 18.6%
           MOUNTAIN= 63.6%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.03; LAG(HR) = 1.63; Fm(INCH/HR) = 0.23; Ybar = 0.39
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  50631.01
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0285; Lca/L=0.4,n=.0255; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0219
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16146.13
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18598.15
  TOTAL AREA(ACRES) =  50631.01       PEAK FLOW RATE(CFS) =   18598.15

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 121.96
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       C      180.60      0.25      0.20    69
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       21.30      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C       48.40      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      160.00      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.80      0.20      0.50    75
  NATURAL FAIR COVER
  "GRASS"                    D       28.00      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.67
  SUBAREA AREA(ACRES) =  439.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.51;30M= 0.95;1H= 1.32;3H= 2.47;6H= 3.69;24H= 6.48
  S-GRAPH: VALLEY(DEV.)=  3.0%;VALLEY(UNDEV.)/DESERT= 18.6%
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```
          MOUNTAIN= 63.3%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.03; LAG(HR) = 1.63; Fm(INCH/HR) = 0.23; Ybar = 0.39
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  51070.11
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0285; Lca/L=0.4,n=.0255; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0219
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16239.76
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18701.87
  TOTAL AREA(ACRES) =  51070.11       PEAK FLOW RATE(CFS) =   18701.87

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 121.96
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  URBAN FAIR COVER
  "TURF"                     D        0.40      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      171.40      0.20      1.00    83
  COMMERCIAL                 D       51.30      0.20      0.10    75
  PUBLIC PARK                D        7.90      0.20      0.85    75
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D      154.70      0.20      0.20    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       24.20      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.58
  SUBAREA AREA(ACRES) =  409.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.51;30M= 0.95;1H= 1.32;3H= 2.47;6H= 3.69;24H= 6.47
  S-GRAPH: VALLEY(DEV.)=  3.3%;VALLEY(UNDEV.)/DESERT= 18.5%
           MOUNTAIN= 63.1%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.03; LAG(HR) = 1.63; Fm(INCH/HR) = 0.23; Ybar = 0.39
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  51480.01
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0285; Lca/L=0.4,n=.0255; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0219
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16339.11
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18809.50
  TOTAL AREA(ACRES) =  51480.01       PEAK FLOW RATE(CFS) =   18809.50

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 121.96
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
```

```
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D        1.30      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D       53.60      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   54.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.51;30M= 0.95;1H= 1.32;3H= 2.47;6H= 3.68;24H= 6.47
  S-GRAPH: VALLEY(DEV.)=  3.4%;VALLEY(UNDEV.)/DESERT= 18.5%
           MOUNTAIN= 63.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.03; LAG(HR) = 1.63; Fm(INCH/HR) = 0.23; Ybar = 0.39
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  51534.91
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0285; Lca/L=0.4,n=.0255; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0219
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16348.04
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18819.72
  TOTAL AREA(ACRES) =  51534.91       PEAK FLOW RATE(CFS) =   18819.72

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  51534.91  TC(MIN.) =    121.96
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.39
  PEAK FLOW RATE(CFS)   =  18819.72
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: LP65100E.DAT
  TIME/DATE OF STUDY: 08:03 02/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.570
        FOOTHILL                           0.150
        MOUNTAIN                           0.010
        VALLEY(UNDEVELOPED)/DESERT         0.270
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1064.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LP64100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    18819.72    Tc(MIN.) = 121.96
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.39
  TOTAL AREA(ACRES) =   51534.91
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1064.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    18819.72    Tc(MIN.) = 121.96
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.39
  TOTAL AREA(ACRES) =   51534.91
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1064.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    275.00  DOWNSTREAM(FEET) =    240.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  5738.00   CHANNEL SLOPE =  0.0061
  CHANNEL BASE(FEET) =   60.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.025   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  18819.72
  FLOW VELOCITY(FEET/SEC.) =  19.52   FLOW DEPTH(FEET) =  11.59
  TRAVEL TIME(MIN.) =   4.90   Tc(MIN.) = 126.86
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) = 126.86
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  0.970
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A        0.20      0.40       0.50    32
  NATURAL FAIR COVER
  "GRASS"                    A       11.30      0.40       1.00    50
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A       49.50      0.40       1.00    49
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        0.70      0.40       1.00    46
  COMMERCIAL                 A        0.90      0.40       0.10    32
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       A       43.50      0.40       0.20    32
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.66
  SUBAREA AREA(ACRES) =  106.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.51;30M= 0.95;1H= 1.32;3H= 2.47;6H= 3.68;24H= 6.46
```

```
  S-GRAPH: VALLEY(DEV.)=  3.5%;VALLEY(UNDEV.)/DESERT= 18.5%
           MOUNTAIN= 62.9%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.11; LAG(HR) = 1.69; Fm(INCH/HR) = 0.23; Ybar = 0.39
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  51641.01
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0282; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0232;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16356.43
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18613.12
  TOTAL AREA(ACRES) =  51641.01       PEAK FLOW RATE(CFS) =   18819.72
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 126.86
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 A        6.90      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        6.70      0.30      1.00    63
  NATURAL POOR COVER
  "BARREN"                   B        0.70      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B       36.10      0.30      1.00    69
  URBAN FAIR COVER
  "TURF"                     B        0.40      0.30      1.00    65
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B        1.80      0.30      1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.31
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   52.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.51;30M= 0.95;1H= 1.32;3H= 2.47;6H= 3.68;24H= 6.46
  S-GRAPH: VALLEY(DEV.)=  3.5%;VALLEY(UNDEV.)/DESERT= 18.5%
           MOUNTAIN= 62.8%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.11; LAG(HR) = 1.69; Fm(INCH/HR) = 0.23; Ybar = 0.39
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  51693.61
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0282; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0232;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16359.41
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18618.29
  TOTAL AREA(ACRES) =  51693.61       PEAK FLOW RATE(CFS) =   18819.72
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 126.86
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       30.50      0.30      1.00    66
  COMMERCIAL                 B        3.90      0.30      0.10    56
  PUBLIC PARK                B        0.20      0.30      0.85    56
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       B       60.30      0.30      0.20    56
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B       82.10      0.30      0.60    56
  NATURAL FAIR COVER
  "WOODLAND"                 B       44.60      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.62
  SUBAREA AREA(ACRES) =  221.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.51;30M= 0.95;1H= 1.32;3H= 2.46;6H= 3.68;24H= 6.45
  S-GRAPH: VALLEY(DEV.)=  3.7%;VALLEY(UNDEV.)/DESERT= 18.6%
           MOUNTAIN= 62.6%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.11; LAG(HR) = 1.69; Fm(INCH/HR) = 0.23; Ybar = 0.39
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  51915.21
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0282; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0232;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16391.21
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18660.68
  TOTAL AREA(ACRES) =  51915.21       PEAK FLOW RATE(CFS) =   18819.72
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 126.86
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      111.40      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                    C       42.10      0.25      1.00    79
  URBAN FAIR COVER
  "TURF"                     C        0.50      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        0.20      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      117.70      0.25      1.00    77
  COMMERCIAL                 C        4.20      0.25      0.10    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  276.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.51;30M= 0.95;1H= 1.32;3H= 2.46;6H= 3.67;24H= 6.44
  S-GRAPH: VALLEY(DEV.)=  4.0%;VALLEY(UNDEV.)/DESERT= 18.6%
```

```
          MOUNTAIN= 62.3%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
 Tc(HR) = 2.11; LAG(HR) = 1.69; Fm(INCH/HR) = 0.23; Ybar = 0.39
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
 3HR = 0.78; 6HR = 0.90; 24HR= 0.94
 UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  52191.31
 LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0282; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0232;Lca/L=0.6,n=.0217
 TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16429.73
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18707.47
 TOTAL AREA(ACRES) =  52191.31       PEAK FLOW RATE(CFS) =   18819.72
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

 SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
 5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
 FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) = 126.86
 *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "11+ DWELLINGS/ACRE"       C       93.00      0.25      0.20    69
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"       C      529.20      0.25      0.60    69
 NATURAL FAIR COVER
 "WOODLAND"                 C      106.50      0.25      1.00    73
 PUBLIC PARK                D        1.80      0.20      0.85    75
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      D        1.90      0.20      1.00    81
 NATURAL POOR COVER
 "BARREN"                   D        0.70      0.20      1.00    93
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.61
 SUBAREA AREA(ACRES) =  733.10
 UNIT-HYDROGRAPH DATA:
 RAINFALL(INCH): 5M= 0.50;30M= 0.95;1H= 1.31;3H= 2.45;6H= 3.66;24H= 6.41
 S-GRAPH: VALLEY(DEV.)=  4.8%;VALLEY(UNDEV.)/DESERT= 18.7%
          MOUNTAIN= 61.4%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
 Tc(HR) = 2.11; LAG(HR) = 1.69; Fm(INCH/HR) = 0.23; Ybar = 0.40
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
 3HR = 0.77; 6HR = 0.90; 24HR= 0.94
 UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  52924.41
 LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0282; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0232;Lca/L=0.6,n=.0217
 TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16567.43
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18875.23
 TOTAL AREA(ACRES) =  52924.41       PEAK FLOW RATE(CFS) =   18875.23

 SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
 5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
 FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) = 126.86
 *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                    D       39.60      0.20      1.00    84
 URBAN FAIR COVER
 "TURF"                     D        3.30      0.20      1.00    82
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          D       11.70      0.20      1.00    84
 NATURAL FAIR COVER
 "OPEN BRUSH"               D       55.00      0.20      1.00    83
 COMMERCIAL                 D        0.40      0.20      0.10    75
 NATURAL GOOD COVER
 "MEADOWS"                  D        2.00      0.20      1.00    78
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =  112.00
 UNIT-HYDROGRAPH DATA:
 RAINFALL(INCH): 5M= 0.50;30M= 0.95;1H= 1.31;3H= 2.45;6H= 3.66;24H= 6.41
 S-GRAPH: VALLEY(DEV.)=  4.9%;VALLEY(UNDEV.)/DESERT= 18.7%
          MOUNTAIN= 61.3%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
 Tc(HR) = 2.11; LAG(HR) = 1.69; Fm(INCH/HR) = 0.23; Ybar = 0.40
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
 3HR = 0.77; 6HR = 0.90; 24HR= 0.94
 UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  53036.41
 LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0282; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0232;Lca/L=0.6,n=.0217
 TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16589.19
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18900.59
 TOTAL AREA(ACRES) =  53036.41       PEAK FLOW RATE(CFS) =   18900.59

 SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
 5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
 FLOW PROCESS FROM NODE   1064.00 TO NODE   1065.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) = 126.86
 *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "11+ DWELLINGS/ACRE"       D       68.90      0.20      0.20    75
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"       D      109.80      0.20      0.60    75
 NATURAL FAIR COVER
 "WOODLAND"                 D       31.70      0.20      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.53
 SUBAREA AREA(ACRES) =  210.40
 UNIT-HYDROGRAPH DATA:
 RAINFALL(INCH): 5M= 0.50;30M= 0.95;1H= 1.31;3H= 2.45;6H= 3.65;24H= 6.40
 S-GRAPH: VALLEY(DEV.)=  5.1%;VALLEY(UNDEV.)/DESERT= 18.8%
          MOUNTAIN= 61.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
 Tc(HR) = 2.11; LAG(HR) = 1.69; Fm(INCH/HR) = 0.23; Ybar = 0.40
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
 3HR = 0.77; 6HR = 0.90; 24HR= 0.94
 UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  53246.81
 LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
```

```
 Lca/L=0.3,n=.0282; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0232;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16638.38
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18959.34
  TOTAL AREA(ACRES) =  53246.81       PEAK FLOW RATE(CFS) =   18959.34

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  53246.81  TC(MIN.) =    126.86
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.40
  PEAK FLOW RATE(CFS)   =  18959.34
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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 ************************************************************************
             RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
            (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                           Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

 ------------------------------------------------------------------------
   FILE NAME: LP66100E.DAT
   TIME/DATE OF STUDY: 08:03 02/26/2004
 ========================================================================
   USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
 ========================================================================
                      --*TIME-OF-CONCENTRATION MODEL*--

   USER SPECIFIED STORM EVENT(YEAR) =  100.00
   SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
   SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
   *USER-DEFINED TABLED RAINFALL USED*
   NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
    1)   5.000;  7.600
    2)  10.000;  4.500
    3)  15.000;  3.500
    4)  20.000;  2.750
    5)  30.000;  2.100
    6)  60.000;  1.520
    7) 120.000;  1.200
   *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

   *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
      HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
      WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
 NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
 ===  =====  =========  ================  ======  =====  ======  =====  =======
   1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

   GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
     1. Relative Flow-Depth =  0.00 FEET
        as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
     2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
   *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
    OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
   *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

   UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
     WATERSHED LAG = 0.80 * Tc
           S-GRAPH TYPE                PERCENTAGE(DECIMAL)
         VALLEY(DEVELOPED)                  0.240
         FOOTHILL                           0.080
         MOUNTAIN                           0.680
         VALLEY(UNDEVELOPED)/DESERT         0.000
         DESERT(UNDEVELOPED)                0.000
     PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
     SIERRA MADRE DEPTH-AREA FACTORS USED.
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


 ************************************************************************
   FLOW PROCESS FROM NODE   1065.00 TO NODE   1065.00 IS CODE = 15.1
 ------------------------------------------------------------------------
   >>>>>DEFINE MEMORY BANK # 1 <<<<<
 ========================================================================
   PEAK FLOWRATE TABLE FILE NAME: LP65100E.DNA
   MEMORY BANK #  1 DEFINED AS FOLLOWS:
   PEAK FLOW RATE(CFS) =    18959.34    Tc(MIN.) = 126.86
   AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.40
   TOTAL AREA(ACRES) =   53246.81
   LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.

 ************************************************************************
   FLOW PROCESS FROM NODE   1065.00 TO NODE   1065.00 IS CODE = 14.0
 ------------------------------------------------------------------------
   >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
 ========================================================================

   MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
   PEAK FLOW RATE(CFS) =    18959.34    Tc(MIN.) = 126.86
   AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.40
   TOTAL AREA(ACRES) =   53246.81
   LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.

 ************************************************************************
   FLOW PROCESS FROM NODE   1065.00 TO NODE   1065.00 IS CODE =  12
 ------------------------------------------------------------------------
   >>>>>CLEAR MEMORY BANK # 1 <<<<<
 ========================================================================

 ************************************************************************
   FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  51
 ------------------------------------------------------------------------
   >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
   >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
 ========================================================================
   ELEVATION DATA: UPSTREAM(FEET) =    240.00  DOWNSTREAM(FEET) =    213.00
   CHANNEL LENGTH THRU SUBAREA(FEET) =  6295.00   CHANNEL SLOPE =  0.0043
   CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
   MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
   CHANNEL FLOW THRU SUBAREA(CFS) =  18959.34
   FLOW VELOCITY(FEET/SEC.) =  14.49   FLOW DEPTH(FEET) =  12.01
   TRAVEL TIME(MIN.) =   7.24   Tc(MIN.) = 134.10
   LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.

 ************************************************************************
   FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
 ------------------------------------------------------------------------
   >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ========================================================================
   MAINLINE Tc(MIN) = 134.10
   * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  0.940
   SUBAREA LOSS RATE DATA(AMC  II):
    DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
   PUBLIC PARK                A       19.80      0.40       0.85    32
   AGRICULTURAL POOR COVER
   "FALLOW"                   A        2.20      0.40       1.00    77
   RESIDENTIAL
   "5-7 DWELLINGS/ACRE"       A       13.30      0.40       0.50    32
   NATURAL POOR COVER
   "BARREN"                   A       56.00      0.40       1.00    78
   NATURAL FAIR COVER
   "GRASS"                    A       51.40      0.40       1.00    50
   URBAN FAIR COVER
   "TURF"                     A       20.20      0.40       1.00    44
   SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
   SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.94
   SUBAREA AREA(ACRES) =  162.90
   UNIT-HYDROGRAPH DATA:
   RAINFALL(INCH): 5M= 0.50;30M= 0.95;1H= 1.31;3H= 2.45;6H= 3.65;24H= 6.40
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```
  S-GRAPH: VALLEY(DEV.)=  5.1%;VALLEY(UNDEV.)/DESERT= 18.7%
           MOUNTAIN= 61.1%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.23; LAG(HR) = 1.79; Fm(INCH/HR) = 0.23; Ybar = 0.40
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  53409.71
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0284; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16643.94
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18600.23
  TOTAL AREA(ACRES) =  53409.71       PEAK FLOW RATE(CFS) =   18959.34
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 134.10
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A      120.00      0.40      1.00    49
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        4.00      0.40      1.00    46
  COMMERCIAL                 A       17.30      0.40      0.10    32
  NATURAL GOOD COVER
  "MEADOWS"                  A        0.40      0.40      1.00    30
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       A        7.10      0.40      0.20    32
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        1.30      0.40      1.00    40
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.86
  SUBAREA AREA(ACRES) =  150.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.50;30M= 0.95;1H= 1.31;3H= 2.45;6H= 3.65;24H= 6.39
  S-GRAPH: VALLEY(DEV.)=  5.2%;VALLEY(UNDEV.)/DESERT= 18.7%
           MOUNTAIN= 61.1%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.23; LAG(HR) = 1.79; Fm(INCH/HR) = 0.23; Ybar = 0.40
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  53559.81
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0284; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16646.21
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18605.21
  TOTAL AREA(ACRES) =  53559.81       PEAK FLOW RATE(CFS) =   18959.34
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 134.10
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 A      101.40      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B      119.30      0.30      1.00    63
  AGRICULTURAL POOR COVER
  "FALLOW"                   B       19.80      0.30      1.00    86
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B      201.90      0.30      0.50    56
  NATURAL POOR COVER
  "BARREN"                   B      189.50      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B      335.80      0.30      1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.31
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.90
  SUBAREA AREA(ACRES) =  967.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.50;30M= 0.94;1H= 1.31;3H= 2.44;6H= 3.63;24H= 6.36
  S-GRAPH: VALLEY(DEV.)=  5.5%;VALLEY(UNDEV.)/DESERT= 18.3%
           MOUNTAIN= 61.2%;FOOTHILL= 14.9%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.23; LAG(HR) = 1.79; Fm(INCH/HR) = 0.23; Ybar = 0.40
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  54527.51
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0284; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16748.97
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18710.91
  TOTAL AREA(ACRES) =  54527.51       PEAK FLOW RATE(CFS) =   18959.34
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 134.10
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  URBAN FAIR COVER
  "TURF"                     B      139.20      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B      113.30      0.30      1.00    66
  COMMERCIAL                 B      352.90      0.30      0.10    56
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B      174.00      0.30      1.00    69
  PUBLIC PARK                B       22.20      0.30      0.85    56
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       B       85.90      0.30      0.20    56
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.56
  SUBAREA AREA(ACRES) =  887.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.50;30M= 0.94;1H= 1.31;3H= 2.43;6H= 3.62;24H= 6.33
  S-GRAPH: VALLEY(DEV.)=  5.8%;VALLEY(UNDEV.)/DESERT= 18.0%
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          MOUNTAIN= 61.3%;FOOTHILL= 14.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.23; LAG(HR) = 1.79; Fm(INCH/HR) = 0.23; Ybar = 0.40
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.32; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  55415.01
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0284; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   16910.61
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  18877.83
  TOTAL AREA(ACRES) =  55415.01       PEAK FLOW RATE(CFS) =   18959.34
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 134.10
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        2.40      0.30      1.00    72
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B       76.70      0.30      0.60    56
  NATURAL FAIR COVER
  "WOODLAND"                 B      223.60      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      252.20      0.25      1.00    75
  AGRICULTURAL POOR COVER
  "FALLOW"                   C       67.20      0.25      1.00    91
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C      322.30      0.25      0.50    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.80
  SUBAREA AREA(ACRES) =  944.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.50;30M= 0.94;1H= 1.30;3H= 2.42;6H= 3.60;24H= 6.30
  S-GRAPH: VALLEY(DEV.)=  6.1%;VALLEY(UNDEV.)/DESERT= 17.7%
           MOUNTAIN= 61.4%;FOOTHILL= 14.7%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.23; LAG(HR) = 1.79; Fm(INCH/HR) = 0.23; Ybar = 0.40
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.32; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  56359.41
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0284; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   17047.10
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  19018.66
  TOTAL AREA(ACRES) =  56359.41       PEAK FLOW RATE(CFS) =   19018.66

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 134.10
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  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   C      117.80      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C      615.70      0.25      1.00    79
  URBAN FAIR COVER
  "TURF"                     C       52.40      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C      183.90      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C     1315.50      0.25      1.00    77
  COMMERCIAL                 C      417.30      0.25      0.10    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.86
  SUBAREA AREA(ACRES) = 2702.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.49;30M= 0.94;1H= 1.30;3H= 2.40;6H= 3.56;24H= 6.21
  S-GRAPH: VALLEY(DEV.)=  6.9%;VALLEY(UNDEV.)/DESERT= 16.9%
           MOUNTAIN= 61.7%;FOOTHILL= 14.4%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.23; LAG(HR) = 1.79; Fm(INCH/HR) = 0.23; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.37; 1HR = 0.41;
  3HR = 0.76; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  59062.01
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0284; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   17528.00
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  19480.55
  TOTAL AREA(ACRES) =  59062.01       PEAK FLOW RATE(CFS) =   19480.55

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 134.10
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  PUBLIC PARK                C        0.70      0.25      0.85    69
  NATURAL GOOD COVER
  "MEADOWS"                  C        4.00      0.25      1.00    71
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       C      460.80      0.25      0.20    69
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       26.10      0.25      1.00    81
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C      228.40      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C      211.80      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.51
  SUBAREA AREA(ACRES) =  931.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.49;30M= 0.94;1H= 1.29;3H= 2.39;6H= 3.55;24H= 6.19
  S-GRAPH: VALLEY(DEV.)=  7.2%;VALLEY(UNDEV.)/DESERT= 16.7%
           MOUNTAIN= 61.8%;FOOTHILL= 14.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.23; LAG(HR) = 1.79; Fm(INCH/HR) = 0.23; Ybar = 0.40
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  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.37; 1HR = 0.41;
  3HR = 0.76; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  59993.81
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0284; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   17734.45
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  19689.89
  TOTAL AREA(ACRES) =  59993.81       PEAK FLOW RATE(CFS) =   19689.89

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 134.10
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      112.90      0.20      1.00    81
  PUBLIC PARK                D       44.50      0.20      0.85    75
  AGRICULTURAL POOR COVER
  "FALLOW"                   D       12.50      0.20      1.00    94
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D       91.50      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        9.60      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      204.00      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.89
  SUBAREA AREA(ACRES) =  475.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.49;30M= 0.94;1H= 1.29;3H= 2.39;6H= 3.54;24H= 6.17
  S-GRAPH: VALLEY(DEV.)=  7.3%;VALLEY(UNDEV.)/DESERT= 16.5%
           MOUNTAIN= 61.9%;FOOTHILL= 14.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.23; LAG(HR) = 1.79; Fm(INCH/HR) = 0.22; Ybar = 0.40
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.36; 1HR = 0.41;
  3HR = 0.76; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  60468.81
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0284; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   17830.63
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  19783.23
  TOTAL AREA(ACRES) =  60468.81       PEAK FLOW RATE(CFS) =   19783.23

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 134.10
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
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       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 D        0.40      0.20      1.00    82
  URBAN FAIR COVER
  "TURF"                     D        5.80      0.20      1.00    82
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D       95.90      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      171.90      0.20      1.00    83
  COMMERCIAL                 D       35.50      0.20      0.10    75
  NATURAL GOOD COVER
  "MEADOWS"                  D        1.60      0.20      1.00    78
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.90
  SUBAREA AREA(ACRES) =  311.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.49;30M= 0.94;1H= 1.29;3H= 2.39;6H= 3.54;24H= 6.17
  S-GRAPH: VALLEY(DEV.)=  7.4%;VALLEY(UNDEV.)/DESERT= 16.5%
           MOUNTAIN= 61.9%;FOOTHILL= 14.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.23; LAG(HR) = 1.79; Fm(INCH/HR) = 0.22; Ybar = 0.40
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.36; 1HR = 0.41;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  60779.91
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0284; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   17895.36
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  19845.16
  TOTAL AREA(ACRES) =  60779.91       PEAK FLOW RATE(CFS) =   19845.16

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 134.10
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D      357.30      0.20      0.20    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       11.30      0.20      1.00    86
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D      309.70      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D       41.70      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.43
  SUBAREA AREA(ACRES) =  720.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.49;30M= 0.94;1H= 1.29;3H= 2.38;6H= 3.53;24H= 6.15
  S-GRAPH: VALLEY(DEV.)=  7.6%;VALLEY(UNDEV.)/DESERT= 16.3%
           MOUNTAIN= 62.0%;FOOTHILL= 14.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.23; LAG(HR) = 1.79; Fm(INCH/HR) = 0.22; Ybar = 0.40
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.36; 1HR = 0.41;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  61499.91
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0284; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0218
```

```
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   18076.90
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  20027.53
  TOTAL AREA(ACRES) =  61499.91       PEAK FLOW RATE(CFS) =   20027.53

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  61499.91  TC(MIN.) =    134.10
  AREA-AVERAGED Fm(INCH/HR)=  0.22   Ybar =  0.40
  PEAK FLOW RATE(CFS)   =  20027.53
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
        (c) Copyright 1983-2003 Advanced Engineering Software (aes)
            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: LP67100E.DAT
  TIME/DATE OF STUDY: 08:03 02/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.160
        FOOTHILL                           0.140
        MOUNTAIN                           0.620
        VALLEY(UNDEVELOPED)/DESERT         0.080
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1066.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LP66100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    20027.53    Tc(MIN.) = 134.10
  AREA-AVERAGED Fm(INCH/HR) =  0.22    Ybar = 0.40
  TOTAL AREA(ACRES) =   61499.91
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1066.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    20027.53    Tc(MIN.) = 134.10
  AREA-AVERAGED Fm(INCH/HR) =  0.22    Ybar = 0.40
  TOTAL AREA(ACRES) =   61499.91
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1066.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    213.00  DOWNSTREAM(FEET) =    176.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  6201.00   CHANNEL SLOPE =  0.0060
  CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  20027.53
  FLOW VELOCITY(FEET/SEC.) =  16.51   FLOW DEPTH(FEET) =  11.28
  TRAVEL TIME(MIN.) =   6.26   Tc(MIN.) = 140.36
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) = 140.36
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  0.915
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   A        0.20      0.40       1.00    77
  NATURAL FAIR COVER
  "GRASS"                    A        0.90      0.40       1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        8.90      0.40       1.00    46
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A        5.50      0.40       1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A       17.90      0.40       1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       23.90      0.30       1.00    63
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.36
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   57.30
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.49;30M= 0.94;1H= 1.29;3H= 2.38;6H= 3.53;24H= 6.15
  S-GRAPH: VALLEY(DEV.)=  7.6%;VALLEY(UNDEV.)/DESERT= 16.3%
           MOUNTAIN= 62.0%;FOOTHILL= 14.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.34; LAG(HR) = 1.87; Fm(INCH/HR) = 0.22; Ybar = 0.40
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.36; 1HR = 0.41;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  61557.22
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =   18076.47
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  19878.29
  TOTAL AREA(ACRES) =  61557.22       PEAK FLOW RATE(CFS) =   20027.53
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 140.36
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   B      180.40      0.30      1.00    86
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B       89.60      0.30      0.50    56
  NATURAL FAIR COVER
  "GRASS"                    B      327.50      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 B        6.00      0.30      1.00    65
  URBAN FAIR COVER
  "TURF"                     B      105.00      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B      118.90      0.30      1.00    66
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.95
  SUBAREA AREA(ACRES) =  827.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.49;30M= 0.93;1H= 1.29;3H= 2.38;6H= 3.51;24H= 6.12
  S-GRAPH: VALLEY(DEV.)=  7.7%;VALLEY(UNDEV.)/DESERT= 16.1%
           MOUNTAIN= 62.0%;FOOTHILL= 14.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.34; LAG(HR) = 1.87; Fm(INCH/HR) = 0.22; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.30; 30M = 0.36; 1HR = 0.41;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  62384.62
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =   18172.97
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  19970.45
  TOTAL AREA(ACRES) =  62384.62       PEAK FLOW RATE(CFS) =   20027.53
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
----------------------------------------------------------------------------
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```
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 140.36
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 B        7.80      0.30      0.10    56
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B      418.80      0.30      1.00    69
  NATURAL GOOD COVER
  "MEADOWS"                  B        0.90      0.30      1.00    58
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        0.40      0.30      1.00    72
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B       50.90      0.30      0.60    56
  NATURAL FAIR COVER
  "WOODLAND"                 B       51.70      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.95
  SUBAREA AREA(ACRES) =  530.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.49;30M= 0.93;1H= 1.29;3H= 2.37;6H= 3.51;24H= 6.11
  S-GRAPH: VALLEY(DEV.)=  7.8%;VALLEY(UNDEV.)/DESERT= 16.1%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.34; LAG(HR) = 1.87; Fm(INCH/HR) = 0.22; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.30; 30M = 0.36; 1HR = 0.40;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  62915.12
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =   18222.37
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  20020.69
  TOTAL AREA(ACRES) =  62915.12       PEAK FLOW RATE(CFS) =   20027.53
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 140.36
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      203.60      0.25      1.00    75
  AGRICULTURAL POOR COVER
  "FALLOW"                   C      124.30      0.25      1.00    91
  NATURAL POOR COVER
  "BARREN"                   C        7.60      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C      485.30      0.25      1.00    79
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 C        0.70      0.25      1.00    77
  URBAN FAIR COVER
  "TURF"                     C        4.90      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  826.40
```

```
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.49;30M= 0.93;1H= 1.29;3H= 2.37;6H= 3.50;24H= 6.09
  S-GRAPH: VALLEY(DEV.)=  7.9%;VALLEY(UNDEV.)/DESERT= 16.0%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.34; LAG(HR) = 1.87; Fm(INCH/HR) = 0.22; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.30; 30M = 0.36; 1HR = 0.40;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  63741.52
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =   18357.87
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  20144.37
  TOTAL AREA(ACRES) =  63741.52       PEAK FLOW RATE(CFS) =   20144.37

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 140.36
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      940.00      0.25      1.00    77
  COMMERCIAL                 C       10.80      0.25      0.10    69
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C      128.10      0.25      1.00    79
  NATURAL GOOD COVER
  "MEADOWS"                  C        0.20      0.25      1.00    71
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       C       17.90      0.25      0.20    69
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C      125.40      0.25      0.60    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.94
  SUBAREA AREA(ACRES) = 1222.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.49;30M= 0.93;1H= 1.28;3H= 2.36;6H= 3.48;24H= 6.06
  S-GRAPH: VALLEY(DEV.)=  8.1%;VALLEY(UNDEV.)/DESERT= 15.8%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.34; LAG(HR) = 1.87; Fm(INCH/HR) = 0.22; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.30; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  64963.91
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =   18541.79
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  20321.74
  TOTAL AREA(ACRES) =  64963.91       PEAK FLOW RATE(CFS) =   20321.74

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) = 140.36
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C       94.10      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      159.90      0.20      1.00    81
  AGRICULTURAL POOR COVER
  "FALLOW"                   D       77.90      0.20      1.00    94
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D      104.60      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        0.60      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      635.30      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.95
  SUBAREA AREA(ACRES) = 1072.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.48;30M= 0.93;1H= 1.28;3H= 2.35;6H= 3.47;24H= 6.03
  S-GRAPH: VALLEY(DEV.)=  8.2%;VALLEY(UNDEV.)/DESERT= 15.7%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.34; LAG(HR) = 1.87; Fm(INCH/HR) = 0.22; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  66036.31
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =   18746.98
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  20516.68
  TOTAL AREA(ACRES) =  66036.31       PEAK FLOW RATE(CFS) =   20516.68

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 140.36
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 D        0.90      0.20      1.00    82
  URBAN FAIR COVER
  "TURF"                     D        8.20      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      334.50      0.20      1.00    83
  COMMERCIAL                 D       11.70      0.20      0.10    75
  PUBLIC PARK                D        0.10      0.20      0.85    75
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D        3.80      0.20      0.20    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.96
  SUBAREA AREA(ACRES) =  359.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.48;30M= 0.93;1H= 1.28;3H= 2.35;6H= 3.47;24H= 6.02
  S-GRAPH: VALLEY(DEV.)=  8.2%;VALLEY(UNDEV.)/DESERT= 15.7%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
```

```
  Tc(HR) = 2.34; LAG(HR) = 1.87; Fm(INCH/HR) = 0.22; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  66395.52
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =   18815.22
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  20581.50
  TOTAL AREA(ACRES) =  66395.52       PEAK FLOW RATE(CFS) =   20581.50

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 140.36
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        7.80      0.20      1.00    86
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D       61.40      0.20      1.00    84
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D      156.10      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D       63.80      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.78
  SUBAREA AREA(ACRES) =  289.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.48;30M= 0.93;1H= 1.28;3H= 2.35;6H= 3.46;24H= 6.02
  S-GRAPH: VALLEY(DEV.)=  8.3%;VALLEY(UNDEV.)/DESERT= 15.6%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.34; LAG(HR) = 1.87; Fm(INCH/HR) = 0.22; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  66684.62
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =   18871.58
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  20637.31
  TOTAL AREA(ACRES) =  66684.62       PEAK FLOW RATE(CFS) =   20637.31

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  66684.62  TC(MIN.) =    140.36
  AREA-AVERAGED Fm(INCH/HR)=  0.22   Ybar =  0.41
  PEAK FLOW RATE(CFS)   =  20637.31
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LP68100E.DAT
  TIME/DATE OF STUDY: 08:03 02/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.600
   2)  10.000;  4.500
   3)  15.000;  3.500
   4)  20.000;  2.750
   5)  30.000;  2.100
   6)  60.000;  1.520
   7) 120.000;  1.200
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.250
        FOOTHILL                           0.140
        MOUNTAIN                           0.180
        VALLEY(UNDEVELOPED)/DESERT         0.430
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1067.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LP67100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    20637.31    Tc(MIN.) = 140.36
  AREA-AVERAGED Fm(INCH/HR) =  0.22    Ybar = 0.41
  TOTAL AREA(ACRES) =   66684.62
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1067.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    20637.31    Tc(MIN.) = 140.36
  AREA-AVERAGED Fm(INCH/HR) =  0.22    Ybar = 0.41
  TOTAL AREA(ACRES) =   66684.62
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1067.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    176.00  DOWNSTREAM(FEET) =    133.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  6324.00   CHANNEL SLOPE =  0.0068
  CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  20637.31
  FLOW VELOCITY(FEET/SEC.) =  17.42   FLOW DEPTH(FEET) =  11.06
  TRAVEL TIME(MIN.) =   6.05   Tc(MIN.) = 146.41
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) = 146.41
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  0.894
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        1.30      0.40      1.00    40
  NATURAL GOOD COVER
  "MEADOWS"                  A        0.30      0.40      1.00    30
  NATURAL FAIR COVER
  "GRASS"                    A        1.80      0.40      1.00    50
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 A        0.90      0.40      1.00    44
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        3.10      0.40      1.00    46
  COMMERCIAL                 A       23.30      0.40      0.10    32
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.32
  SUBAREA AREA(ACRES) =   30.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.48;30M= 0.93;1H= 1.28;3H= 2.35;6H= 3.46;24H= 6.02
```

```
  S-GRAPH: VALLEY(DEV.)=  8.3%;VALLEY(UNDEV.)/DESERT= 15.6%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.44; LAG(HR) = 1.95; Fm(INCH/HR) = 0.22; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  66715.32
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =   18877.84
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  20439.62
  TOTAL AREA(ACRES) =  66715.32       PEAK FLOW RATE(CFS) =   20637.31
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 146.41
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A        1.60      0.40      1.00    49
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       A        6.70      0.40      0.20    32
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       A       33.60      0.40      0.60    32
  NATURAL FAIR COVER
  "WOODLAND"                 A       19.30      0.40      1.00    36
  AGRICULTURAL POOR COVER
  "FALLOW"                   B        4.10      0.30      1.00    86
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B       16.50      0.30      0.50    56
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.38
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.67
  SUBAREA AREA(ACRES) =   81.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.48;30M= 0.93;1H= 1.28;3H= 2.35;6H= 3.46;24H= 6.02
  S-GRAPH: VALLEY(DEV.)=  8.3%;VALLEY(UNDEV.)/DESERT= 15.7%
           MOUNTAIN= 61.9%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.44; LAG(HR) = 1.95; Fm(INCH/HR) = 0.22; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  66797.12
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =   18884.25
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  20448.19
  TOTAL AREA(ACRES) =  66797.12       PEAK FLOW RATE(CFS) =   20637.31
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 146.41
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   B        2.00      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B        7.10      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 B        0.40      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        0.70      0.30      1.00    66
  COMMERCIAL                 B       42.80      0.30      0.10    56
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B       10.70      0.30      1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.40
  SUBAREA AREA(ACRES) =   63.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.48;30M= 0.93;1H= 1.28;3H= 2.35;6H= 3.46;24H= 6.01
  S-GRAPH: VALLEY(DEV.)=  8.3%;VALLEY(UNDEV.)/DESERT= 15.7%
           MOUNTAIN= 61.9%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.44; LAG(HR) = 1.95; Fm(INCH/HR) = 0.22; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  66860.82
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =   18898.71
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  20463.36
  TOTAL AREA(ACRES) =  66860.82       PEAK FLOW RATE(CFS) =   20637.31
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 146.41
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       B       77.60      0.30      0.20    56
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B       14.90      0.30      0.60    56
  NATURAL FAIR COVER
  "WOODLAND"                 B        6.90      0.30      1.00    60
  NATURAL FAIR COVER
  "GRASS"                    C      218.60      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       70.80      0.25      1.00    77
  COMMERCIAL                 C       12.90      0.25      0.10    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.80
  SUBAREA AREA(ACRES) =  401.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.48;30M= 0.93;1H= 1.28;3H= 2.34;6H= 3.46;24H= 6.00
```

```
  S-GRAPH: VALLEY(DEV.)=  8.4%;VALLEY(UNDEV.)/DESERT= 15.9%
           MOUNTAIN= 61.6%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.44; LAG(HR) = 1.95; Fm(INCH/HR) = 0.22; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  67262.52
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =   18968.00
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  20535.25
  TOTAL AREA(ACRES) =  67262.52       PEAK FLOW RATE(CFS) =   20637.31
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 146.41
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  PUBLIC PARK                C        0.20      0.25      0.85    69
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        0.90      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C       19.50      0.25      1.00    73
  AGRICULTURAL POOR COVER
  "FALLOW"                   D       35.60      0.20      1.00    94
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D      140.20      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        0.60      0.20      1.00    93
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.64
  SUBAREA AREA(ACRES) =  197.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.48;30M= 0.93;1H= 1.28;3H= 2.34;6H= 3.45;24H= 6.00
  S-GRAPH: VALLEY(DEV.)=  8.5%;VALLEY(UNDEV.)/DESERT= 15.9%
           MOUNTAIN= 61.5%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.44; LAG(HR) = 1.95; Fm(INCH/HR) = 0.22; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.39;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  67459.52
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =   19011.91
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  20580.66
  TOTAL AREA(ACRES) =  67459.52       PEAK FLOW RATE(CFS) =   20637.31
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 146.41
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D      332.20      0.20      1.00    84
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 D        1.10      0.20      1.00    82
  URBAN FAIR COVER
  "TURF"                     D        1.20      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      172.80      0.20      1.00    83
  COMMERCIAL                 D       60.20      0.20      0.10    75
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D        1.80      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.90
  SUBAREA AREA(ACRES) =  569.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.48;30M= 0.93;1H= 1.28;3H= 2.34;6H= 3.45;24H= 5.99
  S-GRAPH: VALLEY(DEV.)=  8.6%;VALLEY(UNDEV.)/DESERT= 16.2%
           MOUNTAIN= 61.1%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.44; LAG(HR) = 1.95; Fm(INCH/HR) = 0.22; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.39;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  68028.82
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =   19126.12
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  20695.98
  TOTAL AREA(ACRES) =  68028.82       PEAK FLOW RATE(CFS) =   20695.98

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 146.41
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D      143.90      0.20      0.20    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        4.90      0.20      1.00    81
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D        6.00      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D       61.30      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.46
  SUBAREA AREA(ACRES) =  216.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.48;30M= 0.93;1H= 1.28;3H= 2.34;6H= 3.45;24H= 5.98
  S-GRAPH: VALLEY(DEV.)=  8.7%;VALLEY(UNDEV.)/DESERT= 16.2%
           MOUNTAIN= 61.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.44; LAG(HR) = 1.95; Fm(INCH/HR) = 0.22; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.39;
```

```
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  68244.92
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 18.00  RUNOFF VOLUME(AF) =   19178.91
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  20751.00
  TOTAL AREA(ACRES) =  68244.92       PEAK FLOW RATE(CFS) =   20751.00

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  68244.92  TC(MIN.) =    146.41
  AREA-AVERAGED Fm(INCH/HR)=  0.22   Ybar =  0.41
  PEAK FLOW RATE(CFS)   =  20751.00
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

TECHNICAL APPENDIX I-C
HYDROLOGIC ANALYSIS
PROPOSED CONDITION
100-YEAR HIGH CONFIDENCE

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
        (c) Copyright 1983-2003 Advanced Engineering Software (aes)
            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                          Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LP63100H.DAT
  TIME/DATE OF STUDY: 08:17 02/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ======  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.180
        FOOTHILL                           0.150
        MOUNTAIN                           0.640
        VALLEY(UNDEVELOPED)/DESERT         0.030
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1062.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LU62100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    26077.13    Tc(MIN.) = 106.69
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.32
  TOTAL AREA(ACRES) =   46437.31
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1062.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    26077.13    Tc(MIN.) = 106.69
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.32
  TOTAL AREA(ACRES) =   46437.31
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1062.00 = 96841.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1062.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    345.00  DOWNSTREAM(FEET) =    319.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2852.00   CHANNEL SLOPE =  0.0091
  CHANNEL BASE(FEET) =   60.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.025   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  26077.13
  FLOW VELOCITY(FEET/SEC.) =  24.77   FLOW DEPTH(FEET) =  12.41
  TRAVEL TIME(MIN.) =   1.92   Tc(MIN.) = 108.61
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) = 108.61
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.060
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       A       88.70      0.40       1.00    40
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        A        4.40      0.40       0.50    32
  NATURAL FAIR COVER
  "GRASS"                     A        6.50      0.40       1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"                A       98.10      0.40       1.00    46
  COMMERCIAL                  A        1.30      0.40       0.10    32
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"        A       12.90      0.40       0.60    32
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.96
  SUBAREA AREA(ACRES) =  211.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.65;30M= 1.22;1H= 1.70;3H= 3.20;6H= 4.78;24H= 8.47
```

```
  S-GRAPH: VALLEY(DEV.)=  1.1%;VALLEY(UNDEV.)/DESERT= 19.8%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.81; LAG(HR) = 1.45; Fm(INCH/HR) = 0.23; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.36; 30M = 0.40; 1HR = 0.44;
  3HR = 0.79; 6HR = 0.91; 24HR= 0.95
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  46649.21
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0266; Lca/L=0.4,n=.0238; Lca/L=0.5,n=.0219;Lca/L=0.6,n=.0204
  TIME OF PEAK FLOW(HR) = 17.50  RUNOFF VOLUME(AF) =   21698.26
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26012.19
  TOTAL AREA(ACRES) =  46649.21       PEAK FLOW RATE(CFS) =   26077.13
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.55; 30M = 1.12; 1HR = 1.51; 3HR = 2.63; 6HR = 3.72; 24HR = 6.35

****************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 108.61
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.626
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 A       48.40      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        7.10      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                    B        5.60      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       11.60      0.30      1.00    66
  COMMERCIAL                 B        0.20      0.30      0.10    56
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       B        6.90      0.30      0.20    56
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.37
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
  SUBAREA AREA(ACRES) =   79.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.65;30M= 1.22;1H= 1.70;3H= 3.20;6H= 4.78;24H= 8.46
  S-GRAPH: VALLEY(DEV.)=  1.1%;VALLEY(UNDEV.)/DESERT= 19.7%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.81; LAG(HR) = 1.45; Fm(INCH/HR) = 0.23; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.36; 30M = 0.40; 1HR = 0.44;
  3HR = 0.79; 6HR = 0.91; 24HR= 0.95
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  46729.02
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0266; Lca/L=0.4,n=.0238; Lca/L=0.5,n=.0219;Lca/L=0.6,n=.0204
  TIME OF PEAK FLOW(HR) = 17.50  RUNOFF VOLUME(AF) =   21704.66
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26024.84
  TOTAL AREA(ACRES) =  46729.02       PEAK FLOW RATE(CFS) =   26077.13
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.55; 30M = 1.12; 1HR = 1.51; 3HR = 2.63; 6HR = 3.72; 24HR = 6.35

****************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 108.61
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.626
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B        4.20      0.30      0.60    56
  NATURAL FAIR COVER
  "WOODLAND"                 B       19.00      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      656.10      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        1.80      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C      156.50      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C     1039.10      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1876.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.65;30M= 1.21;1H= 1.69;3H= 3.18;6H= 4.74;24H= 8.38
  S-GRAPH: VALLEY(DEV.)=  1.8%;VALLEY(UNDEV.)/DESERT= 19.1%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.81; LAG(HR) = 1.45; Fm(INCH/HR) = 0.23; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.35; 30M = 0.40; 1HR = 0.44;
  3HR = 0.79; 6HR = 0.91; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  48605.71
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0266; Lca/L=0.4,n=.0238; Lca/L=0.5,n=.0219;Lca/L=0.6,n=.0204
  TIME OF PEAK FLOW(HR) = 17.50  RUNOFF VOLUME(AF) =   22204.01
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26550.24
  TOTAL AREA(ACRES) =  48605.71       PEAK FLOW RATE(CFS) =   26550.24

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.55; 30M = 1.12; 1HR = 1.51; 3HR = 2.63; 6HR = 3.72; 24HR = 6.35

****************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 108.61
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.626
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       C       80.90      0.25      0.20    69
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       54.20      0.25      1.00    81
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C       28.70      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C      189.00      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      420.90      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.60      0.20      0.50    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.90
  SUBAREA AREA(ACRES) =  774.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.64;30M= 1.21;1H= 1.69;3H= 3.17;6H= 4.72;24H= 8.35
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 18.8%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.81; LAG(HR) = 1.45; Fm(INCH/HR) = 0.23; Ybar = 0.33
```

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  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.35; 30M = 0.40; 1HR = 0.44;
  3HR = 0.79; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  49380.01
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0266; Lca/L=0.4,n=.0238; Lca/L=0.5,n=.0219;Lca/L=0.6,n=.0204
  TIME OF PEAK FLOW(HR) = 17.50  RUNOFF VOLUME(AF) =   22435.34
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26793.63
  TOTAL AREA(ACRES) =  49380.01       PEAK FLOW RATE(CFS) =   26793.63

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.55; 30M = 1.12; 1HR = 1.51; 3HR = 2.63; 6HR = 3.72; 24HR = 6.35

****************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 108.61
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.626
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   D        0.10      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D       48.30      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      261.40      0.20      1.00    83
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D        1.90      0.20      0.20    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D      139.40      0.20      1.00    86
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D       16.70      0.20      0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  467.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.64;30M= 1.21;1H= 1.68;3H= 3.17;6H= 4.71;24H= 8.33
  S-GRAPH: VALLEY(DEV.)=  2.2%;VALLEY(UNDEV.)/DESERT= 18.7%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.81; LAG(HR) = 1.45; Fm(INCH/HR) = 0.23; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  49847.81
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0266; Lca/L=0.4,n=.0238; Lca/L=0.5,n=.0219;Lca/L=0.6,n=.0204
  TIME OF PEAK FLOW(HR) = 17.50  RUNOFF VOLUME(AF) =   22587.61
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26945.47
  TOTAL AREA(ACRES) =  49847.81       PEAK FLOW RATE(CFS) =   26945.47

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.55; 30M = 1.12; 1HR = 1.51; 3HR = 2.63; 6HR = 3.72; 24HR = 6.35

****************************************************************************
  FLOW PROCESS FROM NODE   1062.00 TO NODE   1063.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 108.61
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.626
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
```

```
  NATURAL FAIR COVER
  "WOODLAND"                 D       40.00      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   40.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.64;30M= 1.21;1H= 1.68;3H= 3.16;6H= 4.71;24H= 8.33
  S-GRAPH: VALLEY(DEV.)=  2.2%;VALLEY(UNDEV.)/DESERT= 18.7%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.81; LAG(HR) = 1.45; Fm(INCH/HR) = 0.23; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  49887.81
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0266; Lca/L=0.4,n=.0238; Lca/L=0.5,n=.0219;Lca/L=0.6,n=.0204
  TIME OF PEAK FLOW(HR) = 17.50  RUNOFF VOLUME(AF) =   22599.14
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26957.67
  TOTAL AREA(ACRES) =  49887.81       PEAK FLOW RATE(CFS) =   26957.67

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.55; 30M = 1.12; 1HR = 1.51; 3HR = 2.63; 6HR = 3.72; 24HR = 6.35
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  49887.81  TC(MIN.) =    108.61
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.33
  PEAK FLOW RATE(CFS)   =  26957.67
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LP64100H.DAT
  TIME/DATE OF STUDY: 08:17 02/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.390
        FOOTHILL                           0.150
        MOUNTAIN                           0.330
        VALLEY(UNDEVELOPED)/DESERT         0.130
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1063.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LP63100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    26957.67    Tc(MIN.) = 108.61
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.33
  TOTAL AREA(ACRES) =   49887.81
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1063.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    26957.67    Tc(MIN.) = 108.61
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.33
  TOTAL AREA(ACRES) =   49887.81
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1063.00 = 99693.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1063.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    319.00  DOWNSTREAM(FEET) =    275.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  5418.00   CHANNEL SLOPE =  0.0081
  CHANNEL BASE(FEET) =   60.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.025   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  26957.67
  FLOW VELOCITY(FEET/SEC.) =  24.01   FLOW DEPTH(FEET) =  13.04
  TRAVEL TIME(MIN.) =   3.76   Tc(MIN.) = 112.37
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) = 112.37
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.040
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       51.80      0.40       1.00    40
  NATURAL FAIR COVER
  "GRASS"                    A        0.20      0.40       1.00    50
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 A        0.20      0.40       1.00    44
  COMMERCIAL                 A        0.20      0.40       0.10    32
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       A        4.80      0.40       0.20    32
  NATURAL FAIR COVER
  "WOODLAND"                 A        1.60      0.40       1.00    36
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
  SUBAREA AREA(ACRES) =   58.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.64;30M= 1.21;1H= 1.68;3H= 3.16;6H= 4.71;24H= 8.33
```

```
  S-GRAPH: VALLEY(DEV.)=  2.2%;VALLEY(UNDEV.)/DESERT= 18.7%
           MOUNTAIN= 64.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.87; LAG(HR) = 1.50; Fm(INCH/HR) = 0.23; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  49946.61
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0262; Lca/L=0.4,n=.0235; Lca/L=0.5,n=.0216;Lca/L=0.6,n=.0202
  TIME OF PEAK FLOW(HR) = 17.50  RUNOFF VOLUME(AF) =   22597.70
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26668.45
  TOTAL AREA(ACRES) =  49946.61       PEAK FLOW RATE(CFS) =   26957.67
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 112.37
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.601
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       99.60      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                    B       14.70      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       20.00      0.30      1.00    66
  COMMERCIAL                 B       33.00      0.30      0.10    56
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       B       15.50      0.30      0.20    56
  NATURAL FAIR COVER
  "WOODLAND"                 B        7.40      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.78
  SUBAREA AREA(ACRES) =  190.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.64;30M= 1.21;1H= 1.68;3H= 3.16;6H= 4.71;24H= 8.32
  S-GRAPH: VALLEY(DEV.)=  2.4%;VALLEY(UNDEV.)/DESERT= 18.7%
           MOUNTAIN= 63.9%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.87; LAG(HR) = 1.50; Fm(INCH/HR) = 0.23; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  50136.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0262; Lca/L=0.4,n=.0235; Lca/L=0.5,n=.0216;Lca/L=0.6,n=.0202
  TIME OF PEAK FLOW(HR) = 17.50  RUNOFF VOLUME(AF) =   22631.51
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26713.37
  TOTAL AREA(ACRES) =  50136.80       PEAK FLOW RATE(CFS) =   26957.67
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 112.37
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.601
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      242.70      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        1.70      0.25      0.50    69
  NATURAL FAIR COVER
  "GRASS"                    C       27.20      0.25      1.00    79
  URBAN FAIR COVER
  "TURF"                     C       12.10      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      172.20      0.25      1.00    77
  COMMERCIAL                 C       38.30      0.25      0.10    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
  SUBAREA AREA(ACRES) =  494.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.64;30M= 1.21;1H= 1.68;3H= 3.15;6H= 4.69;24H= 8.29
  S-GRAPH: VALLEY(DEV.)=  2.7%;VALLEY(UNDEV.)/DESERT= 18.6%
           MOUNTAIN= 63.6%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.87; LAG(HR) = 1.50; Fm(INCH/HR) = 0.23; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  50631.01
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0262; Lca/L=0.4,n=.0235; Lca/L=0.5,n=.0216;Lca/L=0.6,n=.0202
  TIME OF PEAK FLOW(HR) = 17.50  RUNOFF VOLUME(AF) =   22740.43
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26839.24
  TOTAL AREA(ACRES) =  50631.01       PEAK FLOW RATE(CFS) =   26957.67
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 112.37
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.601
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       C      180.60      0.25      0.20    69
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       21.30      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C       48.40      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      160.00      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.80      0.20      0.50    75
  NATURAL FAIR COVER
  "GRASS"                    D       28.00      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.67
  SUBAREA AREA(ACRES) =  439.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.64;30M= 1.21;1H= 1.68;3H= 3.15;6H= 4.68;24H= 8.27
  S-GRAPH: VALLEY(DEV.)=  3.0%;VALLEY(UNDEV.)/DESERT= 18.6%
           MOUNTAIN= 63.3%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.87; LAG(HR) = 1.50; Fm(INCH/HR) = 0.23; Ybar = 0.33
```

```
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  51070.11
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0262; Lca/L=0.4,n=.0235; Lca/L=0.5,n=.0216;Lca/L=0.6,n=.0202
  TIME OF PEAK FLOW(HR) = 17.50  RUNOFF VOLUME(AF) =   22867.31
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26980.83
  TOTAL AREA(ACRES) =  51070.11       PEAK FLOW RATE(CFS) =   26980.83

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 112.37
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.601
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  URBAN FAIR COVER
  "TURF"                     D        0.40      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      171.40      0.20      1.00    83
  COMMERCIAL                 D       51.30      0.20      0.10    75
  PUBLIC PARK                D        7.90      0.20      0.85    75
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D      154.70      0.20      0.20    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       24.20      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.58
  SUBAREA AREA(ACRES) =  409.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.64;30M= 1.21;1H= 1.68;3H= 3.14;6H= 4.67;24H= 8.25
  S-GRAPH: VALLEY(DEV.)=  3.3%;VALLEY(UNDEV.)/DESERT= 18.5%
           MOUNTAIN= 63.1%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.87; LAG(HR) = 1.50; Fm(INCH/HR) = 0.23; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  51480.01
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0262; Lca/L=0.4,n=.0235; Lca/L=0.5,n=.0216;Lca/L=0.6,n=.0202
  TIME OF PEAK FLOW(HR) = 17.50  RUNOFF VOLUME(AF) =   22998.54
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  27123.48
  TOTAL AREA(ACRES) =  51480.01       PEAK FLOW RATE(CFS) =   27123.48

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1063.00 TO NODE   1064.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 112.37
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.601
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D        1.30      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D       53.60      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   54.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.64;30M= 1.21;1H= 1.68;3H= 3.14;6H= 4.67;24H= 8.24
  S-GRAPH: VALLEY(DEV.)=  3.4%;VALLEY(UNDEV.)/DESERT= 18.5%
           MOUNTAIN= 63.0%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.87; LAG(HR) = 1.50; Fm(INCH/HR) = 0.23; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.34; 30M = 0.39; 1HR = 0.43;
  3HR = 0.78; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  51534.91
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1064.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0262; Lca/L=0.4,n=.0235; Lca/L=0.5,n=.0216;Lca/L=0.6,n=.0202
  TIME OF PEAK FLOW(HR) = 17.50  RUNOFF VOLUME(AF) =   23011.52
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  27138.42
  TOTAL AREA(ACRES) =  51534.91       PEAK FLOW RATE(CFS) =   27138.42

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  51534.91  TC(MIN.) =    112.37
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.33
  PEAK FLOW RATE(CFS)   =  27138.42
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LP66100H.DAT
  TIME/DATE OF STUDY: 08:17 02/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ======  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.240
        FOOTHILL                           0.080
        MOUNTAIN                           0.680
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1065.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LP65100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    27138.42    Tc(MIN.) = 116.77
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.33
  TOTAL AREA(ACRES) =   53246.81
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1065.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    27138.42    Tc(MIN.) = 116.77
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.33
  TOTAL AREA(ACRES) =   53246.81
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1065.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1065.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    240.00  DOWNSTREAM(FEET) =    213.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  6295.00   CHANNEL SLOPE =  0.0043
  CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  27138.42
  FLOW VELOCITY(FEET/SEC.) =  16.18   FLOW DEPTH(FEET) =  14.67
  TRAVEL TIME(MIN.) =   6.48   Tc(MIN.) = 123.25
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) = 123.25
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  0.986
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  PUBLIC PARK                A       19.80      0.40       0.85    32
  AGRICULTURAL POOR COVER
  "FALLOW"                   A        2.20      0.40       1.00    77
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A       13.30      0.40       0.50    32
  NATURAL POOR COVER
  "BARREN"                   A       56.00      0.40       1.00    78
  NATURAL FAIR COVER
  "GRASS"                    A       51.40      0.40       1.00    50
  URBAN FAIR COVER
  "TURF"                     A       20.20      0.40       1.00    44
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.94
  SUBAREA AREA(ACRES) =  162.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.63;30M= 1.20;1H= 1.67;3H= 3.12;6H= 4.62;24H= 8.15
```

```
  S-GRAPH: VALLEY(DEV.)=  5.1%;VALLEY(UNDEV.)/DESERT= 18.7%
           MOUNTAIN= 61.1%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.05; LAG(HR) = 1.64; Fm(INCH/HR) = 0.23; Ybar = 0.33
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  53409.71
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   23354.72
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26704.30
  TOTAL AREA(ACRES) =  53409.71       PEAK FLOW RATE(CFS) =   27138.42
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 123.25
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A      120.00      0.40      1.00    49
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        4.00      0.40      1.00    46
  COMMERCIAL                 A       17.30      0.40      0.10    32
  NATURAL GOOD COVER
  "MEADOWS"                  A        0.40      0.40      1.00    30
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       A        7.10      0.40      0.20    32
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        1.30      0.40      1.00    40
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.86
  SUBAREA AREA(ACRES) =  150.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.63;30M= 1.20;1H= 1.67;3H= 3.11;6H= 4.62;24H= 8.14
  S-GRAPH: VALLEY(DEV.)=  5.2%;VALLEY(UNDEV.)/DESERT= 18.7%
           MOUNTAIN= 61.1%;FOOTHILL= 15.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.05; LAG(HR) = 1.64; Fm(INCH/HR) = 0.23; Ybar = 0.34
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  53559.81
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   23363.46
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26719.93
  TOTAL AREA(ACRES) =  53559.81       PEAK FLOW RATE(CFS) =   27138.42
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 123.25
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 A      101.40      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B      119.30      0.30      1.00    63
  AGRICULTURAL POOR COVER
  "FALLOW"                   B       19.80      0.30      1.00    86
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B      201.90      0.30      0.50    56
  NATURAL POOR COVER
  "BARREN"                   B      189.50      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B      335.80      0.30      1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.31
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.90
  SUBAREA AREA(ACRES) =  967.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.63;30M= 1.20;1H= 1.66;3H= 3.10;6H= 4.60;24H= 8.10
  S-GRAPH: VALLEY(DEV.)=  5.5%;VALLEY(UNDEV.)/DESERT= 18.3%
           MOUNTAIN= 61.2%;FOOTHILL= 14.9%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.05; LAG(HR) = 1.64; Fm(INCH/HR) = 0.23; Ybar = 0.34
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.33; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  54527.51
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   23524.73
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  26894.48
  TOTAL AREA(ACRES) =  54527.51       PEAK FLOW RATE(CFS) =   27138.42
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 123.25
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  URBAN FAIR COVER
  "TURF"                     B      139.20      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B      113.30      0.30      1.00    66
  COMMERCIAL                 B      352.90      0.30      0.10    56
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B      174.00      0.30      1.00    69
  PUBLIC PARK                B       22.20      0.30      0.85    56
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       B       85.90      0.30      0.20    56
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.56
  SUBAREA AREA(ACRES) =  887.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.63;30M= 1.20;1H= 1.66;3H= 3.09;6H= 4.58;24H= 8.06
  S-GRAPH: VALLEY(DEV.)=  5.8%;VALLEY(UNDEV.)/DESERT= 18.0%
```

```
           MOUNTAIN= 61.3%;FOOTHILL= 14.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.05; LAG(HR) = 1.64; Fm(INCH/HR) = 0.23; Ybar = 0.34
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.32; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  55415.01
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   23748.61
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  27132.73
  TOTAL AREA(ACRES) =  55415.01       PEAK FLOW RATE(CFS) =   27138.42
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 123.25
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        2.40      0.30      1.00    72
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B       76.70      0.30      0.60    56
  NATURAL FAIR COVER
  "WOODLAND"                 B      223.60      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      252.20      0.25      1.00    75
  AGRICULTURAL POOR COVER
  "FALLOW"                   C       67.20      0.25      1.00    91
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C      322.30      0.25      0.50    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.80
  SUBAREA AREA(ACRES) =  944.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.63;30M= 1.20;1H= 1.66;3H= 3.08;6H= 4.56;24H= 8.02
  S-GRAPH: VALLEY(DEV.)=  6.1%;VALLEY(UNDEV.)/DESERT= 17.7%
           MOUNTAIN= 61.4%;FOOTHILL= 14.7%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.05; LAG(HR) = 1.64; Fm(INCH/HR) = 0.23; Ybar = 0.34
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.32; 30M = 0.38; 1HR = 0.42;
  3HR = 0.77; 6HR = 0.90; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  56359.41
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   23948.69
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  27346.48
  TOTAL AREA(ACRES) =  56359.41       PEAK FLOW RATE(CFS) =   27346.48

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 123.25
```

```
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   C      117.80      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C      615.70      0.25      1.00    79
  URBAN FAIR COVER
  "TURF"                     C       52.40      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C      183.90      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C     1315.50      0.25      1.00    77
  COMMERCIAL                 C      417.30      0.25      0.10    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.86
  SUBAREA AREA(ACRES) = 2702.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.62;30M= 1.19;1H= 1.65;3H= 3.05;6H= 4.50;24H= 7.91
  S-GRAPH: VALLEY(DEV.)=  6.9%;VALLEY(UNDEV.)/DESERT= 16.9%
           MOUNTAIN= 61.7%;FOOTHILL= 14.4%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.05; LAG(HR) = 1.64; Fm(INCH/HR) = 0.23; Ybar = 0.34
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.37; 1HR = 0.41;
  3HR = 0.76; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  59062.01
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   24628.19
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  28009.83
  TOTAL AREA(ACRES) =  59062.01       PEAK FLOW RATE(CFS) =   28009.83

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 123.25
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  PUBLIC PARK                C        0.70      0.25      0.85    69
  NATURAL GOOD COVER
  "MEADOWS"                  C        4.00      0.25      1.00    71
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       C      460.80      0.25      0.20    69
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       26.10      0.25      1.00    81
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C      228.40      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C      211.80      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.51
  SUBAREA AREA(ACRES) =  931.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.62;30M= 1.19;1H= 1.64;3H= 3.04;6H= 4.49;24H= 7.87
  S-GRAPH: VALLEY(DEV.)=  7.2%;VALLEY(UNDEV.)/DESERT= 16.7%
           MOUNTAIN= 61.8%;FOOTHILL= 14.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.05; LAG(HR) = 1.64; Fm(INCH/HR) = 0.23; Ybar = 0.34
```

```
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.37; 1HR = 0.41;
  3HR = 0.76; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  59993.81
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   24905.06
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  28296.49
  TOTAL AREA(ACRES) =  59993.81       PEAK FLOW RATE(CFS) =   28296.49

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 123.25
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      112.90      0.20      1.00    81
  PUBLIC PARK                D       44.50      0.20      0.85    75
  AGRICULTURAL POOR COVER
  "FALLOW"                   D       12.50      0.20      1.00    94
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D       91.50      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        9.60      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      204.00      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.89
  SUBAREA AREA(ACRES) =  475.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.62;30M= 1.19;1H= 1.64;3H= 3.04;6H= 4.48;24H= 7.86
  S-GRAPH: VALLEY(DEV.)=  7.3%;VALLEY(UNDEV.)/DESERT= 16.5%
           MOUNTAIN= 61.9%;FOOTHILL= 14.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.05; LAG(HR) = 1.64; Fm(INCH/HR) = 0.22; Ybar = 0.34
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.36; 1HR = 0.41;
  3HR = 0.76; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  60468.81
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   25037.67
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  28427.38
  TOTAL AREA(ACRES) =  60468.81       PEAK FLOW RATE(CFS) =   28427.38

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 123.25
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
```

```
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 D        0.40      0.20      1.00    82
  URBAN FAIR COVER
  "TURF"                     D        5.80      0.20      1.00    82
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D       95.90      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      171.90      0.20      1.00    83
  COMMERCIAL                 D       35.50      0.20      0.10    75
  NATURAL GOOD COVER
  "MEADOWS"                  D        1.60      0.20      1.00    78
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.90
  SUBAREA AREA(ACRES) =  311.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.62;30M= 1.19;1H= 1.64;3H= 3.03;6H= 4.47;24H= 7.85
  S-GRAPH: VALLEY(DEV.)=  7.4%;VALLEY(UNDEV.)/DESERT= 16.5%
           MOUNTAIN= 61.9%;FOOTHILL= 14.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.05; LAG(HR) = 1.64; Fm(INCH/HR) = 0.22; Ybar = 0.34
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.36; 1HR = 0.41;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  60779.91
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   25126.50
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  28513.64
  TOTAL AREA(ACRES) =  60779.91       PEAK FLOW RATE(CFS) =   28513.64

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1065.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 123.25
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D      357.30      0.20      0.20    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       11.30      0.20      1.00    86
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D      309.70      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D       41.70      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.43
  SUBAREA AREA(ACRES) =  720.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.62;30M= 1.19;1H= 1.64;3H= 3.03;6H= 4.46;24H= 7.82
  S-GRAPH: VALLEY(DEV.)=  7.6%;VALLEY(UNDEV.)/DESERT= 16.3%
           MOUNTAIN= 62.0%;FOOTHILL= 14.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.05; LAG(HR) = 1.64; Fm(INCH/HR) = 0.22; Ybar = 0.34
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.36; 1HR = 0.41;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  61499.91
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
```

```
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   25364.76
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  28756.93
  TOTAL AREA(ACRES) =  61499.91       PEAK FLOW RATE(CFS) =   28756.93

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  61499.91  TC(MIN.) =    123.25
  AREA-AVERAGED Fm(INCH/HR)=  0.22   Ybar =  0.34
  PEAK FLOW RATE(CFS)   =  28756.93
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LP67100H.DAT
  TIME/DATE OF STUDY: 08:17 02/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.160
        FOOTHILL                           0.140
        MOUNTAIN                           0.620
        VALLEY(UNDEVELOPED)/DESERT         0.080
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1066.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LP66100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    28756.93    Tc(MIN.) = 123.25
  AREA-AVERAGED Fm(INCH/HR) =  0.22    Ybar = 0.34
  TOTAL AREA(ACRES) =   61499.91
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1066.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    28756.93    Tc(MIN.) = 123.25
  AREA-AVERAGED Fm(INCH/HR) =  0.22    Ybar = 0.34
  TOTAL AREA(ACRES) =   61499.91
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1066.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1066.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    213.00  DOWNSTREAM(FEET) =    176.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  6201.00   CHANNEL SLOPE =  0.0060
  CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  28756.93
  FLOW VELOCITY(FEET/SEC.) =  18.47   FLOW DEPTH(FEET) =  13.82
  TRAVEL TIME(MIN.) =   5.60   Tc(MIN.) = 128.85
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) = 128.85
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  0.961
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   A        0.20      0.40       1.00    77
  NATURAL FAIR COVER
  "GRASS"                    A        0.90      0.40       1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        8.90      0.40       1.00    46
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A        5.50      0.40       1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A       17.90      0.40       1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       23.90      0.30       1.00    63
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.36
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   57.30
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.62;30M= 1.19;1H= 1.64;3H= 3.03;6H= 4.46;24H= 7.82
  S-GRAPH: VALLEY(DEV.)=  7.6%;VALLEY(UNDEV.)/DESERT= 16.3%
           MOUNTAIN= 62.0%;FOOTHILL= 14.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.15; LAG(HR) = 1.72; Fm(INCH/HR) = 0.22; Ybar = 0.34
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.31; 30M = 0.36; 1HR = 0.41;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  61557.22
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   25366.47
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  28377.06
  TOTAL AREA(ACRES) =  61557.22       PEAK FLOW RATE(CFS) =   28756.93
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

 ****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) = 128.85
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   B      180.40      0.30      1.00    86
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B       89.60      0.30      0.50    56
  NATURAL FAIR COVER
  "GRASS"                    B      327.50      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 B        6.00      0.30      1.00    65
  URBAN FAIR COVER
  "TURF"                     B      105.00      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B      118.90      0.30      1.00    66
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.95
  SUBAREA AREA(ACRES) =  827.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.62;30M= 1.19;1H= 1.64;3H= 3.02;6H= 4.44;24H= 7.79
  S-GRAPH: VALLEY(DEV.)=  7.7%;VALLEY(UNDEV.)/DESERT= 16.1%
           MOUNTAIN= 62.0%;FOOTHILL= 14.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.15; LAG(HR) = 1.72; Fm(INCH/HR) = 0.22; Ybar = 0.34
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.30; 30M = 0.36; 1HR = 0.41;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  62384.62
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   25517.30
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  28524.33
  TOTAL AREA(ACRES) =  62384.62       PEAK FLOW RATE(CFS) =   28756.93
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

 ****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
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  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) = 128.85
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 B        7.80      0.30      0.10    56
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B      418.80      0.30      1.00    69
  NATURAL GOOD COVER
  "MEADOWS"                  B        0.90      0.30      1.00    58
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        0.40      0.30      1.00    72
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B       50.90      0.30      0.60    56
  NATURAL FAIR COVER
  "WOODLAND"                 B       51.70      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.95
  SUBAREA AREA(ACRES) =  530.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.62;30M= 1.19;1H= 1.64;3H= 3.01;6H= 4.43;24H= 7.77
  S-GRAPH: VALLEY(DEV.)=  7.8%;VALLEY(UNDEV.)/DESERT= 16.1%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.15; LAG(HR) = 1.72; Fm(INCH/HR) = 0.22; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.30; 30M = 0.36; 1HR = 0.40;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  62915.12
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   25600.04
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  28610.40
  TOTAL AREA(ACRES) =  62915.12       PEAK FLOW RATE(CFS) =   28756.93
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

 ****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) = 128.85
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      203.60      0.25      1.00    75
  AGRICULTURAL POOR COVER
  "FALLOW"                   C      124.30      0.25      1.00    91
  NATURAL POOR COVER
  "BARREN"                   C        7.60      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C      485.30      0.25      1.00    79
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 C        0.70      0.25      1.00    77
  URBAN FAIR COVER
  "TURF"                     C        4.90      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  826.40
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  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.62;30M= 1.18;1H= 1.63;3H= 3.00;6H= 4.42;24H= 7.74
  S-GRAPH: VALLEY(DEV.)=  7.9%;VALLEY(UNDEV.)/DESERT= 16.0%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.15; LAG(HR) = 1.72; Fm(INCH/HR) = 0.22; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.30; 30M = 0.36; 1HR = 0.40;
  3HR = 0.75; 6HR = 0.89; 24HR= 0.94
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  63741.52
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   25795.92
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  28789.62
  TOTAL AREA(ACRES) =  63741.52       PEAK FLOW RATE(CFS) =   28789.62

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 128.85
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      940.00      0.25      1.00    77
  COMMERCIAL                 C       10.80      0.25      0.10    69
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C      128.10      0.25      1.00    79
  NATURAL GOOD COVER
  "MEADOWS"                  C        0.20      0.25      1.00    71
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       C       17.90      0.25      0.20    69
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C      125.40      0.25      0.60    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.94
  SUBAREA AREA(ACRES) = 1222.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.61;30M= 1.18;1H= 1.63;3H= 2.99;6H= 4.40;24H= 7.70
  S-GRAPH: VALLEY(DEV.)=  8.1%;VALLEY(UNDEV.)/DESERT= 15.8%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.15; LAG(HR) = 1.72; Fm(INCH/HR) = 0.22; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.30; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  64963.91
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   26065.79
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  29049.74
  TOTAL AREA(ACRES) =  64963.91       PEAK FLOW RATE(CFS) =   29049.74

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 128.85
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C       94.10      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      159.90      0.20      1.00    81
  AGRICULTURAL POOR COVER
  "FALLOW"                   D       77.90      0.20      1.00    94
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D      104.60      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        0.60      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      635.30      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.95
  SUBAREA AREA(ACRES) = 1072.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.61;30M= 1.18;1H= 1.63;3H= 2.98;6H= 4.38;24H= 7.67
  S-GRAPH: VALLEY(DEV.)=  8.2%;VALLEY(UNDEV.)/DESERT= 15.7%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.15; LAG(HR) = 1.72; Fm(INCH/HR) = 0.22; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  66036.31
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   26351.26
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  29322.41
  TOTAL AREA(ACRES) =  66036.31       PEAK FLOW RATE(CFS) =   29322.41

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 128.85
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 D        0.90      0.20      1.00    82
  URBAN FAIR COVER
  "TURF"                     D        8.20      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      334.50      0.20      1.00    83
  COMMERCIAL                 D       11.70      0.20      0.10    75
  PUBLIC PARK                D        0.10      0.20      0.85    75
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D        3.80      0.20      0.20    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.96
  SUBAREA AREA(ACRES) =  359.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.61;30M= 1.18;1H= 1.63;3H= 2.98;6H= 4.38;24H= 7.66
  S-GRAPH: VALLEY(DEV.)=  8.2%;VALLEY(UNDEV.)/DESERT= 15.7%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
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```
  Tc(HR) = 2.15; LAG(HR) = 1.72; Fm(INCH/HR) = 0.22; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  66395.52
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   26446.74
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  29414.22
  TOTAL AREA(ACRES) =  66395.52       PEAK FLOW RATE(CFS) =   29414.22

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1066.00 TO NODE   1067.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 128.85
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        7.80      0.20      1.00    86
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D       61.40      0.20      1.00    84
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D      156.10      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D       63.80      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.78
  SUBAREA AREA(ACRES) =  289.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.61;30M= 1.18;1H= 1.63;3H= 2.98;6H= 4.37;24H= 7.65
  S-GRAPH: VALLEY(DEV.)=  8.3%;VALLEY(UNDEV.)/DESERT= 15.6%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.15; LAG(HR) = 1.72; Fm(INCH/HR) = 0.22; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  66684.62
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   26524.58
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  29491.61
  TOTAL AREA(ACRES) =  66684.62       PEAK FLOW RATE(CFS) =   29491.61

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  66684.62  TC(MIN.) =    128.85
  AREA-AVERAGED Fm(INCH/HR)=  0.22   Ybar =  0.35
  PEAK FLOW RATE(CFS)   =  29491.61
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
        (c) Copyright 1983-2003 Advanced Engineering Software (aes)
            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: LP68100H.DAT
  TIME/DATE OF STUDY: 08:17 02/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000; 10.000
   2)  10.000;  6.000
   3)  15.000;  4.500
   4)  20.000;  3.600
   5)  30.000;  2.750
   6)  60.000;  1.950
   7) 120.000;  1.550
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.250
        FOOTHILL                           0.140
        MOUNTAIN                           0.180
        VALLEY(UNDEVELOPED)/DESERT         0.430
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1067.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: LP67100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    29491.61    Tc(MIN.) = 128.85
  AREA-AVERAGED Fm(INCH/HR) =  0.22    Ybar = 0.35
  TOTAL AREA(ACRES) =   66684.62
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1067.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    29491.61    Tc(MIN.) = 128.85
  AREA-AVERAGED Fm(INCH/HR) =  0.22    Ybar = 0.35
  TOTAL AREA(ACRES) =   66684.62
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1067.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1067.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    176.00  DOWNSTREAM(FEET) =    133.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  6324.00   CHANNEL SLOPE =  0.0068
  CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =  29491.61
  FLOW VELOCITY(FEET/SEC.) =  19.48   FLOW DEPTH(FEET) =  13.52
  TRAVEL TIME(MIN.) =   5.41   Tc(MIN.) = 134.26
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) = 134.26
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  0.939
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        1.30      0.40      1.00    40
  NATURAL GOOD COVER
  "MEADOWS"                  A        0.30      0.40      1.00    30
  NATURAL FAIR COVER
  "GRASS"                    A        1.80      0.40      1.00    50
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 A        0.90      0.40      1.00    44
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        3.10      0.40      1.00    46
  COMMERCIAL                 A       23.30      0.40      0.10    32
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.32
  SUBAREA AREA(ACRES) =   30.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.61;30M= 1.18;1H= 1.63;3H= 2.98;6H= 4.37;24H= 7.65
```

```
  S-GRAPH: VALLEY(DEV.)=  8.3%;VALLEY(UNDEV.)/DESERT= 15.6%
           MOUNTAIN= 62.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.24; LAG(HR) = 1.79; Fm(INCH/HR) = 0.22; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  66715.32
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0259; Lca/L=0.4,n=.0232; Lca/L=0.5,n=.0213;Lca/L=0.6,n=.0199
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   26532.75
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  29104.44
  TOTAL AREA(ACRES) =  66715.32       PEAK FLOW RATE(CFS) =   29491.61
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 134.26
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A        1.60      0.40      1.00    49
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       A        6.70      0.40      0.20    32
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       A       33.60      0.40      0.60    32
  NATURAL FAIR COVER
  "WOODLAND"                 A       19.30      0.40      1.00    36
  AGRICULTURAL POOR COVER
  "FALLOW"                   B        4.10      0.30      1.00    86
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B       16.50      0.30      0.50    56
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.38
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.67
  SUBAREA AREA(ACRES) =   81.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.61;30M= 1.18;1H= 1.63;3H= 2.98;6H= 4.37;24H= 7.65
  S-GRAPH: VALLEY(DEV.)=  8.3%;VALLEY(UNDEV.)/DESERT= 15.7%
           MOUNTAIN= 61.9%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.24; LAG(HR) = 1.79; Fm(INCH/HR) = 0.22; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  66797.12
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0259; Lca/L=0.4,n=.0232; Lca/L=0.5,n=.0213;Lca/L=0.6,n=.0199
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   26542.31
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  29117.42
  TOTAL AREA(ACRES) =  66797.12       PEAK FLOW RATE(CFS) =   29491.61
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 134.26
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   B        2.00      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B        7.10      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 B        0.40      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        0.70      0.30      1.00    66
  COMMERCIAL                 B       42.80      0.30      0.10    56
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B       10.70      0.30      1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.40
  SUBAREA AREA(ACRES) =   63.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.61;30M= 1.18;1H= 1.62;3H= 2.98;6H= 4.37;24H= 7.64
  S-GRAPH: VALLEY(DEV.)=  8.3%;VALLEY(UNDEV.)/DESERT= 15.7%
           MOUNTAIN= 61.9%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.24; LAG(HR) = 1.79; Fm(INCH/HR) = 0.22; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  66860.82
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0259; Lca/L=0.4,n=.0232; Lca/L=0.5,n=.0213;Lca/L=0.6,n=.0199
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   26561.42
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  29137.49
  TOTAL AREA(ACRES) =  66860.82       PEAK FLOW RATE(CFS) =   29491.61
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 134.26
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       B       77.60      0.30      0.20    56
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B       14.90      0.30      0.60    56
  NATURAL FAIR COVER
  "WOODLAND"                 B        6.90      0.30      1.00    60
  NATURAL FAIR COVER
  "GRASS"                    C      218.60      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       70.80      0.25      1.00    77
  COMMERCIAL                 C       12.90      0.25      0.10    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.80
  SUBAREA AREA(ACRES) =  401.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.61;30M= 1.18;1H= 1.62;3H= 2.97;6H= 4.36;24H= 7.63
```

```
  S-GRAPH: VALLEY(DEV.)=  8.4%;VALLEY(UNDEV.)/DESERT= 15.9%
           MOUNTAIN= 61.6%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.24; LAG(HR) = 1.79; Fm(INCH/HR) = 0.22; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.40;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  67262.52
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0259; Lca/L=0.4,n=.0232; Lca/L=0.5,n=.0213;Lca/L=0.6,n=.0199
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   26659.57
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  29239.52
  TOTAL AREA(ACRES) =  67262.52       PEAK FLOW RATE(CFS) =   29491.61
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 134.26
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  PUBLIC PARK                C        0.20      0.25      0.85    69
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        0.90      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C       19.50      0.25      1.00    73
  AGRICULTURAL POOR COVER
  "FALLOW"                   D       35.60      0.20      1.00    94
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D      140.20      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        0.60      0.20      1.00    93
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.64
  SUBAREA AREA(ACRES) =  197.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.61;30M= 1.18;1H= 1.62;3H= 2.97;6H= 4.36;24H= 7.63
  S-GRAPH: VALLEY(DEV.)=  8.5%;VALLEY(UNDEV.)/DESERT= 15.9%
           MOUNTAIN= 61.5%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.24; LAG(HR) = 1.79; Fm(INCH/HR) = 0.22; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.39;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  67459.52
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0259; Lca/L=0.4,n=.0232; Lca/L=0.5,n=.0213;Lca/L=0.6,n=.0199
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   26718.33
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  29300.24
  TOTAL AREA(ACRES) =  67459.52       PEAK FLOW RATE(CFS) =   29491.61
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 134.26
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D      332.20      0.20      1.00    84
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 D        1.10      0.20      1.00    82
  URBAN FAIR COVER
  "TURF"                     D        1.20      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      172.80      0.20      1.00    83
  COMMERCIAL                 D       60.20      0.20      0.10    75
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D        1.80      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.90
  SUBAREA AREA(ACRES) =  569.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.61;30M= 1.18;1H= 1.62;3H= 2.97;6H= 4.35;24H= 7.61
  S-GRAPH: VALLEY(DEV.)=  8.6%;VALLEY(UNDEV.)/DESERT= 16.2%
           MOUNTAIN= 61.1%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.24; LAG(HR) = 1.79; Fm(INCH/HR) = 0.22; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.39;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  68028.82
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0259; Lca/L=0.4,n=.0232; Lca/L=0.5,n=.0213;Lca/L=0.6,n=.0199
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   26876.03
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  29459.72
  TOTAL AREA(ACRES) =  68028.82       PEAK FLOW RATE(CFS) =   29491.61
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1067.00 TO NODE   1068.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) = 134.26
  *ERROR-TIME OF CONCENTRATION EXCEEDS RAINFALL TABLE
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D      143.90      0.20      0.20    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        4.90      0.20      1.00    81
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D        6.00      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D       61.30      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.46
  SUBAREA AREA(ACRES) =  216.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.61;30M= 1.18;1H= 1.62;3H= 2.97;6H= 4.35;24H= 7.60
  S-GRAPH: VALLEY(DEV.)=  8.7%;VALLEY(UNDEV.)/DESERT= 16.2%
           MOUNTAIN= 61.0%;FOOTHILL= 14.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 2.24; LAG(HR) = 1.79; Fm(INCH/HR) = 0.22; Ybar = 0.35
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
```

```
  DEPTH-AREA FACTORS: 5M = 0.29; 30M = 0.35; 1HR = 0.39;
  3HR = 0.74; 6HR = 0.89; 24HR= 0.93
  UNIT-INTERVAL(MIN) = 15.00   TOTAL AREA(ACRES) =  68244.92
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1068.00 = ******** FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0259; Lca/L=0.4,n=.0232; Lca/L=0.5,n=.0213;Lca/L=0.6,n=.0199
  TIME OF PEAK FLOW(HR) = 17.75  RUNOFF VOLUME(AF) =   26945.42
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  29531.73
  TOTAL AREA(ACRES) =  68244.92       PEAK FLOW RATE(CFS) =   29531.73

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  68244.92  TC(MIN.) =    134.26
  AREA-AVERAGED Fm(INCH/HR)=  0.22   Ybar =  0.35
  PEAK FLOW RATE(CFS)   =  29531.73
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================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
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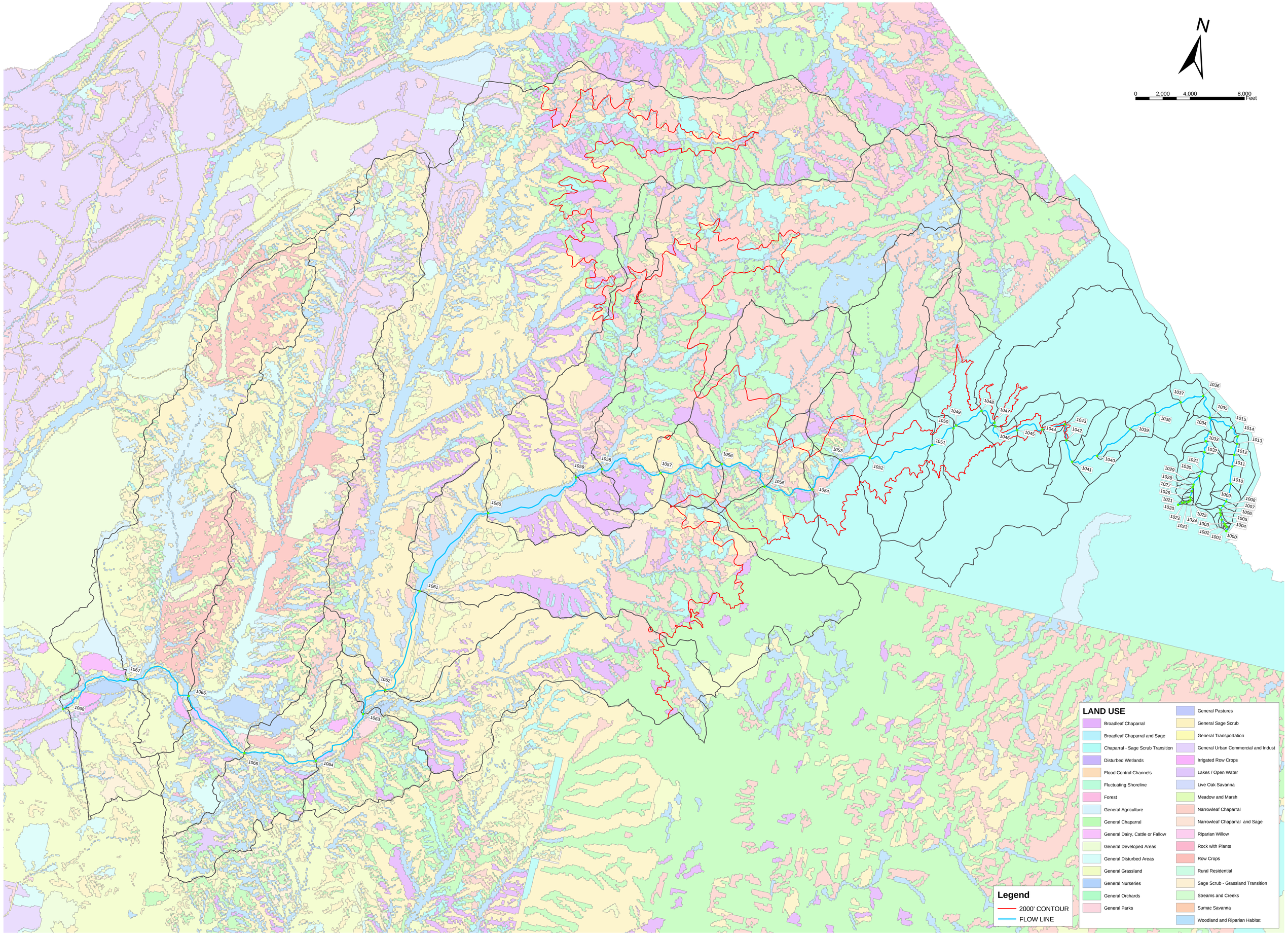


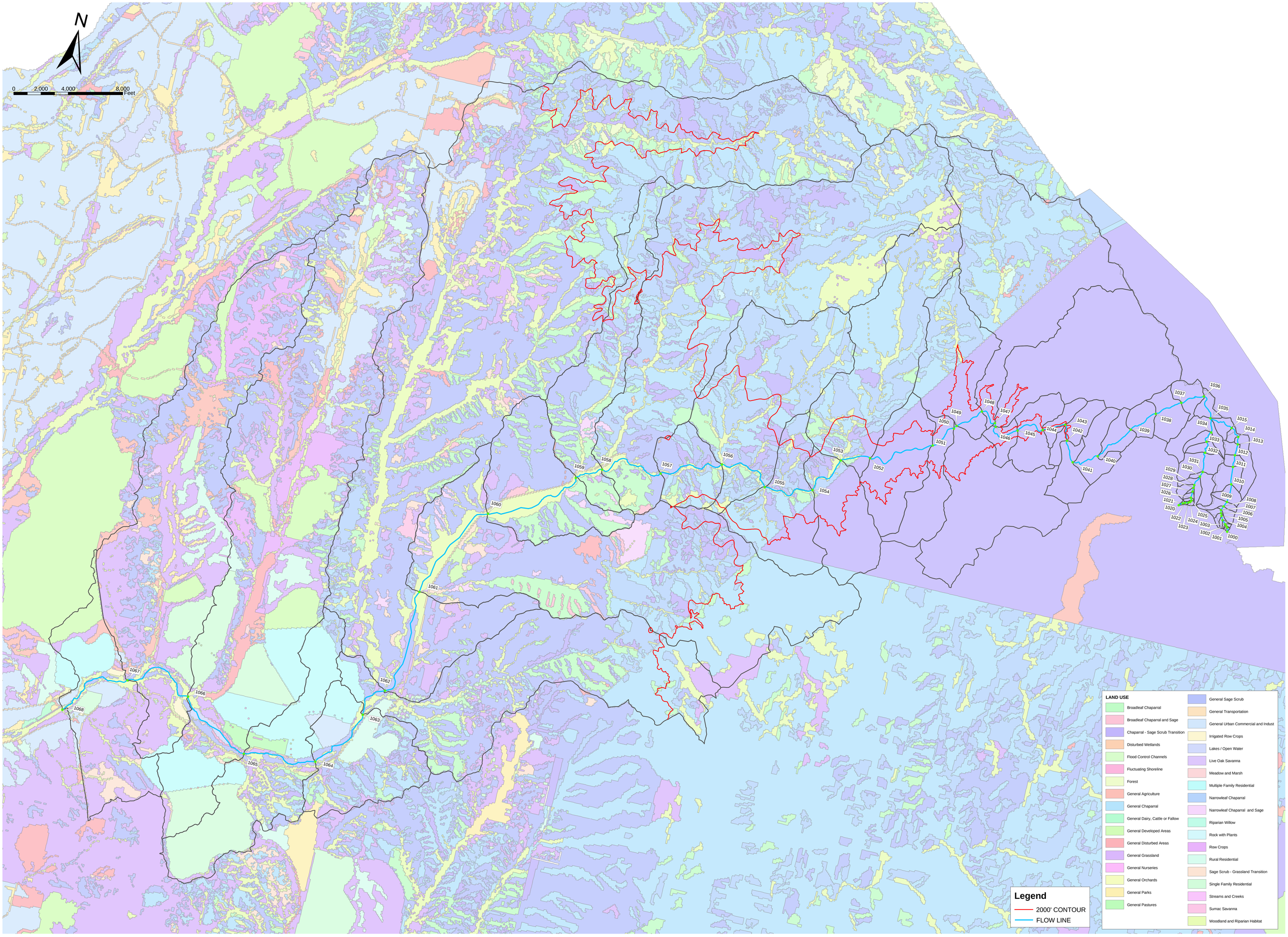
DATE: FEBRUARY 27, 2004

H:/10075501/PH801/RMV WATERSHED/EX/SAN JUAN MAIN.MXD

HYDROLOGIC MAP FOR EXISTING CONDITIONS

SAN JUAN CREEK CHANNEL

HUITT~ZOLLARS
(714) 734-5100
430 EXCHANGE, SUITE 200
IRVINE, CA 92602



DATE: FEBRUARY 27, 2004
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HYDROLOGIC MAP FOR PROPOSED CONDITIONS
SAN JUAN CREEK CHANNEL

HUITT~ZOLLARS
(714) 734-5100
430 EXCHANGE, SUITE 200
IRVINE, CA 92602

N

0 2,000 4,000 8,000 Feet

1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1041 1042 1043 1044 1045 1046 1047 1048 1049 1050 1051 1052 1053 1054 1055 1056 1057 1058 1059 1060 1061 1062 1063 1064 1065 1066 1067 1068

Legend

- 2000' CONTOUR
- FLOW LINE
- RANCHO MISSION VIEJO BOUNDARY

HYDROLOGIC MAP FOR EXISTING CONDITION
SAN JUAN CREEK CHANNEL

DATE: FEBRUARY 27, 2004

H:\10075501\PH801\RMV WATERSHED\EX\SAN JUAN MAIN.MXD

HUITT~ZOLLARS
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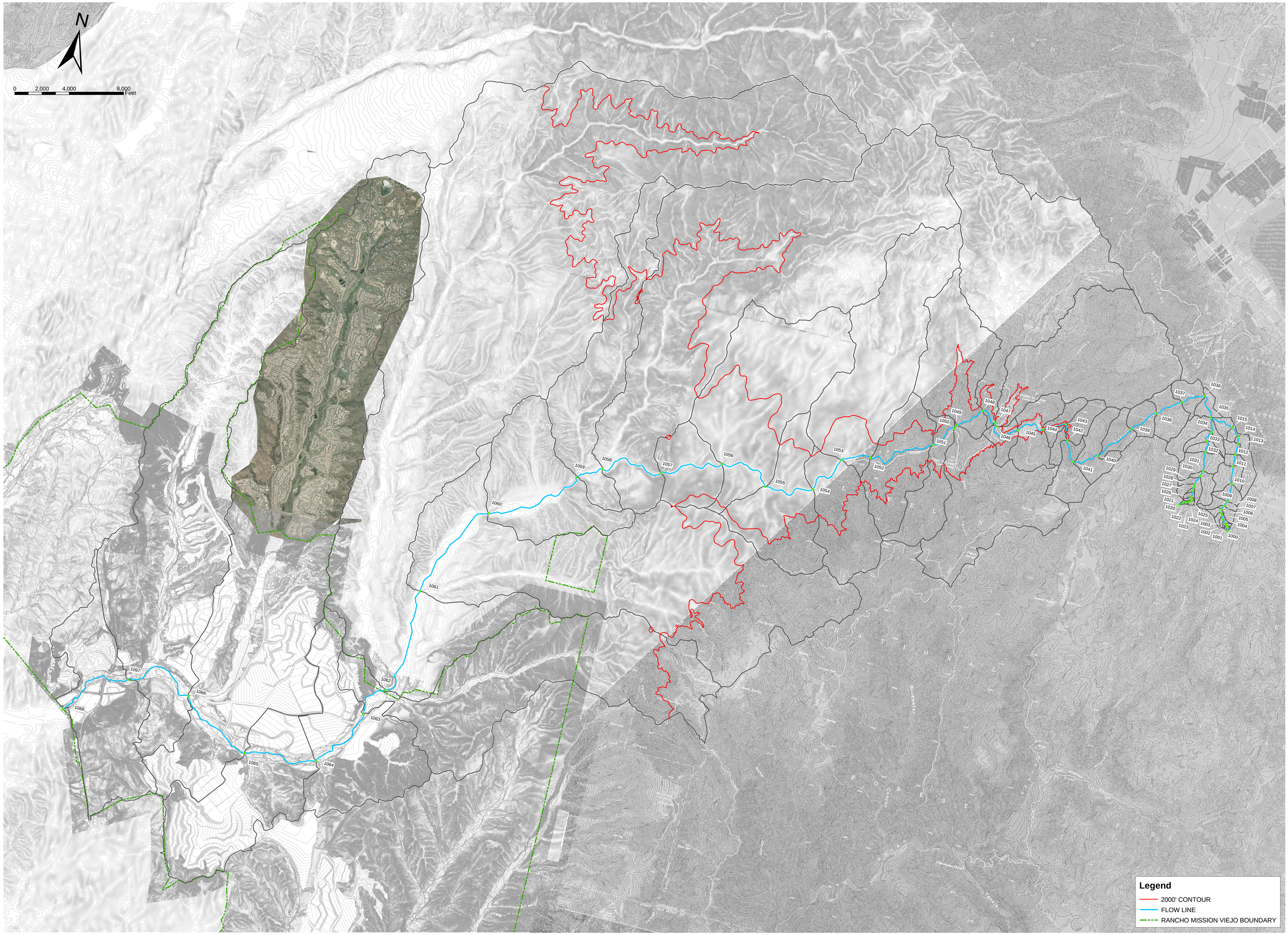

DATE: FEBRUARY 27, 2004

H:/10075501/PH801/RMV WATERSHED/EX/SAN JUAN MAIN.MXD

HYDROLOGIC MAP FOR PROPOSED CONDITION

SAN JUAN CREEK CHANNEL

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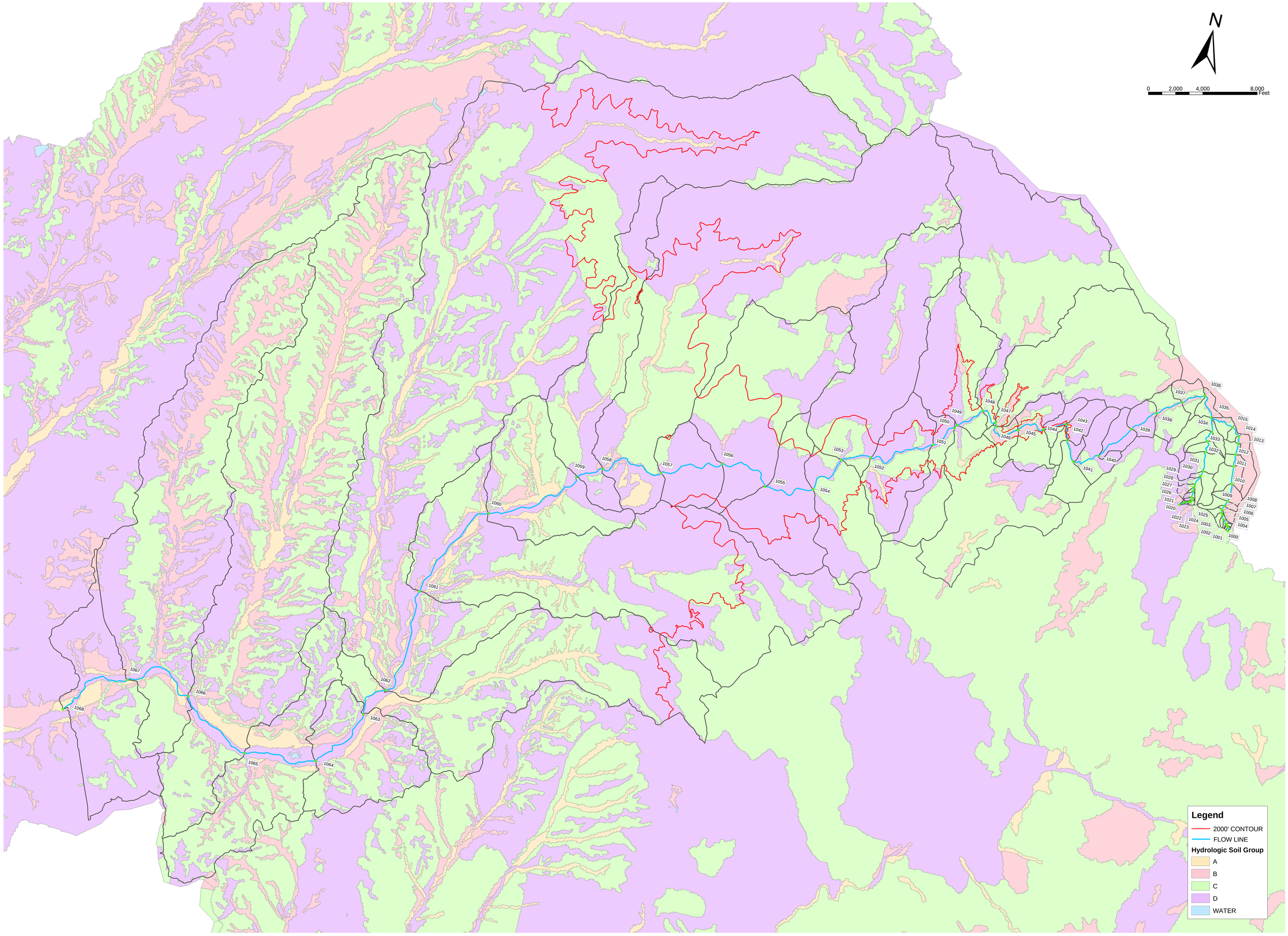

DATE: FEBRUARY 27, 2004
H:/10075501/PH801/RMV WATERSHED/EX/SAN JUAN MAIN.MXD

HYDROLOGIC ANALYSIS OF
SAN JUAN CREEK CHANNEL

HUITT~ZOLLARS
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PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

HYDROLOGIC REPORT

TO

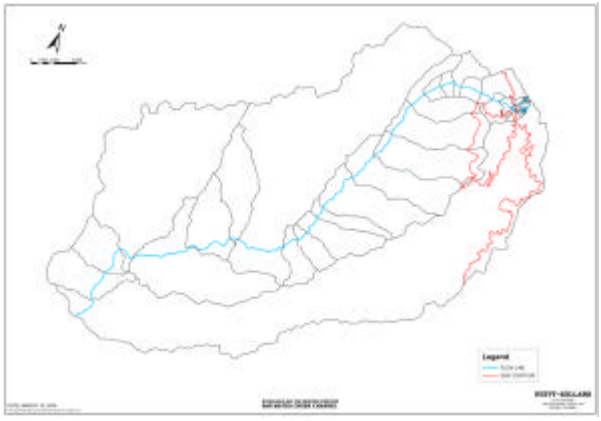
THE BASELINE HYDROLOGIC CONDITIONS

SAN MATEO CREEK
(LA PAZ / GABINO / CHRISTIANITOS)

PREPARED FOR

RANCHO MISSION VIEJO

APRIL 2, 2004



VOLUME II

HUITT-ZOLLARS

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TECHNICAL APPENDIX II-C – HYDROLOGIC ANALYSIS – PROPOSED CONDITION

INTRODUCTION

A Hydrology Report for the La Paz/Gabino/Christianitos canyon main stem of the San Mateo Creek system has been completed to the confluence with, and including, Talega Canyon. This confluence is located approximately a half mile downstream of the boundary of the Rancho Mission Viejo (Ranch) property. The watershed encompasses approximately 29 square miles that extend into the Cleveland National Forest and cover areas in Orange, Riverside, and San Diego Counties. The watershed elevations range from approximately 165 feet above sea level at the downstream confluence to approximately 2,400 feet above sea level at the headwaters.

2-Year, 10-Year, and 100-Year Expected Value and 100-Year High Confidence analyses were prepared. The hydrologic analyses were completed in accordance with the 1986 Orange County Hydrology Manual and 1995 Orange County Hydrology Manual Addendum No. 1. The application of the procedures outlined in these two documents and the assumptions used to develop hydrologic parameters are described in this report.

MODEL OVERVIEW

Since the procedures of the Orange County Hydrology Manual were calibrated to a single area unit hydrograph, a series of single area unit hydrographs have been prepared along the La Paz/Gabino/Christianitos Canyons. Working downstream, a rational method analysis was prepared for the headwaters of La Paz Canyon. As soon as the total upstream tributary drainage area exceeded 640 acres, a unit hydrograph was calculated based on parameters from the rational method analysis such as basin lag. The peak flow rates from the two methods were compared. If the rational method peak flow rate was larger, then this flow rate was used to route flows downstream to the next concentration node. If the unit hydrograph peak flow rate was larger, then this flow rate was used to route flows downstream to the next concentration node. The travel time was calculated to this concentration node and used to estimate a new basin lag for development of a unit hydrograph that included the additional area tributary at this concentration node. This process was continued downstream with concentration nodes located at major confluences or other points of significance. Due to differences in methodology for different return events, specifically, the 2-Year Expected Value analysis versus the others analyzed, two distinct models were created.

To model the 10-Year and 100-Year Expected Value and 100-Year High Confidence analyses, the Advanced Engineering Software RATSCx program was utilized. The RATSCx program allows for both rational method and unit hydrograph method analyses to be completed using one data file. By using the RATSCx program, parameters such as rainfall depths and land use/soil type combinations are input on a sub-area basis and tabulated for calculations of loss rates. Additionally, the hydraulic calculations to estimate travel times between

concentration nodes and, ultimately, basin lag are internal to the program. A limitation of the program is that S-Graph proportions can only be specified on a data file basis. Therefore, 22 separate RATSCx data files were developed, one for each concentration node, and linked together using a network file that executes the data files in upstream to downstream order.

To model the 2-Year Expected Value analysis, both the Advanced Engineering Software RATSCx and FLOODSCx programs were utilized. The RATSCx program was used to develop the rational method analysis to the first hydrograph location. According to the Orange County Hydrology Manual Addendum No. 1, Fp = 0.60 in/hr for all areas independent of soil type. Unfortunately, the RATSCx program requires that these Fp values be manually specified and, thus, does not tabulate soil types or curve numbers that could be used to develop loss rates for a unit hydrograph analysis. Therefore, the FLOODSCx program was used to develop unit hydrographs based on data calculated both from the rational method analysis and from other tabulations of rainfall and land use/soil type combinations. The time of concentration (Tc) from the rational method was used to calculate the basin lag at the first unit hydrograph location. Rainfall, S-Graph proportions, losses, and channel routing information, including travel times, Tc's, and downstream basin lag estimates, were calculated outside of the FLOODSCx program.

ASSUMPTIONS

Base Maps and Topographic Data

Due to the size and extents of the watershed, the base map for the existing and proposed condition model was created using three and four separate sources, respectively. Both base maps used aerial topography with 2-foot, 5-foot, and 10-foot contour intervals in the vicinity of the Ranch that represent existing conditions of the area. Beyond the extents of the aerial topography, USGS digital topography was utilized to the County boundary. Outside of the County, raster images of USGS quadrangle maps were used. Additionally, the base map for the proposed condition utilized mass grade topographic information that was spliced into existing aerial topography for each of the proposed development bubbles.

Rainfall

Rainfall intensities and depths were derived from the Orange County Hydrology Manual. Two rainfall zones were incorporated; Non-Mountainous for areas below the 2,000' elevation and Mountainous for areas above the 2,000' elevation. For sub-areas in both zones, weighted averages were calculated. Rainfall intensities and depths for Non-Mountainous and Mountainous zones are presented in Tables 1 and 2.

In the 10-Year and 100-Year Expected Value and 100-Year High Confidence analyses, rainfall depths were input into the model on a sub-area basis. In the 2-Year Expected Value analysis, rainfall depths were specified for the entire upstream tributary area.

Land Use

As part of the Philip Williams & Associates (PWA) report titled, "Baseline Hydrologic Conditions – San Juan & Upper San Mateo Watersheds," dated May 30, 2001, PWA developed "Land Use Sub-Categories" for the HEC-1 model. Based on descriptions of these sub-categories, the land uses were mapped to hydrologic land uses for input into the models according to Table 3. PWA prepared land use mapping for both the existing and several proposed development conditions. For the proposed condition hydrologic analysis, only one, the Ranch Plan Alternative (B4G), land use plan was evaluated.

RAINFALL INTENSITIES

Non-Mountainous (Elevations <2,000')

2-Year Expected Value		10-Year Expected Value		100-Year Expected Value		100-Year High Confidence	
Time (min)	Intensity (in/hr)	Time (min)	Intensity (in/hr)	Time (min)	Intensity (in/hr)	Time (min)	Intensity (in/hr)
5	1.58	5	3.19	5	4.82	5	6.19
10	1.06	10	2.16	10	3.26	10	4.16
15	0.84	15	1.72	15	2.59	15	3.30
20	0.72	20	1.46	20	2.20	20	2.80
30	0.57	30	1.16	30	1.75	30	2.22
60	0.38	60	0.79	60	1.18	60	1.49
120	0.26	120	0.53	120	0.80	120	1.00

Mountainous (Elevations >2,000')

2-Year Expected Value		10-Year Expected Value		100-Year Expected Value		100-Year High Confidence	
Time (min)	Intensity (in/hr)	Time (min)	Intensity (in/hr)	Time (min)	Intensity (in/hr)	Time (min)	Intensity (in/hr)
5	2.45	5	5.10	5	7.60	5	10.00
10	1.44	10	3.10	10	4.50	10	6.00
15	1.09	15	2.50	15	3.50	15	4.50
20	0.84	20	1.80	20	2.75	20	3.60
30	0.63	30	1.35	30	2.10	30	2.75
60	0.46	60	1.00	60	1.52	60	1.95
120	0.37	120	0.77	120	1.20	120	1.55

Table 1 – Rainfall Intensities

RAINFALL DEPTHS

Non-Mountainous (Elevations <2,000')

2-Year Expected Value		10-Year Expected Value		100-Year Expected Value		100-Year High Confidence	
Time ()	Intensity (in)	Time ()	Intensity (in)	Time ()	Intensity (in)	Time ()	Intensity (in)
5-Min	0.13	5-Min	0.26	5-Min	0.40	5-Min	0.52
30-Min	0.28	30-Min	0.59	30-Min	0.87	30-Min	1.09
1-Hr	0.37	1-Hr	0.78	1-Hr	1.15	1-Hr	1.45
3-Hr	0.62	3-Hr	1.31	3-Hr	1.94	3-Hr	2.43
6-Hr	0.85	6-Hr	1.81	6-Hr	2.71	6-Hr	3.36
24-Hr	1.44	24-Hr	3.03	24-Hr	4.49	24-Hr	5.63

Mountainous (Elevations >2,000')

2-Year Expected Value		10-Year Expected Value		100-Year Expected Value		100-Year High Confidence	
Time ()	Intensity (in)	Time ()	Intensity (in)	Time ()	Intensity (in)	Time ()	Intensity (in)
5-Min	0.18	5-Min	0.40	5-Min	0.63	5-Min	0.78
30-Min	0.32	30-Min	0.68	30-Min	1.04	30-Min	1.34
1-Hr	0.46	1-Hr	0.99	1-Hr	1.51	1-Hr	1.94
3-Hr	0.94	3-Hr	2.10	3-Hr	3.08	3-Hr	3.96
6-Hr	1.46	6-Hr	3.14	6-Hr	4.81	6-Hr	6.19
24-Hr	2.67	24-Hr	5.71	24-Hr	8.76	24-Hr	11.27

Table 1 – Rainfall Depths

LAND USE MAPPING

Land Use Sub-Category	Hydrologic Land Use
General Transportation	Commercial
General Urban Commercial	Commercial
General Developed Areas	5-7 Dwellings/Acre
Fluctuating Shoreline	Public Park
Lakes/Open Water	Public Park
General Disturbed Areas	Barren (Poor)
Broadleaf Chaparral	Chaparral, Broadleaf (Fair)
Broadleaf Chaparral and Sage	Chaparral, Broadleaf (Fair)
Chaparral – Sage Scrub	Chaparral, Broadleaf (Fair)
General Chaparral	Chaparral, Broadleaf (Fair)
Rural Residential	Chaparral, Broadleaf (Fair)
Narrowleaf Chaparral	Chaparral, Narrowleaf (Fair)
General Grassland	Grass (Fair)
Live Oak Savanna	Grass (Fair)
Sumac Savanna	Grass (Fair)
Disturbed Wetlands	Meadows or Cienegas (Fair)
Meadow and Marsh	Meadows or Cienegas (Good)
General Sage Scrub	Open Brush (Fair)
Rock with Plants	Open Brush (Fair)
Sage Scrub- Grassland	Open Brush (Fair)
Streams and Creeks	Open Brush (Fair)
Forest	Woodland (Fair)
Woodland and Riparian	Woodland (Fair)
General Agriculture	Fallow (Poor)
General Nurseries	Orchards, Evergreen (Fair)
General Orchards	Orchards, Evergreen (Fair)
Irrigated Row Crops	Pasture, Dryland (Fair)
Row Crops	Pasture, Dryland (Fair)
General Parks	Turf (Fair)

Table 3 – Land Use Mapping

Hydrologic Soils

Hydrologic soils were assigned based on the Orange County Hydrology Manual.

Antecedent Moisture Condition

As outlined in the Orange County Hydrology Manual Addendum No. 1, Antecedent Moisture Condition (AMC) II was used for all analyses.

Depth Area Adjustments

As outlined in the Orange County Hydrology Manual, Sierra Madre depth area adjustments were chosen for all calculations.

S-Graphs

S-Graph proportions were assigned based on a review of topographic and land use data, as well as aerial photography. Generally, the rugged terrain in the upper portions of the watershed was assigned to a "Mountain" S-Graph, while the lower portions were assigned "Foothill" and "Valley" S-Graphs. For the proposed condition analysis, development bubble areas were assumed to change from "Valley – Undeveloped" to "Valley – Developed".

In the 10-Year and 100-Year Expected Value and 100-Year High Confidence analyses, S-Graph proportions were input into the model on a sub-area basis. In the 2-Year Expected Value analysis, S-Graph proportions were specified for the entire upstream tributary area.

Channel Geometry

Channel geometry was determined based on estimated cross-sections taken from the topographic data at several locations. Channel sizes were incrementally increased as the model moved downstream. Channels were sized to convey the 100-Year High Confidence peak flow rates without overtopping. Additionally, the 100-Year High Confidence analysis was used as the determining factor in insuring that travel times for individual reaches met the County criteria outlined in the Hydrology Manual on pages D-12 and D-15.

Sub-Areas

In general, sub-areas were developed so that the sub-area sizes gradually increased as the study progressed downstream. After the first hydrograph was developed on La Paz Canyon, concentration nodes were located at major confluences or other points of significance. Generally these concentration nodes defined the sub-areas rather than the sub-area size defining a concentration node. Increments in sub-area sizes were, for the most part, less than four square miles. However, there are a few large canyons, such as Gabino and Talega, that drain a significantly larger watershed and the sub-area size increment was correspondingly large.

CONCLUSIONS

Hydrologic Results

The results of the hydrologic analyses at several points of significance along the La Paz/Gabino/Christianitos canyon main stem are presented in Tables 4 through 8.

Impact of Proposed Development

The results indicate that the proposed Ranch development results in only minimal increases to the peak flow rates and runoff volumes on the La Paz/Gabino/Christianitos canyon main steam. The developed condition total watershed area is actually reduced by approximately 25 acres or 0.1% at the downstream terminus of these analyses. Percentage wise, the largest increase in peak flow rate due to development was 1.5% at the Talega Canyon confluence for the 10-Year Expected Value analysis. Correspondingly, the largest increase in runoff volume is 1.1% at the same location for the same analysis.

HYDROLOGIC SUMMARY

Existing Condition

Node	Location	Total Area (acres)	Total Area (sq. mi.)	Peak Flow Rate 2-Year EV (cfs)	Peak Flow Rate 10-Year EV (cfs)	Peak Flow Rate 100-Year EV (cfs)	Peak Flow Rate 100-Year HC (cfs)
1040	Ranch Boundary	2,114	3.30	304	1,455	2,439	3,364
1049	Gabino Canyon	7,790	12.17	444	2,857	5,292	7,364
1053	Blind Canyon	9,881	15.44	460	2,963	5,486	7,770
1054	Christianitos Canyon	12,304	19.23	508	3,330	6,294	8,935
1056	Ranch Boundary	13,022	20.35	508	3,330	6,336	8,935
1057	Talega Canyon	18,581	29.03	624	4,096	8,062	11,528

Proposed Condition

Node	Location	Total Area (acres)	Total Area (sq. mi.)	Peak Flow Rate 2-Year EV (cfs)	Peak Flow Rate 10-Year EV (cfs)	Peak Flow Rate 100-Year EV (cfs)	Peak Flow Rate 100-Year HC (cfs)
1040	Ranch Boundary	2,114	3.30	304	1,455	2,439	3,364
1049	Gabino Canyon	7,790	12.17	444	2,858	5,294	7,366
1053	Blind Canyon	9,632	15.05	457	2,965	5,459	7,633
1054	Christianitos Canyon	12,171	19.02	503	3,345	6,279	8,913
1056	Ranch Boundary	12,891	20.14	503	3,345	6,340	8,913
1057	Talega Canyon	18,556	28.99	614	4,156	8,152	11,586

Table 4 – Hydrologic Summary

HYDROLOGIC SUMMARY – 2-YEAR – EXPECTED VALUE

Existing Condition

Node	Location	Total Area (ac)	Total Area (sq. mi.)	Longest Flowpath (ft)	Lag (hr)	Peak Flow Rate (cfs)	Runoff Volume (ac-ft)
1040	Ranch Boundary	2,114	3.30	18,351	0.59	304	63
1049	Gabino Canyon	7,790	12.17	35,944	1.08	444	169
1053	Blind Canyon	9,881	15.44	46,716	1.42	460	217
1054	Christianitos Canyon	12,304	19.23	48,106	1.46	508	264
1056	Ranch Boundary	13,022	20.35	53,710	1.64	508	275
1057	Talega Canyon	18,581	29.03	56,077	1.73	624	404

Proposed Condition

Node	Location	Total Area (ac)	Total Area (sq. mi.)	Longest Flowpath (ft)	Lag (hr)	Peak Flow Rate (cfs)	Runoff Volume (ac-ft)
1040	Ranch Boundary	2,114	3.30	18,351	0.59	304	63
1049	Gabino Canyon	7,790	12.17	35,944	1.08	444	169
1053	Blind Canyon	9,632	15.05	46,716	1.42	457	202
1054	Christianitos Canyon	12,171	19.02	48,105	1.46	503	249
1056	Ranch Boundary	12,891	20.14	53,710	1.64	503	260
1057	Talega Canyon	18,556	28.99	56,077	1.73	614	384

Table 5 – Hydrologic Summary – 2-Year-Expected Value

HYDROLOGIC SUMMARY – 10-YEAR – EXPECTED VALUE

Existing Condition

Node	Location	Total Area (ac)	Total Area (sq. mi.)	Longest Flowpath (ft)	Lag (hr)	Peak Flow Rate (cfs)	Runoff Volume (ac-ft)
1040	Ranch Boundary	2,114	3.30	18,351	0.42	1,455	278
1049	Gabino Canyon	7,790	12.17	35,944	0.70	2,857	844
1053	Blind Canyon	9,881	15.44	46,716	0.89	2,963	1,070
1054	Christianitos Canyon	12,304	19.23	48,106	0.92	3,330	1,311
1056	Ranch Boundary	13,022	20.35	53,710	1.02	3,330	1,392
1057	Talega Canyon	18,581	29.03	56,077	1.07	4,096	2,054

Proposed Condition

Node	Location	Total Area (ac)	Total Area (sq. mi.)	Longest Flowpath (ft)	Lag (hr)	Peak Flow Rate (cfs)	Runoff Volume (ac-ft)
1040	Ranch Boundary	2,114	3.30	18,351	0.42	1,455	278
1049	Gabino Canyon	7,790	12.17	35,944	0.70	2,858	843
1053	Blind Canyon	9,632	15.05	46,716	0.89	2,965	1,041
1054	Christianitos Canyon	12,171	19.02	48,105	0.92	3,345	1,306
1056	Ranch Boundary	12,891	20.14	53,710	1.02	3,345	1,390
1057	Talega Canyon	18,556	28.99	56,077	1.06	4,156	2,077

Table 6 – Hydrologic Summary – 10-Year-Expected Value

HYDROLOGIC SUMMARY – 100-YEAR – EXPECTED VALUE

Existing Condition

Node	Location	Total Area (ac)	Total Area (sq. mi.)	Longest Flowpath (ft)	Lag (hr)	Peak Flow Rate (cfs)	Runoff Volume (ac-ft)
1040	Ranch Boundary	2,114	3.30	18,351	0.38	2,439	519
1049	Gabino Canyon	7,790	12.17	35,944	0.63	5,292	1,630
1053	Blind Canyon	9,881	15.44	46,716	0.79	5,486	2,067
1054	Christianitos Canyon	12,304	19.23	48,106	0.80	6,294	2,546
1056	Ranch Boundary	13,022	20.35	53,710	0.89	6,336	2,695
1057	Talega Canyon	18,581	29.03	56,077	0.93	8,062	3,984

Proposed Condition

Node	Location	Total Area (ac)	Total Area (sq. mi.)	Longest Flowpath (ft)	Lag (hr)	Peak Flow Rate (cfs)	Runoff Volume (ac-ft)
1040	Ranch Boundary	2,114	3.30	18,351	0.38	2,439	519
1049	Gabino Canyon	7,790	12.17	35,944	0.63	5,294	1,630
1053	Blind Canyon	9,632	15.05	46,716	0.78	5,459	2,014
1054	Christianitos Canyon	12,171	19.02	48,105	0.80	6,279	2,533
1056	Ranch Boundary	12,891	20.14	53,710	0.89	6,340	2,684
1057	Talega Canyon	18,556	28.99	56,077	0.93	8,152	4,009

Table 7 – Hydrologic Summary – 100-Year-Expected Value

HYDROLOGIC SUMMARY – 100-YEAR – HIGH CONFIDENCE

Existing Condition

Node	Location	Total Area (ac)	Total Area (sq. mi.)	Longest Flowpath (ft)	Lag (hr)	Peak Flow Rate (cfs)	Runoff Volume (ac-ft)
1040	Ranch Boundary	2,114	3.30	18,351	0.36	3,364	724
1049	Gabino Canyon	7,790	12.17	35,944	0.59	7,364	2,302
1053	Blind Canyon	9,881	15.44	46,716	0.73	7,770	2,913
1054	Christianitos Canyon	12,304	19.23	48,106	0.75	8,935	3,589
1056	Ranch Boundary	13,022	20.35	53,710	0.83	8,935	3,799
1057	Talega Canyon	18,581	29.03	56,077	0.86	11,528	5,613

Proposed Condition

Node	Location	Total Area (ac)	Total Area (sq. mi.)	Longest Flowpath (ft)	Lag (hr)	Peak Flow Rate (cfs)	Runoff Volume (ac-ft)
1040	Ranch Boundary	2,114	3.30	18,351	0.36	3,364	724
1049	Gabino Canyon	7,790	12.17	35,944	0.59	7,366	2,302
1053	Blind Canyon	9,632	15.05	46,716	0.73	7,633	2,838
1054	Christianitos Canyon	12,171	19.02	48,105	0.75	8,913	3,564
1056	Ranch Boundary	12,891	20.14	53,710	0.83	8,913	3,776
1057	Talega Canyon	18,556	28.99	56,077	0.86	11,586	5,633

Table 8 – Hydrologic Summary – 100-Year-High Confidence

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

TECHNICAL APPENDIX II-A
HYDROLOGIC ANALYSIS
UPSTREAM AREAS
2-YEAR EXPECTED VALUE

Rainfall Depths
2-Year - Expected Value - Existing Condition

	Area	< 2000	> 2000	Rainfall Depth							Area	< 2000	> 2000	Rainfall Depth					
Subarea	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr	Node	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr
		X		0.13	0.28	0.37	0.62	0.85	1.44			X		0.13	0.28	0.37	0.62	0.85	1.44
			X	0.18	0.32	0.46	0.94	1.46	2.67				X	0.18	0.32	0.46	0.94	1.46	2.67
1000	0.3	0.0	0.3	0.18	0.32	0.46	0.94	1.46	2.67	1001	0.3	0.0	0.3	0.18	0.32	0.46	0.94	1.46	2.67
1001	0.3	0.0	0.3	0.18	0.32	0.46	0.94	1.46	2.67	1002	0.6	0.0	0.6	0.18	0.32	0.46	0.94	1.46	2.67
1002	0.3	0.0	0.3	0.18	0.32	0.46	0.94	1.46	2.67	1003	0.9	0.0	0.9	0.18	0.32	0.46	0.94	1.46	2.67
1003	0.4	0.0	0.4	0.18	0.32	0.46	0.94	1.46	2.67	1004	1.3	0.0	1.3	0.18	0.32	0.46	0.94	1.46	2.67
1004	0.6	0.0	0.6	0.18	0.32	0.46	0.94	1.46	2.67	1005	1.9	0.0	1.9	0.18	0.32	0.46	0.94	1.46	2.67
1005	0.6	0.0	0.6	0.18	0.32	0.46	0.94	1.46	2.67										
1010	0.6	0.0	0.6	0.18	0.32	0.46	0.94	1.46	2.67	1011	0.6	0.0	0.6	0.18	0.32	0.46	0.94	1.46	2.67
1011	0.4	0.0	0.4	0.18	0.32	0.46	0.94	1.46	2.67	1012	1.0	0.0	1.0	0.18	0.32	0.46	0.94	1.46	2.67
1012	0.9	0.0	0.9	0.18	0.32	0.46	0.94	1.46	2.67	1013	1.9	0.0	1.9	0.18	0.32	0.46	0.94	1.46	2.67
1013	1.1	0.0	1.1	0.18	0.32	0.46	0.94	1.46	2.67	1014	5.5	0.0	5.5	0.18	0.32	0.46	0.94	1.46	2.67
1014	3.8	0.0	3.8	0.18	0.32	0.46	0.94	1.46	2.67	1015	9.3	0.0	9.3	0.18	0.32	0.46	0.94	1.46	2.67
1015	3.4	1.0	2.4	0.17	0.31	0.43	0.85	1.28	2.31	1016	12.7	1.0	11.7	0.18	0.32	0.45	0.91	1.41	2.57
1016	16.2	4.1	12.1	0.17	0.31	0.44	0.86	1.31	2.36	1017	28.9	5.1	23.8	0.17	0.31	0.44	0.88	1.35	2.45
1017	4.6	2.8	1.8	0.15	0.30	0.41	0.75	1.09	1.92										
1020	0.7	0.0	0.7	0.18	0.32	0.46	0.94	1.46	2.67	1021	0.7	0.0	0.7	0.18	0.32	0.46	0.94	1.46	2.67
1021	0.5	0.0	0.5	0.18	0.32	0.46	0.94	1.46	2.67	1022	1.2	0.0	1.2	0.18	0.32	0.46	0.94	1.46	2.67
1022	1.7	0.0	1.7	0.18	0.32	0.46	0.94	1.46	2.67	1023	2.9	0.0	2.9	0.18	0.32	0.46	0.94	1.46	2.67
1023	0.3	0.0	0.3	0.18	0.32	0.46	0.94	1.46	2.67	1024	3.2	0.0	3.2	0.18	0.32	0.46	0.94	1.46	2.67
1024	1.8	0.0	1.8	0.18	0.32	0.46	0.94	1.46	2.67	1025	5.0	0.0	5.0	0.18	0.32	0.46	0.94	1.46	2.67
1025	3.4	0.0	3.4	0.18	0.32	0.46	0.94	1.46	2.67	1026	8.4	0.0	8.4	0.18	0.32	0.46	0.94	1.46	2.67
1026	6.2	0.0	6.2	0.18	0.32	0.46	0.94	1.46	2.67	1027	14.6	0.0	14.6	0.18	0.32	0.46	0.94	1.46	2.67
1027	9.9	0.0	9.9	0.18	0.32	0.46	0.94	1.46	2.67	1028	24.5	0.0	24.5	0.18	0.32	0.46	0.94	1.46	2.67
1028	4.0	2.0	2.0	0.16	0.30	0.42	0.78	1.16	2.06	1029	62.0	9.9	52.1	0.17	0.31	0.45	0.89	1.36	2.47
1029	33.7	26.3	7.4	0.14	0.29	0.39	0.69	0.98	1.71	1030	95.7	36.2	59.5	0.16	0.30	0.43	0.82	1.23	2.20
1030	83.9	54.2	29.7	0.15	0.29	0.40	0.73	1.07	1.88	1031	179.6	90.4	89.2	0.15	0.30	0.41	0.78	1.15	2.05
1031	176.1	116.9	59.2	0.15	0.29	0.40	0.73	1.06	1.85	1032	355.7	207.3	148.4	0.15	0.30	0.41	0.75	1.10	1.95
1032	75.8	75.5	0.3	0.13	0.28	0.37	0.62	0.85	1.44	1033	431.5	282.8	148.7	0.15	0.29	0.40	0.73	1.06	1.86
1033	133.0	133.0	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1034	564.5	415.8	148.7	0.14	0.29	0.39	0.70	1.01	1.76
1034	46.5	46.5	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1035	611.0	462.3	148.7	0.14	0.29	0.39	0.70	1.00	1.74
1035	59.0	59.0	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1036	670.0	521.3	148.7	0.14	0.29	0.39	0.69	0.99	1.71
1036	348.9	341.2	7.7	0.13	0.28	0.37	0.63	0.86	1.47	1037	1,018.9	862.5	156.4	0.14	0.29	0.38	0.67	0.94	1.63
1037	84.2	84.2	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1038	1,103.1	946.7	156.4	0.14	0.29	0.38	0.67	0.94	1.61

Rainfall Depths
2-Year - Expected Value - Existing Condition

	Area	< 2000	> 2000	Rainfall Depth							Area	< 2000	> 2000	Rainfall Depth					
Subarea	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr	Node	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr
		X		0.13	0.28	0.37	0.62	0.85	1.44			X		0.13	0.28	0.37	0.62	0.85	1.44
			X	0.18	0.32	0.46	0.94	1.46	2.67				X	0.18	0.32	0.46	0.94	1.46	2.67
1038	426.5	358.5	68.0	0.14	0.29	0.38	0.67	0.95	1.64	1039	1,529.6	1,305.2	224.4	0.14	0.29	0.38	0.67	0.94	1.62
1039	584.2	520.2	64.0	0.14	0.28	0.38	0.66	0.92	1.57	1040	2,113.8	1,825.4	288.4	0.14	0.29	0.38	0.66	0.93	1.61
1040	629.8	628.6	1.2	0.13	0.28	0.37	0.62	0.85	1.44	1041	2,743.6	2,454.0	289.6	0.14	0.28	0.38	0.65	0.91	1.57
1041	135.8	135.8	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1042	2,879.4	2,589.8	289.6	0.14	0.28	0.38	0.65	0.91	1.56
1042	475.9	475.9	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1043	3,355.3	3,065.7	289.6	0.13	0.28	0.38	0.65	0.90	1.55
1043	165.2	165.2	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1044	3,520.5	3,230.9	289.6	0.13	0.28	0.38	0.65	0.90	1.54
1044	339.3	339.3	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1045	3,859.8	3,570.2	289.6	0.13	0.28	0.38	0.64	0.90	1.53
1045	155.5	155.5	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1046	4,015.3	3,725.7	289.6	0.13	0.28	0.38	0.64	0.89	1.53
1046	190.7	190.7	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1047	4,206.0	3,916.4	289.6	0.13	0.28	0.38	0.64	0.89	1.52
1047	200.9	200.9	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1048	4,406.9	4,117.3	289.6	0.13	0.28	0.38	0.64	0.89	1.52
1048	3,383.3	3,383.3	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1049	7,790.2	7,500.6	289.6	0.13	0.28	0.37	0.63	0.87	1.49
1049	497.6	497.6	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1050	8,287.8	7,998.2	289.6	0.13	0.28	0.37	0.63	0.87	1.48
1050	454.4	454.4	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1051	8,742.2	8,452.6	289.6	0.13	0.28	0.37	0.63	0.87	1.48
1051	290.9	290.9	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1052	9,033.1	8,743.5	289.6	0.13	0.28	0.37	0.63	0.87	1.48
1052	848.4	848.4	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1053	9,881.5	9,591.9	289.6	0.13	0.28	0.37	0.63	0.87	1.48
1053	2,422.6	2,422.6	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1054	12,304.1	12,014.5	289.6	0.13	0.28	0.37	0.63	0.86	1.47
1054	324.5	324.5	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1055	12,628.6	12,339.0	289.6	0.13	0.28	0.37	0.63	0.86	1.47
1055	392.6	392.6	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1056	13,021.2	12,731.6	289.6	0.13	0.28	0.37	0.63	0.86	1.47
1056	5,559.2	4,931.8	627.4	0.14	0.28	0.38	0.66	0.92	1.58	1057	18,580.4	17,663.4	917.0	0.13	0.28	0.37	0.64	0.88	1.50

Channel Hydraulics, Travel Times, Times of Concentration, and Lag Estimates
2-Year - Expected Value - Existing Condition

U/S Node	D/S Node	U/S Elevation	D/S Elevation	Length (ft)	Manning (n)	Base (ft)	Sideslope (z)	Height (ft)	Q(2) (cfs)	Dn (ft)	V (fps)	Tt (min)	Tc (min)	Lag (hr)
	1036		1100		Data from Rational Method Analysis:				56				31.03	0.41
1036	1037	1100	1010	1517	0.040	7	1	7	139	1.59	10.16	2.49	33.52	0.45
1037	1038	1010	925	2069	0.040	8	1	8	193	1.99	9.69	3.56	37.08	0.49
1038	1039	925	873	1383	0.040	8	1	8	193	2.04	9.39	2.45	39.53	0.53
1039	1040	873	780	2714	0.040	9	1	9	235	2.21	9.49	4.76	44.30	0.59
1040	1041	780	695	2758	0.040	10	1	10	304	2.50	9.75	4.71	49.01	0.65
1041	1042	695	650	1846	0.040	15	1	10	335	2.25	8.63	3.56	52.58	0.70
1042	1043	650	600	2257	0.040	15	1	10	337	2.32	8.38	4.49	57.07	0.76
1043	1044	600	580	1011	0.040	20	1	10	337	2.03	7.55	2.23	59.30	0.79
1044	1045	580	540	1918	0.040	20	1	10	337	2.00	7.68	4.16	63.46	0.85
1045	1046	540	515	1273	0.040	20	1	10	342	2.05	7.57	2.80	66.27	0.88
1046	1047	515	485	1705	0.040	20	1	10	347	2.14	7.33	3.88	70.14	0.94
1047	1048	485	445	2398	0.040	20	1	10	347	2.17	7.21	5.55	75.69	1.01
1048	1049	445	400	2427	0.040	20	1	10	347	2.10	7.46	5.42	81.11	1.08
1049	1050	400	390	616	0.040	20	1	15	444	2.54	7.77	1.32	82.43	1.10
1050	1051	390	330	4501	0.040	20	1	15	457	2.74	7.35	10.21	92.64	1.24
1051	1052	330	300	2333	0.040	20	1	15	457	2.76	7.26	5.36	98.00	1.31
1052	1053	300	265	3322	0.040	20	1	15	457	2.93	6.79	8.15	106.15	1.42
1053	1054	265	245	1390	0.040	20	1	15	460	2.68	7.55	3.07	109.22	1.46
1054	1055	245	215	2724	0.040	25	1	15	508	2.71	6.78	6.69	115.91	1.55
1055	1056	215	185	2880	0.040	25	1	15	508	2.75	6.66	7.21	123.12	1.64
1056	1057	185	165	2367	0.040	30	1	15	508	2.63	5.93	6.65	129.77	1.73

Rainfall Depths
2-Year - Expected Value - Proposed Condition

	Area	< 2000	> 2000	Rainfall Depth							Area	< 2000	> 2000	Rainfall Depth					
Subarea	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr	Node	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr
		X		0.13	0.28	0.37	0.62	0.85	1.44			X		0.13	0.28	0.37	0.62	0.85	1.44
			X	0.18	0.32	0.46	0.94	1.46	2.67				X	0.18	0.32	0.46	0.94	1.46	2.67
1000	0.3	0.0	0.3	0.18	0.32	0.46	0.94	1.46	2.67	1001	0.3	0.0	0.3	0.18	0.32	0.46	0.94	1.46	2.67
1001	0.3	0.0	0.3	0.18	0.32	0.46	0.94	1.46	2.67	1002	0.6	0.0	0.6	0.18	0.32	0.46	0.94	1.46	2.67
1002	0.3	0.0	0.3	0.18	0.32	0.46	0.94	1.46	2.67	1003	0.9	0.0	0.9	0.18	0.32	0.46	0.94	1.46	2.67
1003	0.4	0.0	0.4	0.18	0.32	0.46	0.94	1.46	2.67	1004	1.3	0.0	1.3	0.18	0.32	0.46	0.94	1.46	2.67
1004	0.6	0.0	0.6	0.18	0.32	0.46	0.94	1.46	2.67	1005	1.9	0.0	1.9	0.18	0.32	0.46	0.94	1.46	2.67
1005	0.6	0.0	0.6	0.18	0.32	0.46	0.94	1.46	2.67										
1010	0.6	0.0	0.6	0.18	0.32	0.46	0.94	1.46	2.67	1011	0.6	0.0	0.6	0.18	0.32	0.46	0.94	1.46	2.67
1011	0.4	0.0	0.4	0.18	0.32	0.46	0.94	1.46	2.67	1012	1.0	0.0	1.0	0.18	0.32	0.46	0.94	1.46	2.67
1012	0.9	0.0	0.9	0.18	0.32	0.46	0.94	1.46	2.67	1013	1.9	0.0	1.9	0.18	0.32	0.46	0.94	1.46	2.67
1013	1.1	0.0	1.1	0.18	0.32	0.46	0.94	1.46	2.67	1014	5.5	0.0	5.5	0.18	0.32	0.46	0.94	1.46	2.67
1014	3.8	0.0	3.8	0.18	0.32	0.46	0.94	1.46	2.67	1015	9.3	0.0	9.3	0.18	0.32	0.46	0.94	1.46	2.67
1015	3.4	1.0	2.4	0.17	0.31	0.43	0.85	1.28	2.31	1016	12.7	1.0	11.7	0.18	0.32	0.45	0.91	1.41	2.57
1016	16.2	4.1	12.1	0.17	0.31	0.44	0.86	1.31	2.36	1017	28.9	5.1	23.8	0.17	0.31	0.44	0.88	1.35	2.45
1017	4.6	2.8	1.8	0.15	0.30	0.41	0.75	1.09	1.92										
1020	0.7	0.0	0.7	0.18	0.32	0.46	0.94	1.46	2.67	1021	0.7	0.0	0.7	0.18	0.32	0.46	0.94	1.46	2.67
1021	0.5	0.0	0.5	0.18	0.32	0.46	0.94	1.46	2.67	1022	1.2	0.0	1.2	0.18	0.32	0.46	0.94	1.46	2.67
1022	1.7	0.0	1.7	0.18	0.32	0.46	0.94	1.46	2.67	1023	2.9	0.0	2.9	0.18	0.32	0.46	0.94	1.46	2.67
1023	0.3	0.0	0.3	0.18	0.32	0.46	0.94	1.46	2.67	1024	3.2	0.0	3.2	0.18	0.32	0.46	0.94	1.46	2.67
1024	1.8	0.0	1.8	0.18	0.32	0.46	0.94	1.46	2.67	1025	5.0	0.0	5.0	0.18	0.32	0.46	0.94	1.46	2.67
1025	3.4	0.0	3.4	0.18	0.32	0.46	0.94	1.46	2.67	1026	8.4	0.0	8.4	0.18	0.32	0.46	0.94	1.46	2.67
1026	6.2	0.0	6.2	0.18	0.32	0.46	0.94	1.46	2.67	1027	14.6	0.0	14.6	0.18	0.32	0.46	0.94	1.46	2.67
1027	9.9	0.0	9.9	0.18	0.32	0.46	0.94	1.46	2.67	1028	24.5	0.0	24.5	0.18	0.32	0.46	0.94	1.46	2.67
1028	4.0	2.0	2.0	0.16	0.30	0.42	0.78	1.16	2.06	1029	62.0	9.9	52.1	0.17	0.31	0.45	0.89	1.36	2.47
1029	33.7	26.3	7.4	0.14	0.29	0.39	0.69	0.98	1.71	1030	95.7	36.2	59.5	0.16	0.30	0.43	0.82	1.23	2.20
1030	83.9	54.2	29.7	0.15	0.29	0.40	0.73	1.07	1.88	1031	179.6	90.4	89.2	0.15	0.30	0.41	0.78	1.15	2.05
1031	176.1	116.9	59.2	0.15	0.29	0.40	0.73	1.06	1.85	1032	355.7	207.3	148.4	0.15	0.30	0.41	0.75	1.10	1.95
1032	75.8	75.5	0.3	0.13	0.28	0.37	0.62	0.85	1.44	1033	431.5	282.8	148.7	0.15	0.29	0.40	0.73	1.06	1.86
1033	133.0	133.0	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1034	564.5	415.8	148.7	0.14	0.29	0.39	0.70	1.01	1.76
1034	46.5	46.5	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1035	611.0	462.3	148.7	0.14	0.29	0.39	0.70	1.00	1.74
1035	59.0	59.0	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1036	670.0	521.3	148.7	0.14	0.29	0.39	0.69	0.99	1.71
1036	348.9	341.2	7.7	0.13	0.28	0.37	0.63	0.86	1.47	1037	1,018.9	862.5	156.4	0.14	0.29	0.38	0.67	0.94	1.63
1037	84.2	84.2	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1038	1,103.1	946.7	156.4	0.14	0.29	0.38	0.67	0.94	1.61

Rainfall Depths
2-Year - Expected Value - Proposed Condition

	Area	< 2000	> 2000	Rainfall Depth							Area	< 2000	> 2000	Rainfall Depth					
Subarea	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr	Node	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr
		X		0.13	0.28	0.37	0.62	0.85	1.44			X		0.13	0.28	0.37	0.62	0.85	1.44
			X	0.18	0.32	0.46	0.94	1.46	2.67				X	0.18	0.32	0.46	0.94	1.46	2.67
1038	426.5	358.5	68.0	0.14	0.29	0.38	0.67	0.95	1.64	1039	1,529.6	1,305.2	224.4	0.14	0.29	0.38	0.67	0.94	1.62
1039	584.2	520.2	64.0	0.14	0.28	0.38	0.66	0.92	1.57	1040	2,113.8	1,825.4	288.4	0.14	0.29	0.38	0.66	0.93	1.61
1040	629.8	628.6	1.2	0.13	0.28	0.37	0.62	0.85	1.44	1041	2,743.6	2,454.0	289.6	0.14	0.28	0.38	0.65	0.91	1.57
1041	135.8	135.8	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1042	2,879.4	2,589.8	289.6	0.14	0.28	0.38	0.65	0.91	1.56
1042	475.9	475.9	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1043	3,355.3	3,065.7	289.6	0.13	0.28	0.38	0.65	0.90	1.55
1043	165.2	165.2	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1044	3,520.5	3,230.9	289.6	0.13	0.28	0.38	0.65	0.90	1.54
1044	339.3	339.3	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1045	3,859.8	3,570.2	289.6	0.13	0.28	0.38	0.64	0.90	1.53
1045	155.5	155.5	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1046	4,015.3	3,725.7	289.6	0.13	0.28	0.38	0.64	0.89	1.53
1046	190.7	190.7	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1047	4,206.0	3,916.4	289.6	0.13	0.28	0.38	0.64	0.89	1.52
1047	200.9	200.9	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1048	4,406.9	4,117.3	289.6	0.13	0.28	0.38	0.64	0.89	1.52
1048	3,383.3	3,383.3	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1049	7,790.2	7,500.6	289.6	0.13	0.28	0.37	0.63	0.87	1.49
1049	496.3	496.3	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1050	8,286.5	7,996.9	289.6	0.13	0.28	0.37	0.63	0.87	1.48
1050	300.9	300.9	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1051	8,587.4	8,297.8	289.6	0.13	0.28	0.37	0.63	0.87	1.48
1051	365.0	365.0	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1052	8,952.4	8,662.8	289.6	0.13	0.28	0.37	0.63	0.87	1.48
1052	679.9	679.9	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1053	9,632.3	9,342.7	289.6	0.13	0.28	0.37	0.63	0.87	1.48
1053	2,538.8	2,538.8	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1054	12,171.1	11,881.5	289.6	0.13	0.28	0.37	0.63	0.86	1.47
1054	351.6	351.6	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1055	12,522.7	12,233.1	289.6	0.13	0.28	0.37	0.63	0.86	1.47
1055	367.9	367.9	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1056	12,890.6	12,601.0	289.6	0.13	0.28	0.37	0.63	0.86	1.47
1056	5,665.4	5,037.9	627.5	0.14	0.28	0.38	0.66	0.92	1.58	1057	18,556.0	17,638.9	917.1	0.13	0.28	0.37	0.64	0.88	1.50

Channel Hydraulics, Travel Times, Times of Concentration, and Lag Estimates
2-Year - Expected Value - Proposed Condition

U/S Node	D/S Node	U/S Elevation	D/S Elevation	Length (ft)	Manning (n)	Base (ft)	Sideslope (z)	Height (ft)	Q(2) (cfs)	Dn (ft)	V (fps)	Tt (min)	Tc (min)	Lag (hr)
	1036		1100		Data from Rational Method Analysis:				56.21				31.03	0.41
1036	1037	1100	1010	1517	0.040	7	1	7	138.92	1.59	10.16	2.49	33.52	0.45
1037	1038	1010	925	2069	0.040	8	1	8	192.54	1.99	9.69	3.56	37.08	0.49
1038	1039	925	873	1383	0.040	8	1	8	192.58	2.04	9.39	2.45	39.53	0.53
1039	1040	873	780	2714	0.040	9	1	9	234.70	2.21	9.49	4.76	44.30	0.59
1040	1041	780	695	2758	0.040	10	1	10	303.94	2.50	9.75	4.71	49.01	0.65
1041	1042	695	650	1846	0.040	15	1	10	334.68	2.25	8.63	3.56	52.58	0.70
1042	1043	650	600	2257	0.040	15	1	10	336.96	2.32	8.38	4.49	57.07	0.76
1043	1044	600	580	1011	0.040	20	1	10	337.14	2.03	7.55	2.23	59.30	0.79
1044	1045	580	540	1918	0.040	20	1	10	337.08	2.00	7.68	4.16	63.46	0.85
1045	1046	540	515	1273	0.040	20	1	10	342.30	2.05	7.57	2.80	66.27	0.88
1046	1047	515	485	1705	0.040	20	1	10	346.50	2.14	7.33	3.88	70.14	0.94
1047	1048	485	445	2398	0.040	20	1	10	346.68	2.17	7.21	5.55	75.69	1.01
1048	1049	445	400	2427	0.040	20	1	10	346.55	2.10	7.46	5.42	81.11	1.08
1049	1050	400	390	616	0.040	20	1	15	444.07	2.54	7.77	1.32	82.43	1.10
1050	1051	390	330	4501	0.040	20	1	15	456.57	2.73	7.35	10.21	92.65	1.24
1051	1052	330	300	2333	0.040	20	1	15	456.73	2.76	7.26	5.36	98.00	1.31
1052	1053	300	265	3322	0.040	20	1	15	456.58	2.93	6.79	8.15	106.16	1.42
1053	1054	265	245	1390	0.040	20	1	15	456.69	2.67	7.54	3.07	109.23	1.46
1054	1055	245	215	2724	0.040	25	1	15	503.05	2.69	6.76	6.72	115.95	1.55
1055	1056	215	185	2880	0.040	25	1	15	503.33	2.73	6.64	7.23	123.18	1.64
1056	1057	185	165	2367	0.040	30	1	15	503.34	2.61	5.91	6.67	129.85	1.73

Losses

Node	U1036
Total Area (ac)	670.1
24-Hour Rainfall Depth (in)	1.71
Fm (in/hr)	0.60
Y-Bar	0.78

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	25.9	0.0	83.0	421.9	25.9	0.0	83.0	421.9
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.1	9.1	0.0	0.0	0.1	9.1
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	11.7	0.0	47.1	69.4	11.7	0.0	47.1	69.4
Woodland (Fair)	100	36	60	73	79	0.0	0.0	0.1	0.8	0.0	0.0	0.1	0.8
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.07	0.15
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.07	0.15
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.07	0.15
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.07	0.15
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.07	0.15
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.19	0.37	0.53	0.62
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.03	0.15	0.25
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.11	0.25	0.37
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.07	0.21	0.32
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.08	0.23	0.32
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.01	0.09	0.19
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.05	0.18	0.30
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.01	0.12	0.21
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.18	0.37	0.53	0.66
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.04	0.18	0.27
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.07	0.21	0.32
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.04	0.18	0.27

Losses

Node	U1037
Total Area (ac)	1,019.0
24-Hour Rainfall Depth (in)	1.63
Fm (in/hr)	0.60
Y-Bar	0.80

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	23.7	0.0	82.5	2.5	49.6	0.0	165.5	424.4
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	24.2	10.6	0.0	0.0	24.3	19.7
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	6.7	0.0	114.0	84.7	18.4	0.0	161.1	154.1
Woodland (Fair)	100	36	60	73	79	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.18	0.36	0.52	0.60
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.02	0.13	0.24
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.09	0.24	0.36
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.06	0.20	0.30
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.07	0.22	0.30
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.08	0.18
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.04	0.16	0.28
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.01	0.11	0.20
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.16	0.36	0.52	0.65
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.16	0.26
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.06	0.20	0.30
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.16	0.26

Losses

Node	U1038
Total Area (ac)	1,103.1
24-Hour Rainfall Depth (in)	1.61
Fm (in/hr)	0.60
Y-Bar	0.81

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	10.2	0.0	31.2	1.2	59.8	0.0	196.7	425.6
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	4.7	1.9	0.0	0.0	29.0	21.6
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.4	0.0	17.5	17.0	18.8	0.0	178.6	171.1
Woodland (Fair)	100	36	60	73	79	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.18	0.35	0.52	0.60
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.02	0.13	0.23
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.09	0.23	0.35
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.06	0.19	0.30
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.07	0.21	0.30
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.08	0.18
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.04	0.16	0.28
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.01	0.10	0.19
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.16	0.35	0.52	0.64
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.16	0.25
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.06	0.19	0.30
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.16	0.25

Losses

Node	U1039
Total Area (ac)	1,529.7
24-Hour Rainfall Depth (in)	1.62
Fm (in/hr)	0.60
Y-Bar	0.81

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	55.8	0.0	106.0	28.5	115.6	0.0	302.7	454.1
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	1.9	0.8	0.0	0.0	30.9	22.4
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	25.5	0.0	0.0	0.0	26.5
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	2.3	0.0	112.0	92.9	21.1	0.0	290.6	264.0
Woodland (Fair)	100	36	60	73	79	0.2	0.0	0.7	0.0	0.2	0.0	0.8	0.8
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.18	0.35	0.52	0.60
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.02	0.13	0.23
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.09	0.23	0.35
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.06	0.20	0.30
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.07	0.21	0.30
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.08	0.18
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.04	0.16	0.28
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.01	0.10	0.20
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.16	0.35	0.52	0.65
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.16	0.26
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.06	0.20	0.30
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.16	0.26

Losses

Node	U1040
Total Area (ac)	2,113.7
24-Hour Rainfall Depth (in)	1.61
Fm (in/hr)	0.60
Y-Bar	0.81

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	31.1	0.0	122.3	129.9	146.7	0.0	425.0	584.0
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	4.4	0.0	0.0	30.9	26.8
Grass (Fair)	100	50	69	79	84	2.2	0.0	1.6	12.7	2.2	0.0	1.6	39.2
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	12.1	0.0	137.4	116.4	33.2	0.0	428.0	380.4
Woodland (Fair)	100	36	60	73	79	8.7	0.0	0.9	2.9	8.9	0.0	1.7	3.7
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	1.3	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.18	0.35	0.52	0.60
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.02	0.13	0.23
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.09	0.23	0.35
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.06	0.19	0.30
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.07	0.21	0.30
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.08	0.18
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.04	0.16	0.28
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.01	0.10	0.19
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.16	0.35	0.52	0.64
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.16	0.25
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.06	0.19	0.30
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.16	0.25

Losses

Node	U1041
Total Area (ac)	2,743.6
24-Hour Rainfall Depth (in)	1.57
Fm (in/hr)	0.60
Y-Bar	0.82

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	30.0	0.0	87.4	36.1	176.7	0.0	512.4	620.1
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	0.0	30.9	26.8
Grass (Fair)	100	50	69	79	84	1.2	0.0	10.4	56.8	3.4	0.0	12.0	96.0
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	28.6	0.0	138.6	220.7	61.8	0.0	566.6	601.1
Woodland (Fair)	100	36	60	73	79	14.7	0.0	2.9	0.9	23.6	0.0	4.6	4.6
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	1.6	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.12
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.12
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.12
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.12
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.12
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.17	0.34	0.51	0.59
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.02	0.12	0.22
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.09	0.22	0.34
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.06	0.19	0.29
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.06	0.20	0.29
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.07	0.17
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.15	0.27
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.01	0.10	0.19
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.15	0.34	0.51	0.64
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.15	0.24
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.06	0.19	0.29
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.15	0.24

Losses

Node	U1042
Total Area (ac)	2,879.3
24-Hour Rainfall Depth (in)	1.56
Fm (in/hr)	0.60
Y-Bar	0.82

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	1.3	0.0	25.1	18.0	178.0	0.0	537.5	638.1
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	0.0	30.9	26.8
Grass (Fair)	100	50	69	79	84	0.2	0.0	3.2	2.2	3.6	0.0	15.2	98.2
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	2.2	0.0	28.6	44.1	64.0	0.0	595.2	645.2
Woodland (Fair)	100	36	60	73	79	5.3	0.0	0.9	4.6	28.9	0.0	5.5	9.2
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.17	0.34	0.51	0.59
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.02	0.12	0.22
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.08	0.22	0.34
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.18	0.29
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.06	0.20	0.29
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.07	0.17
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.15	0.27
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.10	0.18
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.15	0.34	0.51	0.64
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.15	0.24
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.18	0.29
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.15	0.24

Losses

Node	U1043
Total Area (ac)	3,355.1
24-Hour Rainfall Depth (in)	1.55
Fm (in/hr)	0.60
Y-Bar	0.82

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	5.5	6.4	52.9	95.6	183.5	6.4	590.4	733.7
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	13.5	0.0	0.0	0.0	44.4	26.8
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.6	3.6	0.0	15.2	98.8
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	8.0	2.6	57.9	213.7	72.0	2.6	653.1	858.9
Woodland (Fair)	100	36	60	73	79	1.1	9.6	0.0	8.4	30.0	9.6	5.5	17.6
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.16	0.34	0.50	0.59
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.12	0.22
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.08	0.22	0.34
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.18	0.29
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.06	0.20	0.29
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.07	0.16
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.15	0.26
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.09	0.18
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.15	0.34	0.50	0.63
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.15	0.24
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.18	0.29
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.15	0.24

Losses

Node	U1044
Total Area (ac)	3,520.2
24-Hour Rainfall Depth (in)	1.54
Fm (in/hr)	0.60
Y-Bar	0.82

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	1.3	0.4	27.5	33.2	184.8	6.8	617.9	766.9
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.7	7.6	0.0	0.0	0.7	52.0	26.8
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	3.6	0.0	15.2	98.8
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	1.3	1.6	32.5	50.7	73.3	4.2	685.6	909.6
Woodland (Fair)	100	36	60	73	79	0.9	2.8	0.9	3.7	30.9	12.4	6.4	21.3
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.16	0.34	0.50	0.59
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.12	0.22
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.08	0.22	0.34
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.18	0.28
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.06	0.20	0.28
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.07	0.16
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.15	0.26
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.09	0.18
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.15	0.34	0.50	0.63
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.15	0.24
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.18	0.28
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.15	0.24

Losses

Node	U1045
Total Area (ac)	3,859.5
24-Hour Rainfall Depth (in)	1.53
Fm (in/hr)	0.60
Y-Bar	0.82

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	6.2	4.5	90.4	75.7	191.0	11.3	708.3	842.6
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	2.2	0.0	0.0	0.7	54.2	26.8
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	3.6	0.0	15.2	98.8
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	2.0	2.4	49.6	85.1	75.3	6.6	735.2	994.7
Woodland (Fair)	100	36	60	73	79	6.0	0.2	6.7	8.3	36.9	12.6	13.1	29.6
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.16	0.33	0.50	0.58
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.12	0.22
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.08	0.22	0.33
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.18	0.28
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.06	0.20	0.28
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.07	0.16
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.15	0.26
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.09	0.18
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.15	0.33	0.50	0.63
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.15	0.24
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.18	0.28
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.15	0.24

Losses

Node	U1046
Total Area (ac)	4,015.1
24-Hour Rainfall Depth (in)	1.53
Fm (in/hr)	0.60
Y-Bar	0.82

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.1	6.7	90.0	1.6	191.1	18.0	798.3	844.2
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.2	3.8	0.0	0.0	0.9	58.0	26.8
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	3.6	0.0	15.2	98.8
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	1.1	42.9	1.7	75.3	7.7	778.1	996.4
Woodland (Fair)	100	36	60	73	79	0.0	1.0	0.8	5.7	36.9	13.6	13.9	35.3
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.16	0.33	0.50	0.58
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.12	0.22
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.08	0.22	0.33
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.18	0.28
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.06	0.20	0.28
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.07	0.16
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.15	0.26
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.09	0.18
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.15	0.33	0.50	0.63
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.15	0.24
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.18	0.28
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.15	0.24

Losses

Node	U1047
Total Area (ac)	4,206.0
24-Hour Rainfall Depth (in)	1.52
Fm (in/hr)	0.60
Y-Bar	0.83

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	7.4	88.5	2.6	191.1	25.4	886.8	846.8
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	12.7	0.7	0.0	0.9	70.7	27.5
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.7	1.1	3.6	0.0	15.9	99.9
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	4.7	48.3	7.1	75.3	12.4	826.4	1,003.5
Woodland (Fair)	100	36	60	73	79	0.0	2.7	5.7	8.7	36.9	16.3	19.6	44.0
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.16	0.33	0.50	0.58
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.08	0.21	0.33
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.18	0.28
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.06	0.19	0.28
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.07	0.16
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.14	0.26
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.09	0.18
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.33	0.50	0.63
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.18	0.28
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	U1048
Total Area (ac)	4,407.0
24-Hour Rainfall Depth (in)	1.52
Fm (in/hr)	0.60
Y-Bar	0.83

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	1.8	86.1	6.8	191.1	27.2	972.9	853.6
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	0.9	70.7	27.5
Grass (Fair)	100	50	69	79	84	0.0	3.0	4.7	6.3	3.6	3.0	20.6	106.2
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	0.0	47.3	2.8	75.3	12.4	873.7	1,006.3
Woodland (Fair)	100	36	60	73	79	0.0	8.1	22.4	11.7	36.9	24.4	42.0	55.7
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.16	0.33	0.50	0.58
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.08	0.21	0.33
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.18	0.28
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.06	0.19	0.28
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.07	0.16
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.14	0.26
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.09	0.18
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.33	0.50	0.63
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.18	0.28
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	E1049
Total Area (ac)	7,790.2
24-Hour Rainfall Depth (in)	1.49
Fm (in/hr)	0.60
Y-Bar	0.84

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	2.2	1.0	0.0	0.0	2.2	1.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	39.1	70.7	709.7	141.9	230.2	97.9	1,682.6	995.5
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	2.0	78.3	21.6	0.0	2.9	149.0	49.1
Grass (Fair)	100	50	69	79	84	26.9	65.1	92.3	481.5	30.5	68.1	112.9	587.7
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.4
Open Brush (Fair)	100	46	66	77	83	43.6	39.6	838.8	419.6	118.9	52.0	1,712.5	1,425.9
Woodland (Fair)	100	36	60	73	79	72.7	81.7	84.4	70.1	109.6	106.1	126.4	125.8
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.33	0.49	0.58
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.21	0.33
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.19	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.33	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	E1050
Total Area (ac)	8,287.9
24-Hour Rainfall Depth (in)	1.48
Fm (in/hr)	0.60
Y-Bar	0.84

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.9	6.9	0.0	0.0	0.9	6.9
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	1.1	0.2	0.0	0.0	3.3	1.2
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.0	88.3	2.5	230.2	97.9	1,770.9	998.0
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	2.9	149.0	49.1
Grass (Fair)	100	50	69	79	84	0.3	2.2	36.5	62.6	30.8	70.3	149.4	650.3
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Open Brush (Fair)	100	46	66	77	83	0.2	0.2	245.3	9.2	119.1	52.2	1,957.8	1,435.1
Woodland (Fair)	100	36	60	73	79	1.1	0.4	38.0	1.8	110.7	106.5	164.4	127.6
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.21	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.19	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	E1051
Total Area (ac)	8,742.1
24-Hour Rainfall Depth (in)	1.48
Fm (in/hr)	0.60
Y-Bar	0.84

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.7	0.0	0.0	23.1	0.7	0.0	0.9	30.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	1.3	7.1	0.0	0.0	4.6	8.3
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.0	9.1	40.7	230.2	97.9	1,780.0	1,038.7
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	2.9	149.0	49.1
Grass (Fair)	100	50	69	79	84	1.8	3.2	5.8	178.6	32.6	73.5	155.2	828.9
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Open Brush (Fair)	100	46	66	77	83	0.0	2.2	29.6	93.4	119.1	54.4	1,987.4	1,528.5
Woodland (Fair)	100	36	60	73	79	6.5	10.9	8.8	31.4	117.2	117.4	173.2	159.0
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.21	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.19	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	E1052
Total Area (ac)	9,032.9
24-Hour Rainfall Depth (in)	1.48
Fm (in/hr)	0.60
Y-Bar	0.84

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.7	0.0	0.9	30.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	1.1	0.0	0.0	1.1	1.1	0.0	0.0	1.1
Barren (Poor)	100	78	86	91	93	7.2	0.0	4.3	36.1	7.2	0.0	8.9	44.4
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.0	14.1	14.6	230.2	97.9	1,794.1	1,053.3
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	2.9	149.0	49.1
Grass (Fair)	100	50	69	79	84	1.4	0.0	14.5	104.4	34.0	73.5	169.7	933.3
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Open Brush (Fair)	100	46	66	77	83	4.7	0.0	12.1	28.8	123.8	54.4	1,999.5	1,557.3
Woodland (Fair)	100	36	60	73	79	12.1	0.0	0.2	34.1	129.3	117.4	173.4	193.1
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.21	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.19	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	E1053
Total Area (ac)	9,881.3
24-Hour Rainfall Depth (in)	1.48
Fm (in/hr)	0.60
Y-Bar	0.83

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	16.9	12.9	0.7	0.0	17.8	42.9
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.1
Barren (Poor)	100	78	86	91	93	0.9	0.0	8.7	4.9	8.1	0.0	17.6	49.3
Chaparral, Broadleaf (Fair)	100	40	63	75	81	1.6	0.0	66.6	12.5	231.8	97.9	1,860.7	1,065.8
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	2.9	149.0	49.1
Grass (Fair)	100	50	69	79	84	13.1	21.8	24.9	325.9	47.1	95.3	194.6	1,259.2
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Open Brush (Fair)	100	46	66	77	83	3.2	4.2	63.5	125.0	127.0	58.6	2,063.0	1,682.3
Woodland (Fair)	100	36	60	73	79	16.9	4.4	47.0	73.5	146.2	121.8	220.4	266.6
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.21	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.19	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	E1054
Total Area (ac)	12,304.1
24-Hour Rainfall Depth (in)	1.47
Fm (in/hr)	0.60
Y-Bar	0.83

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.7	0.7	0.0	17.8	43.6
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.7	1.1	0.0	0.0	1.8
Barren (Poor)	100	78	86	91	93	12.0	12.5	12.3	30.7	20.1	12.5	29.9	80.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	21.7	265.4	53.4	231.8	119.6	2,126.1	1,119.2
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.9	0.7	0.0	2.9	149.9	49.8
Grass (Fair)	100	50	69	79	84	5.0	143.5	255.0	594.1	52.1	238.8	449.6	1,853.3
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Open Brush (Fair)	100	46	66	77	83	0.0	25.8	361.1	275.5	127.0	84.4	2,424.1	1,957.8
Woodland (Fair)	100	36	60	73	79	1.3	97.0	166.1	87.4	147.5	218.8	386.5	354.0
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.20
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.20	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.18	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.13	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.13	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22

Losses

Node	E1055
Total Area (ac)	12,628.7
24-Hour Rainfall Depth (in)	1.47
Fm (in/hr)	0.60
Y-Bar	0.83

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	2.2	0.7	0.0	17.8	45.8
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.8
Barren (Poor)	100	78	86	91	93	0.0	6.9	0.4	0.2	20.1	19.4	30.3	80.2
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	5.8	71.9	4.6	231.8	125.4	2,198.0	1,123.8
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.2	0.2	0.0	2.9	150.1	50.0
Grass (Fair)	100	50	69	79	84	7.2	22.6	14.6	45.5	59.3	261.4	464.2	1,898.8
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Open Brush (Fair)	100	46	66	77	83	1.8	7.9	66.5	16.9	128.8	92.3	2,490.6	1,974.7
Woodland (Fair)	100	36	60	73	79	5.5	9.5	23.3	10.9	153.0	228.3	409.8	364.9
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.20
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.20	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.18	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.13	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.13	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22

Losses

Node	E1056
Total Area (ac)	13,021.5
24-Hour Rainfall Depth (in)	1.47
Fm (in/hr)	0.59
Y-Bar	0.83

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	2.7	0.0	0.0	0.0	2.7
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	8.6	142.3	0.7	0.0	26.4	188.1
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.8
Barren (Poor)	100	78	86	91	93	0.0	1.8	2.4	32.6	20.1	21.2	32.7	112.8
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.0	0.0	4.7	231.8	125.4	2,198.0	1,128.5
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.7	0.0	2.9	150.1	50.7
Grass (Fair)	100	50	69	79	84	1.8	14.8	1.3	110.4	61.1	276.2	465.5	2,009.2
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Open Brush (Fair)	100	46	66	77	83	1.1	1.2	0.2	36.4	129.9	93.5	2,490.8	2,011.1
Woodland (Fair)	100	36	60	73	79	9.3	5.1	0.0	14.6	162.3	233.4	409.8	379.5
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.8

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.20
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.20	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.18	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.13	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.13	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22

Losses

Node	E1057
Total Area (ac)	18,580.6
24-Hour Rainfall Depth (in)	1.50
Fm (in/hr)	0.59
Y-Bar	0.82

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	12.8	87.5	0.7	0.0	39.2	275.6
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.8
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	20.1	21.2	32.7	112.8
Chaparral, Broadleaf (Fair)	100	40	63	75	81	38.9	18.5	554.0	1,538.1	270.7	143.9	2,752.0	2,666.6
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	22.0	0.0	2.9	150.1	72.7
Grass (Fair)	100	50	69	79	84	2.0	18.9	54.6	411.3	63.1	295.1	520.1	2,420.5
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Open Brush (Fair)	100	46	66	77	83	40.3	25.4	369.0	1,877.2	170.2	118.9	2,859.8	3,888.3
Woodland (Fair)	100	36	60	73	79	74.7	105.0	37.1	270.1	237.0	338.4	446.9	649.6
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	1.7	0.0	0.0	0.0	2.5

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.16	0.33	0.49	0.58
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.08	0.21	0.33
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.28
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.06	0.19	0.28
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.07	0.16
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.09	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.33	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.28
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	P1049
Total Area (ac)	7,790.2
24-Hour Rainfall Depth (in)	1.49
Fm (in/hr)	0.60
Y-Bar	0.84

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	1.1	13.1	26.5	0.0	1.1	13.1	26.5
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	2.2	1.0	0.0	0.0	2.2	1.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	38.0	70.0	710.2	145.3	229.1	97.2	1,683.1	998.9
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	2.0	75.6	21.6	0.0	2.9	146.3	49.1
Grass (Fair)	100	50	69	79	84	10.9	38.4	89.7	367.2	14.5	41.4	110.3	473.4
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	37.8	37.4	819.4	373.6	113.1	49.8	1,693.1	1,379.9
Woodland (Fair)	100	36	60	73	79	53.6	77.2	82.2	58.4	90.5	101.6	124.2	114.1
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	42.0	32.9	13.1	142.8	42.0	32.9	13.1	142.8

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.33	0.49	0.58
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.21	0.33
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.19	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.33	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	P1050
Total Area (ac)	8,286.4
24-Hour Rainfall Depth (in)	1.48
Fm (in/hr)	0.60
Y-Bar	0.84

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	1.1	13.1	26.5
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	2.2	1.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.0	53.0	41.6	229.1	97.2	1,736.1	1,040.5
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	2.9	146.3	49.1
Grass (Fair)	100	50	69	79	84	0.3	2.2	318.8	29.9	14.8	43.6	429.1	503.3
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.2	0.2	33.3	8.6	113.3	50.0	1,726.4	1,388.5
Woodland (Fair)	100	36	60	73	79	1.1	0.4	4.8	1.8	91.6	102.0	129.0	115.9
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	42.0	32.9	13.1	142.8

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.21	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.19	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	P1051
Total Area (ac)	8,587.1
24-Hour Rainfall Depth (in)	1.48
Fm (in/hr)	0.60
Y-Bar	0.84

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.7	0.0	0.0	5.1	0.7	0.0	0.0	5.1
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	7.8	0.0	1.1	13.1	34.3
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.6	0.0	0.0	2.2	1.6
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.0	5.6	57.5	229.1	97.2	1,741.7	1,098.0
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	2.9	146.3	49.1
Grass (Fair)	100	50	69	79	84	1.8	3.2	38.2	92.5	16.6	46.8	467.3	595.8
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	2.2	3.8	14.6	113.3	52.2	1,730.2	1,403.1
Woodland (Fair)	100	36	60	73	79	6.5	10.9	7.0	31.4	98.1	112.9	136.0	147.3
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	11.3	42.0	32.9	13.1	154.1

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.21	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.19	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	P1052
Total Area (ac)	8,952.0
24-Hour Rainfall Depth (in)	1.48
Fm (in/hr)	0.60
Y-Bar	0.84

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.7	0.0	0.0	5.1
3-4 Dwellings / Acre	60	32	56	69	75	7.6	0.0	27.3	85.5	7.6	1.1	40.4	119.8
Public Park	85	32	56	69	75	1.1	0.0	0.0	0.0	1.1	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	3.8	0.0	3.3	7.3	3.8	0.0	5.5	8.9
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.4	0.7	49.5	229.1	97.6	1,742.4	1,147.5
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	2.9	146.3	49.1
Grass (Fair)	100	50	69	79	84	0.6	0.0	0.0	13.5	17.2	46.8	467.3	609.3
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.4	0.0	0.3	0.8	113.7	52.2	1,730.5	1,403.9
Woodland (Fair)	100	36	60	73	79	10.1	0.0	0.2	15.0	108.2	112.9	136.2	162.3
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	2.9	3.8	0.0	130.8	44.9	36.7	13.1	284.9

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.21	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.19	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	P1053
Total Area (ac)	9,632.2
24-Hour Rainfall Depth (in)	1.48
Fm (in/hr)	0.59
Y-Bar	0.84

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	7.7	3.3	0.7	0.0	7.7	8.4
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	17.9	12.7	7.6	1.1	58.3	132.5
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.9	0.0	8.5	4.9	4.7	0.0	14.0	13.8
Chaparral, Broadleaf (Fair)	100	40	63	75	81	1.6	0.0	47.2	79.8	230.7	97.6	1,789.6	1,227.3
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	2.9	146.3	49.1
Grass (Fair)	100	50	69	79	84	12.5	11.4	17.2	105.1	29.7	58.2	484.5	714.4
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	2.9	1.3	49.1	67.8	116.6	53.5	1,779.6	1,471.7
Woodland (Fair)	100	36	60	73	79	16.9	4.2	43.1	49.4	125.1	117.1	179.3	211.7
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.9	9.3	0.0	104.6	45.8	46.0	13.1	389.5

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.21	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.19	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	P1054
Total Area (ac)	12,171.0
24-Hour Rainfall Depth (in)	1.47
Fm (in/hr)	0.58
Y-Bar	0.84

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.7	0.0	7.7	8.4
3-4 Dwellings / Acre	60	32	56	69	75	14.7	24.7	56.8	499.3	22.3	25.8	115.1	631.8
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	12.5	0.0	15.4	4.7	12.5	14.0	29.2
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	36.3	295.4	38.1	230.7	133.9	2,085.0	1,265.4
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.9	0.7	0.0	2.9	147.2	49.8
Grass (Fair)	100	50	69	79	84	2.3	99.2	140.4	282.8	32.0	157.4	624.9	997.2
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	22.9	312.4	171.9	116.6	76.4	2,092.0	1,643.6
Woodland (Fair)	100	36	60	73	79	1.3	92.6	153.3	72.0	126.4	209.7	332.6	283.7
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	9.8	102.4	80.7	45.8	55.8	115.5	470.2

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.20
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.20	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.18	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.13	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.13	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22

Losses

Node	P1055
Total Area (ac)	12,522.5
24-Hour Rainfall Depth (in)	1.47
Fm (in/hr)	0.58
Y-Bar	0.85

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	1.2	0.7	0.0	7.7	9.6
3-4 Dwellings / Acre	60	32	56	69	75	0.4	0.0	0.3	50.1	22.7	25.8	115.4	681.9
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	6.9	0.4	0.2	4.7	19.4	14.4	29.4
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	5.8	71.9	3.5	230.7	139.7	2,156.9	1,268.9
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.2	0.2	0.0	2.9	147.4	50.0
Grass (Fair)	100	50	69	79	84	6.8	22.6	14.6	33.5	38.8	180.0	639.5	1,030.7
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	1.8	7.9	66.5	9.5	118.4	84.3	2,158.5	1,653.1
Woodland (Fair)	100	36	60	73	79	5.5	9.5	23.3	8.9	131.9	219.2	355.9	292.6
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	45.8	55.8	115.5	470.2

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.20
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.20	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.18	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.13	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.13	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22

Losses

Node	P1056
Total Area (ac)	12,890.6
24-Hour Rainfall Depth (in)	1.47
Fm (in/hr)	0.58
Y-Bar	0.84

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	2.7	0.0	0.0	0.0	2.7
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	8.5	128.0	0.7	0.0	16.2	137.6
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	42.8	22.7	25.8	115.4	724.7
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	1.8	2.4	32.6	4.7	21.2	16.8	62.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.0	0.0	3.1	230.7	139.7	2,156.9	1,272.0
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.7	0.0	2.9	147.4	50.7
Grass (Fair)	100	50	69	79	84	1.8	14.8	1.3	74.3	40.6	194.8	640.8	1,105.0
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	1.1	1.2	0.2	21.8	119.5	85.5	2,158.7	1,674.9
Woodland (Fair)	100	36	60	73	79	9.3	5.1	0.0	13.8	141.2	224.3	355.9	306.4
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.8	45.8	55.8	115.5	471.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.20
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.20	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.18	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.13	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.13	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22

Losses

Node	P1057
Total Area (ac)	18,555.7
24-Hour Rainfall Depth (in)	1.50
Fm (in/hr)	0.58
Y-Bar	0.83

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	1.4	48.3	0.7	0.0	17.6	185.9
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	145.9	398.0	22.7	25.8	261.3	1,122.7
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	4.7	21.2	16.8	62.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	38.9	18.5	540.8	1,590.5	269.6	158.2	2,697.7	2,862.5
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	22.0	0.0	2.9	147.4	72.7
Grass (Fair)	100	50	69	79	84	2.0	18.9	106.1	198.3	42.6	213.7	746.9	1,303.3
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	40.3	25.4	236.6	1,749.2	159.8	110.9	2,395.3	3,424.1
Woodland (Fair)	100	36	60	73	79	74.7	105.0	35.4	267.2	215.9	329.3	391.3	573.6
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	1.7	0.0	45.8	55.8	117.2	471.0

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.16	0.33	0.49	0.58
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.08	0.21	0.33
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.28
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.06	0.19	0.28
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.07	0.16
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.09	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.33	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.28
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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             Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                          Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU36002E.DAT
  TIME/DATE OF STUDY: 08:53 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =    2.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  1.780
   2)  10.000;  1.150
   3)  15.000;  0.900
   4)  20.000;  0.740
   5)  30.000;  0.580
   6)  60.000;  0.400
   7) 120.000;  0.280
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  ========== ================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1001.00 IS CODE =  21
--------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
==========================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   327.00
  ELEVATION DATA: UPSTREAM(FEET) =   2400.00  DOWNSTREAM(FEET) =   2280.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    8.744
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.642
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      -        0.30      0.60      1.00     0    8.74
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      0.28
  TOTAL AREA(ACRES) =      0.30   PEAK FLOW RATE(CFS) =      0.28

**************************************************************************
  FLOW PROCESS FROM NODE   1001.00 TO NODE   1002.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2280.00  DOWNSTREAM(FEET) =   2240.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    95.00   CHANNEL SLOPE =  0.4211
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      0.28
  FLOW VELOCITY(FEET/SEC.) =   3.30   FLOW DEPTH(FEET) =   0.08
  TRAVEL TIME(MIN.) =   0.48   Tc(MIN.) =   9.22
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1002.00 =   422.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1001.00 TO NODE   1002.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =   9.22
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.248
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED              -        0.30      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.30      SUBAREA RUNOFF(CFS) =    0.17
  EFFECTIVE AREA(ACRES) =      0.60   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      0.60       PEAK FLOW RATE(CFS) =       0.35

**************************************************************************
  FLOW PROCESS FROM NODE   1002.00 TO NODE   1003.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2240.00  DOWNSTREAM(FEET) =   2200.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    96.00   CHANNEL SLOPE =  0.4167
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      0.35
  FLOW VELOCITY(FEET/SEC.) =   3.62   FLOW DEPTH(FEET) =   0.09
  TRAVEL TIME(MIN.) =   0.44   Tc(MIN.) =   9.67
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1003.00 =   518.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1002.00 TO NODE   1003.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =   9.67
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.192
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED              -        0.30      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.30      SUBAREA RUNOFF(CFS) =    0.16
```

```
  EFFECTIVE AREA(ACRES) =      0.90   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      0.90       PEAK FLOW RATE(CFS) =       0.48

****************************************************************************
  FLOW PROCESS FROM NODE   1003.00 TO NODE   1004.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2200.00  DOWNSTREAM(FEET) =   2160.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   109.00   CHANNEL SLOPE =  0.3670
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      0.48
  FLOW VELOCITY(FEET/SEC.) =   3.87   FLOW DEPTH(FEET) =   0.11
  TRAVEL TIME(MIN.) =   0.47   Tc(MIN.) =  10.14
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1004.00 =   627.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1003.00 TO NODE   1004.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.14
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.143
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED              -        0.40      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.40      SUBAREA RUNOFF(CFS) =    0.20
  EFFECTIVE AREA(ACRES) =      1.30   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.30       PEAK FLOW RATE(CFS) =       0.64

****************************************************************************
  FLOW PROCESS FROM NODE   1004.00 TO NODE   1005.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2160.00  DOWNSTREAM(FEET) =   2120.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   128.00   CHANNEL SLOPE =  0.3125
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      0.64
  FLOW VELOCITY(FEET/SEC.) =   3.92   FLOW DEPTH(FEET) =   0.14
  TRAVEL TIME(MIN.) =   0.54   Tc(MIN.) =  10.68
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1005.00 =   755.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1004.00 TO NODE   1005.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.68
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.116
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED              -        0.60      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.60      SUBAREA RUNOFF(CFS) =    0.28
  EFFECTIVE AREA(ACRES) =      1.90   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.90       PEAK FLOW RATE(CFS) =       0.88

****************************************************************************
  FLOW PROCESS FROM NODE   1005.00 TO NODE   1014.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2120.00  DOWNSTREAM(FEET) =   2040.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   186.00   CHANNEL SLOPE =  0.4301
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      0.88
  FLOW VELOCITY(FEET/SEC.) =   4.91   FLOW DEPTH(FEET) =   0.16
  TRAVEL TIME(MIN.) =   0.63   Tc(MIN.) =  11.31
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1014.00 =   941.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1005.00 TO NODE   1014.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.31
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.084
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED              -        0.60      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.60      SUBAREA RUNOFF(CFS) =    0.26
  EFFECTIVE AREA(ACRES) =      2.50   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      2.50       PEAK FLOW RATE(CFS) =       1.09

****************************************************************************
  FLOW PROCESS FROM NODE   1014.00 TO NODE   1014.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  11.31
  RAINFALL INTENSITY(INCH/HR) =   1.08
  AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =     2.50
  TOTAL STREAM AREA(ACRES) =     2.50
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      1.09

****************************************************************************
  FLOW PROCESS FROM NODE   1010.00 TO NODE   1011.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   325.00
  ELEVATION DATA: UPSTREAM(FEET) =   2300.00  DOWNSTREAM(FEET) =   2200.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    9.035
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.272
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      -        0.60      0.60      1.00     0    9.04
```

```
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      0.36
  TOTAL AREA(ACRES) =      0.60   PEAK FLOW RATE(CFS) =      0.36

****************************************************************************
  FLOW PROCESS FROM NODE   1011.00 TO NODE   1012.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2200.00  DOWNSTREAM(FEET) =   2160.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    89.00   CHANNEL SLOPE =  0.4494
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      0.36
  FLOW VELOCITY(FEET/SEC.) =   3.76   FLOW DEPTH(FEET) =   0.09
  TRAVEL TIME(MIN.) =   0.39   Tc(MIN.) =   9.43
  LONGEST FLOWPATH FROM NODE   1010.00 TO NODE   1012.00 =   414.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1011.00 TO NODE   1012.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.43
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.222
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -       0.40      0.60       1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.40      SUBAREA RUNOFF(CFS) =    0.22
  EFFECTIVE AREA(ACRES) =      1.00   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.00       PEAK FLOW RATE(CFS) =       0.56

****************************************************************************
  FLOW PROCESS FROM NODE   1012.00 TO NODE   1013.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2160.00  DOWNSTREAM(FEET) =   2120.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   114.00   CHANNEL SLOPE =  0.3509
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      0.56
  FLOW VELOCITY(FEET/SEC.) =   3.92   FLOW DEPTH(FEET) =   0.13
  TRAVEL TIME(MIN.) =   0.49   Tc(MIN.) =   9.92
  LONGEST FLOWPATH FROM NODE   1010.00 TO NODE   1013.00 =   528.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1012.00 TO NODE   1013.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.92
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.161
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -       0.90      0.60       1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.90      SUBAREA RUNOFF(CFS) =    0.45
  EFFECTIVE AREA(ACRES) =      1.90   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.90       PEAK FLOW RATE(CFS) =       0.96

****************************************************************************
  FLOW PROCESS FROM NODE   1013.00 TO NODE   1014.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2120.00  DOWNSTREAM(FEET) =   2040.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   206.00   CHANNEL SLOPE =  0.3883
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      0.96
  FLOW VELOCITY(FEET/SEC.) =   4.80   FLOW DEPTH(FEET) =   0.17
  TRAVEL TIME(MIN.) =   0.72   Tc(MIN.) =  10.63
  LONGEST FLOWPATH FROM NODE   1010.00 TO NODE   1014.00 =   734.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1013.00 TO NODE   1014.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.63
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.118
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -       1.10      0.60       1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.10      SUBAREA RUNOFF(CFS) =    0.51
  EFFECTIVE AREA(ACRES) =      3.00   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      3.00       PEAK FLOW RATE(CFS) =       1.40

****************************************************************************
  FLOW PROCESS FROM NODE   1014.00 TO NODE   1014.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  10.63
  RAINFALL INTENSITY(INCH/HR) =   1.12
  AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =     3.00
  TOTAL STREAM AREA(ACRES) =     3.00
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      1.40

  ** CONFLUENCE DATA **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1      1.09  11.31    1.084  0.60( 0.60) 1.00     2.5    1000.00
      2      1.40  10.63    1.118  0.60( 0.60) 1.00     3.0    1010.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1      2.49  10.63    1.118  0.60( 0.60) 1.00     5.3    1010.00
      2      2.40  11.31    1.084  0.60( 0.60) 1.00     5.5    1000.00
```

```
 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =      2.49    Tc(MIN.) =    10.63
 EFFECTIVE AREA(ACRES) =     5.35   AREA-AVERAGED Fm(INCH/HR) =  0.60
 AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =      5.50
 LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1014.00 =   941.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1014.00 TO NODE   1015.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   2040.00  DOWNSTREAM(FEET) =   2000.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   182.00   CHANNEL SLOPE =  0.2198
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =      2.49
 FLOW VELOCITY(FEET/SEC.) =   4.77   FLOW DEPTH(FEET) =   0.23
 TRAVEL TIME(MIN.) =   0.64   Tc(MIN.) =  11.27
 LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1015.00 =  1123.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1014.00 TO NODE   1015.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  11.27
 *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.087
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 USER-DEFINED               -       3.80      0.60       1.00     -
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =     3.80      SUBAREA RUNOFF(CFS) =    1.66
 EFFECTIVE AREA(ACRES) =      9.15   AREA-AVERAGED Fm(INCH/HR) =  0.60
 AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =      9.30       PEAK FLOW RATE(CFS) =       4.01

****************************************************************************
 FLOW PROCESS FROM NODE   1015.00 TO NODE   1016.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   2000.00  DOWNSTREAM(FEET) =   1920.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   366.00   CHANNEL SLOPE =  0.2186
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =      4.01
 FLOW VELOCITY(FEET/SEC.) =   5.48   FLOW DEPTH(FEET) =   0.32
 TRAVEL TIME(MIN.) =   1.11   Tc(MIN.) =  12.38
 LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1016.00 =  1489.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1015.00 TO NODE   1016.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  12.38
 *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.031
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 USER-DEFINED               -       3.40      0.60       1.00     -
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =     3.40      SUBAREA RUNOFF(CFS) =    1.32
 EFFECTIVE AREA(ACRES) =     12.55   AREA-AVERAGED Fm(INCH/HR) =  0.60
 AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     12.70       PEAK FLOW RATE(CFS) =       4.87

****************************************************************************
 FLOW PROCESS FROM NODE   1016.00 TO NODE   1017.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   1920.00  DOWNSTREAM(FEET) =   1880.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   107.00   CHANNEL SLOPE =  0.3738
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =      4.87
 FLOW VELOCITY(FEET/SEC.) =   7.05   FLOW DEPTH(FEET) =   0.30
 TRAVEL TIME(MIN.) =   0.25   Tc(MIN.) =  12.63
 LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1017.00 =  1596.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1016.00 TO NODE   1017.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  12.63
 *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.018
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 USER-DEFINED               -       16.20      0.60       1.00     -
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    16.20      SUBAREA RUNOFF(CFS) =    6.10
 EFFECTIVE AREA(ACRES) =     28.75   AREA-AVERAGED Fm(INCH/HR) =  0.60
 AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     28.90       PEAK FLOW RATE(CFS) =      10.83

****************************************************************************
 FLOW PROCESS FROM NODE   1017.00 TO NODE   1029.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   1880.00  DOWNSTREAM(FEET) =   1835.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   342.00   CHANNEL SLOPE =  0.1316
 CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   3.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     10.83
 FLOW VELOCITY(FEET/SEC.) =   5.97   FLOW DEPTH(FEET) =   0.52
 TRAVEL TIME(MIN.) =   0.95   Tc(MIN.) =  13.59
 LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1029.00 =  1938.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1017.00 TO NODE   1029.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  13.59
 *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  0.971
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 USER-DEFINED               -       4.60      0.60       1.00     -
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =     4.60      SUBAREA RUNOFF(CFS) =    1.54
 EFFECTIVE AREA(ACRES) =     33.35   AREA-AVERAGED Fm(INCH/HR) =  0.60
```

```
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     33.50       PEAK FLOW RATE(CFS) =      11.13

****************************************************************************
  FLOW PROCESS FROM NODE   1029.00 TO NODE   1029.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  13.59
  RAINFALL INTENSITY(INCH/HR) =   0.97
  AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =    33.35
  TOTAL STREAM AREA(ACRES) =    33.50
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     11.13

****************************************************************************
  FLOW PROCESS FROM NODE   1020.00 TO NODE   1021.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   304.00
  ELEVATION DATA: UPSTREAM(FEET) =   2525.00  DOWNSTREAM(FEET) =   2360.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    7.853
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.421
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      -        0.70      0.60      1.00     0    7.85
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      0.52
  TOTAL AREA(ACRES) =      0.70   PEAK FLOW RATE(CFS) =      0.52

****************************************************************************
  FLOW PROCESS FROM NODE   1021.00 TO NODE   1022.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2360.00  DOWNSTREAM(FEET) =   2280.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   106.00   CHANNEL SLOPE =  0.7547
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      0.52
  FLOW VELOCITY(FEET/SEC.) =   4.90   FLOW DEPTH(FEET) =   0.10
  TRAVEL TIME(MIN.) =   0.36   Tc(MIN.) =   8.21
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1022.00 =   410.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1021.00 TO NODE   1022.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   8.21
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.375
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -        0.50      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.50      SUBAREA RUNOFF(CFS) =    0.35
  EFFECTIVE AREA(ACRES) =      1.20   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.20       PEAK FLOW RATE(CFS) =       0.84

****************************************************************************
  FLOW PROCESS FROM NODE   1022.00 TO NODE   1023.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2280.00  DOWNSTREAM(FEET) =   2240.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    68.00   CHANNEL SLOPE =  0.5882
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      0.84
  FLOW VELOCITY(FEET/SEC.) =   5.24   FLOW DEPTH(FEET) =   0.14
  TRAVEL TIME(MIN.) =   0.22   Tc(MIN.) =   8.43
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1023.00 =   478.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1022.00 TO NODE   1023.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   8.43
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.348
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -        1.70      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.70      SUBAREA RUNOFF(CFS) =    1.14
  EFFECTIVE AREA(ACRES) =      2.90   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      2.90       PEAK FLOW RATE(CFS) =       1.95

****************************************************************************
  FLOW PROCESS FROM NODE   1023.00 TO NODE   1024.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2240.00  DOWNSTREAM(FEET) =   2200.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    72.00   CHANNEL SLOPE =  0.5556
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      1.95
  FLOW VELOCITY(FEET/SEC.) =   6.84   FLOW DEPTH(FEET) =   0.23
  TRAVEL TIME(MIN.) =   0.18   Tc(MIN.) =   8.61
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1024.00 =   550.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1023.00 TO NODE   1024.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   8.61
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.326
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -        0.30      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.30      SUBAREA RUNOFF(CFS) =    0.20
```

```
  EFFECTIVE AREA(ACRES) =      3.20   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      3.20       PEAK FLOW RATE(CFS) =       2.09

****************************************************************************
  FLOW PROCESS FROM NODE   1024.00 TO NODE   1025.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2200.00  DOWNSTREAM(FEET) =   2160.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   111.00   CHANNEL SLOPE =  0.3604
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      2.09
  FLOW VELOCITY(FEET/SEC.) =   6.05   FLOW DEPTH(FEET) =   0.27
  TRAVEL TIME(MIN.) =   0.31   Tc(MIN.) =   8.91
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1025.00 =   661.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1024.00 TO NODE   1025.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   8.91
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.287
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -        1.80      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.80      SUBAREA RUNOFF(CFS) =    1.11
  EFFECTIVE AREA(ACRES) =      5.00   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      5.00       PEAK FLOW RATE(CFS) =       3.09

****************************************************************************
  FLOW PROCESS FROM NODE   1025.00 TO NODE   1026.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2160.00  DOWNSTREAM(FEET) =   2080.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   289.00   CHANNEL SLOPE =  0.2768
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      3.09
  FLOW VELOCITY(FEET/SEC.) =   5.53   FLOW DEPTH(FEET) =   0.25
  TRAVEL TIME(MIN.) =   0.87   Tc(MIN.) =   9.78
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1026.00 =   950.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1025.00 TO NODE   1026.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.78
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.177
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -        3.40      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.40      SUBAREA RUNOFF(CFS) =    1.77
  EFFECTIVE AREA(ACRES) =      8.40   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      8.40       PEAK FLOW RATE(CFS) =       4.37

****************************************************************************
  FLOW PROCESS FROM NODE   1026.00 TO NODE   1027.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2080.00  DOWNSTREAM(FEET) =   2040.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   185.00   CHANNEL SLOPE =  0.2162
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      4.37
  FLOW VELOCITY(FEET/SEC.) =   5.66   FLOW DEPTH(FEET) =   0.33
  TRAVEL TIME(MIN.) =   0.54   Tc(MIN.) =  10.33
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1027.00 =  1135.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1026.00 TO NODE   1027.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.33
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.134
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -        6.20      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    6.20      SUBAREA RUNOFF(CFS) =    2.98
  EFFECTIVE AREA(ACRES) =     14.60   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     14.60       PEAK FLOW RATE(CFS) =       7.01

****************************************************************************
  FLOW PROCESS FROM NODE   1027.00 TO NODE   1028.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2040.00  DOWNSTREAM(FEET) =   2000.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   197.00   CHANNEL SLOPE =  0.2030
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      7.01
  FLOW VELOCITY(FEET/SEC.) =   6.44   FLOW DEPTH(FEET) =   0.45
  TRAVEL TIME(MIN.) =   0.51   Tc(MIN.) =  10.84
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1028.00 =  1332.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1027.00 TO NODE   1028.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.84
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.108
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -        9.90      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    9.90      SUBAREA RUNOFF(CFS) =    4.53
  EFFECTIVE AREA(ACRES) =     24.50   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     24.50       PEAK FLOW RATE(CFS) =      11.21
```

```
****************************************************************************
  FLOW PROCESS FROM NODE   1028.00 TO NODE   1029.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2000.00  DOWNSTREAM(FEET) =   1835.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   476.00   CHANNEL SLOPE =  0.3466
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     11.21
  FLOW VELOCITY(FEET/SEC.) =   8.95   FLOW DEPTH(FEET) =   0.50
  TRAVEL TIME(MIN.) =   0.89   Tc(MIN.) =  11.72
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1029.00 =  1808.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1028.00 TO NODE   1029.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.72
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  1.064
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -        4.00      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    4.00      SUBAREA RUNOFF(CFS) =    1.67
  EFFECTIVE AREA(ACRES) =     28.50   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     28.50       PEAK FLOW RATE(CFS) =      11.90

****************************************************************************
  FLOW PROCESS FROM NODE   1029.00 TO NODE   1029.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  11.72
  RAINFALL INTENSITY(INCH/HR) =   1.06
  AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =    28.50
  TOTAL STREAM AREA(ACRES) =    28.50
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     11.90

  ** CONFLUENCE DATA **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1     11.13  13.59    0.971  0.60( 0.60) 1.00    33.3    1010.00
      1     10.06  14.33    0.933  0.60( 0.60) 1.00    33.5    1000.00
      2     11.90  11.72    1.064  0.60( 0.60) 1.00    28.5    1020.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1     23.03  11.72    1.064  0.60( 0.60) 1.00    57.3    1020.00
      2     20.64  13.59    0.971  0.60( 0.60) 1.00    61.8    1010.00
      3     18.61  14.33    0.933  0.60( 0.60) 1.00    62.0    1000.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     23.03    Tc(MIN.) =    11.72
  EFFECTIVE AREA(ACRES) =    57.28   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     62.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1029.00 =  1938.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1029.00 TO NODE   1030.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1835.00  DOWNSTREAM(FEET) =   1680.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1378.00   CHANNEL SLOPE =  0.1125
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     23.03
  FLOW VELOCITY(FEET/SEC.) =   7.10   FLOW DEPTH(FEET) =   0.84
  TRAVEL TIME(MIN.) =   3.24   Tc(MIN.) =  14.96
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1030.00 =  3316.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1029.00 TO NODE   1030.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  14.96
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  0.902
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -       33.70      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   33.70      SUBAREA RUNOFF(CFS) =    9.16
  EFFECTIVE AREA(ACRES) =     90.98   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     95.70       PEAK FLOW RATE(CFS) =      24.74

****************************************************************************
  FLOW PROCESS FROM NODE   1030.00 TO NODE   1031.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1680.00  DOWNSTREAM(FEET) =   1630.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   523.00   CHANNEL SLOPE =  0.0956
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     24.74
  FLOW VELOCITY(FEET/SEC.) =   6.55   FLOW DEPTH(FEET) =   0.79
  TRAVEL TIME(MIN.) =   1.33   Tc(MIN.) =  16.29
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1031.00 =  3839.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1030.00 TO NODE   1031.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.29
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  0.859
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -       81.00      0.60      1.00     -
  USER-DEFINED               -        1.00      0.60      1.00     -
  USER-DEFINED               -        1.80      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
```

```
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   83.80      SUBAREA RUNOFF(CFS) =   19.52
  EFFECTIVE AREA(ACRES) =    174.78   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    179.50       PEAK FLOW RATE(CFS) =      40.72

****************************************************************************
  FLOW PROCESS FROM NODE   1031.00 TO NODE   1032.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1630.00  DOWNSTREAM(FEET) =   1520.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1128.00   CHANNEL SLOPE =  0.0975
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     40.72
  FLOW VELOCITY(FEET/SEC.) =   7.42   FLOW DEPTH(FEET) =   0.93
  TRAVEL TIME(MIN.) =   2.53   Tc(MIN.) =  18.82
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1032.00 =  4967.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1031.00 TO NODE   1032.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.82
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  0.778
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -        0.50      0.60      1.00     -
  USER-DEFINED               -        0.10      0.60      1.00     -
  USER-DEFINED               -      167.20      0.60      1.00     -
  USER-DEFINED               -        0.90      0.60      1.00     -
  USER-DEFINED               -        6.60      0.60      1.00     -
  USER-DEFINED               -        0.80      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  176.10      SUBAREA RUNOFF(CFS) =   28.17
  EFFECTIVE AREA(ACRES) =    350.88   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    355.60       PEAK FLOW RATE(CFS) =      56.13

****************************************************************************
  FLOW PROCESS FROM NODE   1032.00 TO NODE   1033.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1520.00  DOWNSTREAM(FEET) =   1320.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1992.00   CHANNEL SLOPE =  0.1004
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     56.13
  FLOW VELOCITY(FEET/SEC.) =   8.05   FLOW DEPTH(FEET) =   1.00
  TRAVEL TIME(MIN.) =   4.12   Tc(MIN.) =  22.95
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1033.00 =  6959.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1032.00 TO NODE   1033.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  22.95
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  0.693
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -        0.70      0.60      1.00     -
  USER-DEFINED               -        1.60      0.60      1.00     -
  USER-DEFINED               -       20.50      0.60      1.00     -
  USER-DEFINED               -        1.50      0.60      1.00     -
  USER-DEFINED               -       32.10      0.60      1.00     -
  USER-DEFINED               -       17.00      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   73.40      SUBAREA RUNOFF(CFS) =    6.14
  EFFECTIVE AREA(ACRES) =    424.28   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    429.00       PEAK FLOW RATE(CFS) =      56.13
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1032.00 TO NODE   1033.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  22.95
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  0.693
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -        2.50      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    2.50      SUBAREA RUNOFF(CFS) =    0.21
  EFFECTIVE AREA(ACRES) =    426.78   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    431.50       PEAK FLOW RATE(CFS) =      56.13
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1033.00 TO NODE   1034.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1320.00  DOWNSTREAM(FEET) =   1275.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   804.00   CHANNEL SLOPE =  0.0560
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     56.13
  FLOW VELOCITY(FEET/SEC.) =   7.66   FLOW DEPTH(FEET) =   1.04
  TRAVEL TIME(MIN.) =   1.75   Tc(MIN.) =  24.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1034.00 =  7763.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1033.00 TO NODE   1034.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  24.70
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  0.665
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -        1.90      0.60      1.00     -
  USER-DEFINED               -        2.20      0.60      1.00     -
  USER-DEFINED               -       27.10      0.60      1.00     -
  USER-DEFINED               -        7.20      0.60      1.00     -
  USER-DEFINED               -       45.90      0.60      1.00     -
  USER-DEFINED               -       48.60      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  132.90      SUBAREA RUNOFF(CFS) =    7.77
```

```
  EFFECTIVE AREA(ACRES) =    559.68   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    564.40       PEAK FLOW RATE(CFS) =      56.13
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1034.00 TO NODE   1035.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1275.00  DOWNSTREAM(FEET) =   1200.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1266.00   CHANNEL SLOPE =  0.0592
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     56.13
  FLOW VELOCITY(FEET/SEC.) =   7.58   FLOW DEPTH(FEET) =   0.93
  TRAVEL TIME(MIN.) =   2.78   Tc(MIN.) =  27.48
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1035.00 =  9029.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1034.00 TO NODE   1035.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  27.48
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  0.620
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -       11.50      0.60      1.00     -
  USER-DEFINED               -        2.70      0.60      1.00     -
  USER-DEFINED               -       14.60      0.60      1.00     -
  USER-DEFINED               -       16.60      0.60      1.00     -
  USER-DEFINED               -        0.10      0.60      1.00     -
  USER-DEFINED               -        1.10      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   46.60      SUBAREA RUNOFF(CFS) =    0.86
  EFFECTIVE AREA(ACRES) =    606.28   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    611.00       PEAK FLOW RATE(CFS) =      56.13
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1036.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1200.00  DOWNSTREAM(FEET) =   1100.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1639.00   CHANNEL SLOPE =  0.0610
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     56.13
  FLOW VELOCITY(FEET/SEC.) =   7.65   FLOW DEPTH(FEET) =   0.93
  TRAVEL TIME(MIN.) =   3.57   Tc(MIN.) =  31.05
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1036.00 = 10668.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1036.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  31.05
  *   2 YEAR RAINFALL INTENSITY(INCH/HR) =  0.574
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
```

```
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  USER-DEFINED               -       11.80      0.60      1.00     -
  USER-DEFINED               -        5.20      0.60      1.00     -
  USER-DEFINED               -       20.30      0.60      1.00     -
  USER-DEFINED               -       21.80      0.60      1.00     -
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.60
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  * RAINFALL INTENSITY IS LESS THAN AREA-AVERAGED Fp;
  * IMPERVIOUS AREA USED FOR RUNOFF ESTIMATES.
  SUBAREA AREA(ACRES) =   59.10      SUBAREA RUNOFF(CFS) =    0.00
  EFFECTIVE AREA(ACRES) =    665.38   AREA-AVERAGED Fm(INCH/HR) =  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  * RAINFALL INTENSITY IS LESS THAN AREA-AVERAGED Fp;
  * IMPERVIOUS AREA USED FOR RUNOFF ESTIMATES.
  TOTAL AREA(ACRES) =    670.10       PEAK FLOW RATE(CFS) =      56.13
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =    670.10  TC(MIN.) =     31.05
  EFFECTIVE AREA(ACRES) =    665.38  AREA-AVERAGED Fm(INCH/HR)=  0.60
  AREA-AVERAGED Fp(INCH/HR) =  0.60  AREA-AVERAGED Ap =  1.00
  PEAK FLOW RATE(CFS)   =     56.13

  ** PEAK FLOW RATE TABLE **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1     56.13  31.05    0.574  0.60( 0.60) 1.00   665.4    1020.00
      2     39.31  34.85    0.551  0.60( 0.60) 1.00   669.9    1010.00
      3     33.89  36.60    0.540  0.60( 0.60) 1.00   670.1    1000.00
============================================================================
============================================================================
  END OF RATIONAL METHOD ANALYSIS
```

```
**************************************************************************

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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU36002E.FLD
  TIME/DATE OF STUDY: 08:33 03/26/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1036.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =     670.100 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.410 HOURS
          CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
          THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
          MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  1.000
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.780
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.14
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.29
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.39
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.69
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  0.99
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.71

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.970
          30-MINUTE FACTOR = 0.970
           1-HOUR FACTOR = 0.970
           3-HOUR FACTOR = 0.996
           6-HOUR FACTOR = 0.998
          24-HOUR FACTOR = 0.999

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  20.325


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00
```

==========

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	2.329	188.768
2	9.008	541.280
3	21.224	989.927
4	36.530	1240.459
5	46.584	814.766
6	53.500	560.482
7	58.199	380.756
8	62.177	322.434
9	65.474	267.187
10	68.364	234.193
11	70.925	207.547
12	73.173	182.168
13	75.097	155.893
14	76.866	143.363
15	78.476	130.503
16	79.922	117.131
17	81.291	110.983
18	82.524	99.905
19	83.620	88.847
20	84.593	78.832
21	85.496	73.210
22	86.352	69.386
23	87.150	64.605
24	87.939	63.951
25	88.665	58.888
26	89.379	57.807
27	90.075	56.459
28	90.711	51.537
29	91.342	51.085
30	91.961	50.167
31	92.501	43.796
32	93.026	42.504
33	93.550	42.488
34	94.049	40.479
35	94.460	33.252
36	94.862	32.614
37	95.265	32.630
38	95.667	32.599
39	96.045	30.605
40	96.343	24.187
41	96.635	23.674
42	96.928	23.705
43	97.220	23.705
44	97.513	23.705
45	97.805	23.674
46	98.024	17.724
47	98.106	6.697
48	98.186	6.479
49	98.266	6.479
50	98.346	6.480
51	98.426	6.448
52	98.506	6.479
53	98.585	6.448
54	98.665	6.479
55	98.745	6.448
56	98.825	6.479
57	98.905	6.479
58	98.985	6.479
59	99.064	6.448

60	99.144	6.448
61	99.223	6.448
62	99.303	6.448
63	99.382	6.448
64	99.462	6.448
65	99.542	6.448
66	99.621	6.448
67	99.701	6.448
68	99.780	6.448
69	99.860	6.448
70	99.939	6.448
71	100.000	4.908

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 71.2579
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 24.0903

---

2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 50.0 100.0 150.0 200.0
14.000	7.3286	15.00	. Q . V . . .
14.083	7.4338	15.27	. Q . V . . .
14.167	7.5411	15.59	. Q . V . . .
14.250	7.6510	15.95	. Q . V . . .
14.333	7.7636	16.35	. Q . V . . .
14.417	7.8788	16.73	. Q . V . . .
14.500	7.9967	17.11	. Q . V . . .
14.583	8.1171	17.48	. Q . V . . .
14.667	8.2402	17.88	. Q . V . . .
14.750	8.3662	18.30	. Q . V . . .
14.833	8.4953	18.74	. Q . V . . .
14.917	8.6276	19.21	. Q . V . . .
15.000	8.7634	19.71	. Q . V . . .
15.083	8.9028	20.25	. Q . V . . .
15.167	9.0464	20.85	. Q . V . . .
15.250	9.1945	21.49	. Q . V . . .
15.333	9.3475	22.21	. Q . V . . .
15.417	9.5049	22.86	. Q . V . . .
15.500	9.6656	23.34	. Q . V . . .
15.583	9.8280	23.58	. Q . V . . .
15.667	9.9921	23.82	. Q . V . . .
15.750	10.1616	24.61	. Q . V . . .
15.833	10.3402	25.93	. Q . V . . .
15.917	10.5330	27.99	. Q . V . . .
16.000	10.7495	31.44	. Q . V . . .
16.083	11.0999	50.88	. Q V . . .
16.167	11.6736	83.29	. Q V. . .
16.250	12.5056	120.81	. V Q . .
16.333	13.4625	138.94	. V Q . .
16.417	14.1689	102.57	. Q V . .
16.500	14.7166	79.52	. Q . V . .
16.583	15.1522	63.25	. Q . V . .
16.667	15.5462	57.21	.Q . V . .
16.750	15.9009	51.50	. Q . V . .
16.833	16.2288	47.61	. Q. . V . .
16.917	16.5337	44.27	. Q . . V . .
17.000	16.8171	41.14	. Q . . V . .
17.083	17.0791	38.05	. Q . . V . .
17.167	17.3277	36.10	. Q . . V . .
17.250	17.5630	34.17	. Q . . V. .
17.333	17.7851	32.24	. Q . . V. .
17.417	17.9983	30.95	. Q . . V. .
17.500	18.2004	29.34	. Q . . V .
17.583	18.3917	27.79	. Q . . V .
17.667	18.5735	26.39	. Q . . V .
17.750	18.7483	25.39	. Q . . .V .
17.833	18.9176	24.57	. Q . . .V .
17.917	19.0810	23.73	. Q . . .V .
18.000	19.2409	23.22	. Q . . .V .
18.083	19.3947	22.33	. Q . . . V .
18.167	19.5437	21.63	. Q . . . V .
18.250	19.6867	20.76	. Q . . . V .
18.333	19.8212	19.53	. Q . . . V .
18.417	19.9508	18.82	. Q . . . . V .
18.500	20.0760	18.18	. Q . . . . V .
18.583	20.1945	17.21	. Q . . . . V .
18.667	20.3093	16.67	. Q . . . V .
18.750	20.4214	16.26	. Q . . . V .
18.833	20.5295	15.71	. Q . . . V .
18.917	20.6313	14.77	. Q . . . V .
19.000	20.7304	14.39	. Q . . . V .
19.083	20.8273	14.08	. Q . . . V .
19.167	20.9221	13.76	. Q . . . V .
19.250	21.0137	13.30	. Q . . . V .
19.333	21.0998	12.51	. Q . . . V .
19.417	21.1840	12.21	. Q . . . V .
19.500	21.2664	11.97	. Q . . . V .
19.583	21.3472	11.73	. Q . . . V .
19.667	21.4263	11.49	. Q . . . V .
19.750	21.5035	11.21	. Q . . . V .
19.833	21.5756	10.46	. Q . . . V .
19.917	21.6400	9.36	.Q . . . V .
20.000	21.7029	9.13	.Q . . . V .

END OF FLOODSCx ROUTING ANALYSIS

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**************************************************************************

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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU37002E.FLD
  TIME/DATE OF STUDY: 08:37 03/26/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1037.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    1019.000 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.450 HOURS
          CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
          THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
          MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  1.000
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.800
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.14
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.29
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.38
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.67
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  0.94
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.63

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.955
          30-MINUTE FACTOR = 0.955
           1-HOUR FACTOR = 0.955
           3-HOUR FACTOR = 0.993
           6-HOUR FACTOR = 0.997
          24-HOUR FACTOR = 0.998

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  18.519


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00
```

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==========================================================================
                    UNIT HYDROGRAPH DETERMINATION

--------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER         MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------
       1                2.088              257.260
       2                7.845              709.578
       3               17.825             1229.833
       4               32.303             1784.188
       5               43.075             1327.446
       6               50.490              913.799
       7               55.648              635.652
       8               59.577              484.227
       9               63.055              428.563
      10               65.949              356.670
      11               68.544              319.878
      12               70.870              286.636
      13               72.948              256.063
      14               74.727              219.189
      15               76.372              202.741
      16               77.898              188.015
      17               79.254              167.154
      18               80.538              158.251
      19               81.761              150.719
      20               82.817              130.091
      21               83.809              122.255
      22               84.673              106.540
      23               85.496              101.406
      24               86.281               96.740
      25               87.008               89.565
      26               87.733               89.397
      27               88.412               83.612
      28               89.062               80.078
      29               89.711               80.051
      30               90.319               74.918
      31               90.893               70.758
      32               91.468               70.757
      33               92.026               68.809
      34               92.513               59.996
      35               92.991               58.879
      36               93.469               58.904
      37               93.938               57.839
      38               94.326               47.779
      39               94.692               45.179
      40               95.059               45.205
      41               95.426               45.179
      42               95.792               45.180
      43               96.115               39.824
      44               96.382               32.858
      45               96.648               32.831
      46               96.915               32.858
      47               97.181               32.831
      48               97.448               32.858
      49               97.714               32.754
      50               97.963               30.726
      51               98.067               12.841
      52               98.140                8.942
      53               98.213                8.994
      54               98.285                8.942
      55               98.358                8.942
      56               98.431                9.046
      57               98.504                8.942
      58               98.577                8.942
      59               98.649                8.942
```

60	98.722	8.994
61	98.795	8.942
62	98.868	8.995
63	98.940	8.941
64	99.013	8.942
65	99.085	8.941
66	99.158	8.941
67	99.230	8.941
68	99.303	8.941
69	99.376	8.941
70	99.448	8.941
71	99.521	8.941
72	99.593	8.941
73	99.666	8.941
74	99.738	8.941
75	99.811	8.941
76	99.883	8.941
77	99.956	8.941
78	100.000	5.420

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 105.6724
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 32.4416

---

2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 50.0 100.0 150.0 200.0
14.000	9.4832	18.61	. Q .V . . .
14.083	9.6140	18.99	. Q .V . . .
14.167	9.7483	19.50	. Q . V . . .
14.250	9.8869	20.13	. Q . V . . .
14.333	10.0309	20.90	. Q . V . . .
14.417	10.1796	21.59	. Q . V . . .
14.500	10.3325	22.21	. Q . V . . .
14.583	10.4895	22.80	. Q . V . . .
14.667	10.6505	23.38	. Q . V . . .
14.750	10.8157	23.98	. Q . V . . .
14.833	10.9851	24.60	. Q . V . . .
14.917	11.1589	25.24	. Q . V . . .
15.000	11.3376	25.94	. Q . V . . .
15.083	11.5212	26.67	. Q . V . . .
15.167	11.7103	27.46	. Q . V . . .
15.250	11.9053	28.31	. Q . V . . .
15.333	12.1068	29.25	. Q . V . . .
15.417	12.3136	30.04	. Q . V . . .
15.500	12.5238	30.52	. Q . V . . .
15.583	12.7348	30.63	. Q . V . . .
15.667	12.9444	30.44	. Q . V . . .
15.750	13.1581	31.03	. Q . V . . .
15.833	13.3825	32.58	. Q . V . . .
15.917	13.6259	35.34	. Q . V . . .
16.000	13.9018	40.05	. Q . V . . .
16.083	14.3549	65.79	. Q V . . .
16.167	15.0908	106.85	. V .Q . .
16.250	16.1300	150.90	. V. Q .
16.333	17.4560	192.54	. .V . Q .
16.417	18.5147	153.72	. . V Q .
16.500	19.3242	117.54	. . Q . .
16.583	19.9642	92.92	. Q . V . .
16.667	20.5116	79.49	. Q . V . .
16.750	21.0185	73.60	. Q . V . .
16.833	21.4768	66.53	. Q . V . .
16.917	21.9050	62.18	. Q . V . .
17.000	22.3057	58.19	.Q . V . .
17.083	22.6807	54.45	Q . V . .
17.167	23.0269	50.27	Q . V . .
17.250	23.3551	47.65	Q. . V . .
17.333	23.6659	45.12	Q. . V. .
17.417	23.9574	42.32	Q . . V. .
17.500	24.2367	40.56	Q . . V. .
17.583	24.5053	39.00	Q . . V .
17.667	24.7567	36.52	Q . . V .
17.750	24.9982	35.06	Q . . V .
17.833	25.2262	33.11	Q . . .V .
17.917	25.4469	32.04	Q . . .V .
18.000	25.6607	31.04	Q . . .V .
18.083	25.8662	29.85	Q . . .V .
18.167	26.0667	29.11	Q . . . V .
18.250	26.2585	27.84	Q . . . V .
18.333	26.4419	26.64	Q . . . V .
18.417	26.6198	25.83	Q . . . V .
18.500	26.7904	24.76	Q . . . V .
18.583	26.9547	23.86	Q . . . V .
18.667	27.1154	23.33	Q . . . V .
18.750	27.2714	22.66	Q . . . V .
18.833	27.4195	21.50	Q . . . V .
18.917	27.5638	20.97	Q . . . V .
19.000	27.7053	20.54	Q . . . V .
19.083	27.8433	20.03	Q . . . V .
19.167	27.9731	18.85	Q . . . V .
19.250	28.0991	18.28	Q . . . V .
19.333	28.2226	17.94	Q . . . V .
19.417	28.3438	17.60	Q . . . V .
19.500	28.4625	17.24	Q . . . V .
19.583	28.5761	16.49	Q . . . V .
19.667	28.6839	15.65	Q . . . V .
19.750	28.7898	15.37	Q . . . V .
19.833	28.8939	15.12	Q . . . V .
19.917	28.9962	14.85	Q . . . V .
20.000	29.0966	14.58	Q . . . V .

END OF FLOODSCx ROUTING ANALYSIS

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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU38002E.FLD
  TIME/DATE OF STUDY: 08:37 03/26/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1038.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    1103.100 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.490 HOURS
          CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
          THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
          MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  1.000
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.810
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.14
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.29
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.38
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.67
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  0.94
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.61

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.951
          30-MINUTE FACTOR = 0.951
           1-HOUR FACTOR = 0.951
           3-HOUR FACTOR = 0.993
           6-HOUR FACTOR = 0.996
          24-HOUR FACTOR = 0.998

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  17.007


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00
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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.895	252.799
2	6.960	675.673
3	15.274	1109.226
4	28.222	1727.306
5	39.679	1528.476
6	47.451	1036.763
7	53.173	763.368
8	57.270	546.511
9	60.707	458.617
10	63.736	404.076
11	66.344	347.883
12	68.693	313.346
13	70.823	284.202
14	72.759	258.196
15	74.414	220.842
16	75.949	204.840
17	77.384	191.373
18	78.687	173.846
19	79.895	161.099
20	81.042	153.094
21	82.130	145.104
22	83.062	124.345
23	83.962	120.116
24	84.740	103.799
25	85.496	100.826
26	86.221	96.736
27	86.890	89.138
28	87.556	88.952
29	88.199	85.706
30	88.797	79.760
31	89.393	79.593
32	89.982	78.504
33	90.518	71.610
34	91.046	70.322
35	91.573	70.354
36	92.079	67.565
37	92.522	59.107
38	92.961	58.526
39	93.400	58.557
40	93.838	58.433
41	94.213	50.039
42	94.550	44.951
43	94.887	44.889
44	95.224	44.951
45	95.560	44.890
46	95.896	44.767
47	96.170	36.556
48	96.415	32.665
49	96.659	32.664
50	96.904	32.634
51	97.148	32.602
52	97.393	32.695
53	97.638	32.665
54	97.882	32.541
55	98.034	20.285
56	98.101	8.947
57	98.168	8.886
58	98.235	8.948
59	98.302	8.886

60	98.369	8.947
61	98.435	8.886
62	98.502	8.948
63	98.569	8.948
64	98.636	8.885
65	98.703	8.886
66	98.770	8.948
67	98.836	8.885
68	98.903	8.886
69	98.970	8.948
70	99.037	8.885
71	99.103	8.885
72	99.170	8.885
73	99.236	8.885
74	99.303	8.885
75	99.370	8.885
76	99.436	8.885
77	99.503	8.885
78	99.569	8.885
79	99.636	8.885
80	99.703	8.885
81	99.769	8.885
82	99.836	8.885
83	99.903	8.885
84	99.969	8.885
85	100.000	4.119

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 114.2990
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 33.3550

---

2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 50.0 100.0 150.0 200.0
14.000	9.4250	18.87	. Q .V . . .
14.083	9.5577	19.26	. Q .V . . .
14.167	9.6937	19.75	. Q .V . . .
14.250	9.8339	20.36	. Q .V . . .
14.333	9.9793	21.12	. Q .V . . .
14.417	10.1298	21.85	. Q . V . . .
14.500	10.2848	22.50	. Q . V . . .
14.583	10.4440	23.11	. Q . V . . .
14.667	10.6072	23.71	. Q . V . . .
14.750	10.7747	24.31	. Q . V . . .
14.833	10.9465	24.94	. Q . V . . .
14.917	11.1228	25.60	. Q . V . . .
15.000	11.3038	26.29	. Q . V . . .
15.083	11.4899	27.02	. Q . V . . .
15.167	11.6815	27.82	. Q . V . . .
15.250	11.8789	28.67	. Q . V . . .
15.333	12.0828	29.60	. Q . V . . .
15.417	12.2921	30.39	. Q . V . . .
15.500	12.5050	30.91	. Q . V . . .
15.583	12.7196	31.17	. Q . V . . .
15.667	12.9335	31.05	. Q . V . . .
15.750	13.1501	31.45	. Q . V . . .
15.833	13.3763	32.83	. Q . V . . .
15.917	13.6196	35.34	. Q . V . . .
16.000	13.8932	39.71	. Q . V . . .
16.083	14.3386	64.68	. . Q V . . .
16.167	15.0479	103.00	. . V Q . . .
16.250	16.0176	140.80	. . V. Q . .
16.333	17.3155	188.45	. . V . Q .
16.417	18.4878	170.22	. . . V . Q .
16.500	19.3725	128.46	. . . V Q . .
16.583	20.0883	103.94	. . Q V . . .
16.667	20.6753	85.23	. . Q . V . .
16.750	21.2049	76.91	. . Q . V . .
16.833	21.6951	71.18	. . Q . V . .
16.917	22.1457	65.42	. . Q . V . .
17.000	22.5682	61.35	. . Q . V . .
17.083	22.9659	57.74	. .Q . V . .
17.167	23.3403	54.37	. . Q . V . .
17.250	23.6857	50.15	. . Q . V . .
17.333	24.0131	47.54	. . Q. . V . .
17.417	24.3247	45.24	. . Q. . V. .
17.500	24.6195	42.81	. . Q . . V. .
17.583	24.9008	40.85	. . Q . . V. .
17.667	25.1718	39.34	. . Q . . V .
17.750	25.4326	37.87	. . Q . . V .
17.833	25.6770	35.49	. . Q . . V .
17.917	25.9140	34.41	. . Q . . .V .
18.000	26.1378	32.49	. . Q . . .V .
18.083	26.3554	31.59	. . Q . . .V .
18.167	26.5656	30.52	. . Q . . .V .
18.250	26.7662	29.13	. Q . . . . V .
18.333	26.9602	28.16	. Q . . . . V .
18.417	27.1464	27.05	. Q . . . . V .
18.500	27.3247	25.88	. Q . . . . V .
18.583	27.4986	25.25	. Q . . . . V .
18.667	27.6680	24.60	. Q . . . . V .
18.750	27.8302	23.56	. Q . . . . V .
18.833	27.9885	22.98	. Q . . . . V .
18.917	28.1436	22.53	. Q . . . . V .
19.000	28.2942	21.86	. Q . . . . V .
19.083	28.4374	20.79	. Q . . . . V .
19.167	28.5776	20.35	. Q . . . . V .
19.250	28.7151	19.98	. Q . . . . V .
19.333	28.8500	19.58	. Q . . . . V .
19.417	28.9779	18.57	. Q . . . . V .
19.500	29.1007	17.83	. Q . . . . V .
19.583	29.2213	17.51	. Q . . . . V .
19.667	29.3399	17.22	. Q . . . . V .
19.750	29.4563	16.90	. Q . . . . V .
19.833	29.5703	16.56	. Q . . . . V .
19.917	29.6780	15.63	. Q . . . . V .
20.000	29.7817	15.07	. Q . . . . V .

END OF FLOODSCx ROUTING ANALYSIS

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**************************************************************************

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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU39002E.FLD
  TIME/DATE OF STUDY: 08:38 03/26/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1039.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    1529.700 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.530 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  1.000
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.810
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.14
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.29
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.38
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.67
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  0.94
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.62

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.932
          30-MINUTE FACTOR = 0.932
           1-HOUR FACTOR = 0.932
           3-HOUR FACTOR = 0.990
           6-HOUR FACTOR = 0.995
          24-HOUR FACTOR = 0.997

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  15.723


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


==========================================================================
```

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.741	322.130
2	6.232	830.813
3	13.292	1306.125
4	24.560	2084.543
5	36.406	2191.417
6	44.509	1499.035
7	50.641	1134.472
8	55.091	823.235
9	58.515	633.419
10	61.633	576.804
11	64.297	492.743
12	66.678	440.570
13	68.817	395.635
14	70.783	363.782
15	72.596	335.385
16	74.145	286.495
17	75.582	265.995
18	76.930	249.256
19	78.196	234.317
20	79.329	209.522
21	80.421	202.123
22	81.470	193.976
23	82.420	175.798
24	83.270	157.209
25	84.089	151.485
26	84.798	131.103
27	85.496	129.240
28	86.170	124.691
29	86.789	114.442
30	87.405	114.050
31	88.013	112.351
32	88.571	103.388
33	89.123	102.078
34	89.675	101.987
35	90.200	97.206
36	90.688	90.220
37	91.175	90.174
38	91.663	90.221
39	92.124	85.257
40	92.531	75.329
41	92.937	75.099
42	93.342	75.007
43	93.748	75.099
44	94.117	68.297
45	94.429	57.727
46	94.741	57.634
47	95.052	57.542
48	95.363	57.634
49	95.675	57.589
50	95.977	55.933
51	96.216	44.214
52	96.442	41.870
53	96.669	41.870
54	96.895	41.778
55	97.121	41.916
56	97.347	41.823
57	97.574	41.916
58	97.800	41.825
59	97.995	36.032
60	98.069	13.696
61	98.131	11.490
62	98.192	11.397

63	98.254	11.399
64	98.316	11.490
65	98.377	11.306
66	98.440	11.582
67	98.501	11.307
68	98.563	11.399
69	98.625	11.489
70	98.686	11.307
71	98.748	11.490
72	98.810	11.397
73	98.871	11.399
74	98.933	11.490
75	98.995	11.399
76	99.057	11.489
77	99.119	11.399
78	99.180	11.399
79	99.242	11.399
80	99.303	11.399
81	99.365	11.399
82	99.427	11.399
83	99.488	11.399
84	99.550	11.399
85	99.612	11.399
86	99.673	11.399
87	99.735	11.399
88	99.796	11.399
89	99.858	11.399
90	99.920	11.399
91	99.981	11.399
92	100.000	3.475

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 159.6639
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 46.1871

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 75.0 150.0 225.0 300.0
14.000	13.0968	25.92	. Q .V . . .
14.083	13.2790	26.46	. Q .V . . .
14.167	13.4660	27.15	. Q .V . . .
14.250	13.6588	27.99	. Q .V . . .
14.333	13.8589	29.06	. Q . V . . .
14.417	14.0668	30.18	. Q . V . . .
14.500	14.2813	31.14	. Q . V . . .
14.583	14.5020	32.04	. Q . V . . .
14.667	14.7285	32.90	. Q . V . . .
14.750	14.9609	33.74	. Q . V . . .
14.833	15.1992	34.61	. Q . V . . .
14.917	15.4438	35.51	. Q . V . . .
15.000	15.6949	36.45	. Q . V . . .
15.083	15.9528	37.45	. Q . V . . .
15.167	16.2181	38.52	. Q . V . . .
15.250	16.4913	39.67	. Q . V . . .
15.333	16.7731	40.91	. Q . V . . .
15.417	17.0620	41.95	. Q . V . . .
15.500	17.3556	42.63	. Q . V . . .
15.583	17.6519	43.03	. Q . V . . .
15.667	17.9473	42.88	. Q . V . . .
15.750	18.2438	43.06	. Q . V . . .
15.833	18.5508	44.57	. Q . V . . .
15.917	18.8782	47.54	. Q . V . . .
16.000	19.2421	52.84	. Q . V . . .
16.083	19.8182	83.65	. .Q V . . .
16.167	20.7041	128.63	. . Q . . .
16.250	21.8762	170.19	. . V . Q . . .
16.333	23.4579	229.67	. . V Q . .
16.417	25.0737	234.61	. . .V .Q . .
16.500	26.3032	178.51	. . . VQ . .
16.583	27.3133	146.67	. . Q. V . . .
16.667	28.1434	120.53	. . Q . V . . .
16.750	28.8632	104.52	. . Q . V . . .
16.833	29.5405	98.35	. . Q . V . . .
16.917	30.1625	90.30	. . Q . V . . .
17.000	30.7454	84.64	. .Q . V . . .
17.083	31.2930	79.52	. Q . V . . .
17.167	31.8121	75.37	. Q . V . . .
17.250	32.3039	71.40	. Q. . V . . .
17.333	32.7575	65.86	. Q . . V . . .
17.417	33.1880	62.51	. Q . . V . . .
17.500	33.5994	59.74	. Q . . V. . .
17.583	33.9938	57.26	. Q . . V. . .
17.667	34.3670	54.19	. Q . . V. . .
17.750	34.7287	52.52	. Q . . V . .
17.833	35.0788	50.83	. Q . . V . .
17.917	35.4125	48.45	. Q . . V . .
18.000	35.7300	46.11	. Q . . V . .
18.083	36.0378	44.70	. Q . . .V . .
18.167	36.3283	42.17	. Q . . .V . .
18.250	36.6102	40.94	. Q . . .V . .
18.333	36.8814	39.37	. Q . . .V . .
18.417	37.1391	37.42	. Q . . . V . .
18.500	37.3896	36.38	. Q . . . V . .
18.583	37.6333	35.37	. Q . . . V . .
18.667	37.8671	33.95	. Q . . . V . .
18.750	38.0955	33.17	. Q . . . V . .
18.833	38.3194	32.50	. Q . . . V . .
18.917	38.5364	31.52	. Q . . . V . .
19.000	38.7459	30.41	. Q . . . V . .
19.083	38.9515	29.86	. Q . . . V . .
19.167	39.1534	29.32	. Q . . . V . .
19.250	39.3491	28.41	. Q . . . V . .
19.333	39.5362	27.17	. Q . . . V . .
19.417	39.7200	26.68	. Q . . . V . .
19.500	39.9006	26.22	. Q . . . V . .
19.583	40.0781	25.77	. Q . . . V . .
19.667	40.2489	24.80	. Q . . . V . .
19.750	40.4114	23.59	. Q . . . V . .
19.833	40.5711	23.19	. Q . . . V . .
19.917	40.7282	22.82	. Q . . . V . .
20.000	40.8829	22.46	. Q . . . V . .

END OF FLOODSCx ROUTING ANALYSIS

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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU40002E.FLD
  TIME/DATE OF STUDY: 08:38 03/26/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1040.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    2113.700 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.590 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  1.000
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.810
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.14
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.29
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.38
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.66
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  0.93
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.61

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.906
          30-MINUTE FACTOR = 0.906
           1-HOUR FACTOR = 0.906
           3-HOUR FACTOR = 0.986
           6-HOUR FACTOR = 0.993
          24-HOUR FACTOR = 0.996

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  14.124


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.564	399.850
2	5.401	980.818
3	11.099	1456.568
4	19.998	2274.706
5	31.502	2940.872
6	40.351	2261.917
7	46.776	1642.426
8	51.892	1307.754
9	55.586	944.394
10	58.627	777.329
11	61.439	718.625
12	63.880	624.108
13	66.047	553.969
14	68.059	514.299
15	69.850	457.882
16	71.602	447.739
17	73.105	384.289
18	74.469	348.727
19	75.749	327.183
20	76.952	307.460
21	78.098	292.895
22	79.119	261.135
23	80.115	254.541
24	81.061	241.888
25	81.980	234.925
26	82.766	200.778
27	83.529	195.193
28	84.240	181.619
29	84.868	160.657
30	85.496	160.517
31	86.106	155.850
32	86.663	142.453
33	87.217	141.605
34	87.771	141.535
35	88.291	132.874
36	88.787	126.723
37	89.282	126.617
38	89.777	126.617
39	90.241	118.629
40	90.679	111.982
41	91.117	111.914
42	91.555	111.982
43	91.984	109.720
44	92.359	95.653
45	92.723	93.248
46	93.088	93.108
47	93.452	93.178
48	93.817	93.178
49	94.139	82.432
50	94.419	71.473
51	94.698	71.475
52	94.978	71.473
53	95.258	71.473
54	95.537	71.546
55	95.817	71.544
56	96.069	64.335
57	96.274	52.314
58	96.477	51.893
59	96.680	52.031
60	96.883	51.891
61	97.087	52.033
62	97.289	51.750

63	97.493	52.174
64	97.696	51.750
65	97.899	52.031
66	98.028	32.804
67	98.083	14.282
68	98.139	14.139
69	98.194	14.139
70	98.250	14.280
71	98.305	14.139
72	98.361	14.139
73	98.416	14.139
74	98.472	14.280
75	98.527	14.139
76	98.582	14.139
77	98.638	14.280
78	98.694	14.139
79	98.749	14.139
80	98.805	14.282
81	98.859	13.997
82	98.915	14.280
83	98.971	14.139
84	99.027	14.282
85	99.082	14.139
86	99.137	14.139
87	99.192	14.139
88	99.248	14.139
89	99.303	14.139
90	99.358	14.139
91	99.414	14.139
92	99.469	14.139
93	99.524	14.139
94	99.580	14.139
95	99.635	14.139
96	99.690	14.139
97	99.746	14.139
98	99.801	14.139
99	99.856	14.139
100	99.912	14.139
101	99.967	14.139
102	100.000	8.476

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 219.4484

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 62.9030

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 100.0 200.0 300.0 400.0
14.000	17.8339	35.24	. Q .V . . .
14.083	18.0815	35.95	. Q .V . . .
14.167	18.3351	36.83	. Q .V . . .
14.250	18.5959	37.86	. Q .V . . .
14.333	18.8653	39.13	. Q .V . . .
14.417	19.1449	40.60	. Q . V . . .
14.500	19.4336	41.92	. Q . V . . .
14.583	19.7307	43.13	. Q . V . . .
14.667	20.0358	44.29	. Q . V . . .
14.750	20.3486	45.42	. Q . V . . .
14.833	20.6692	46.55	. Q . V . . .
14.917	20.9979	47.74	. Q . V . . .
15.000	21.3351	48.96	. Q . V . . .
15.083	21.6813	50.26	. Q . V . . .
15.167	22.0369	51.64	. Q . V . . .
15.250	22.4028	53.12	. Q . V . . .
15.333	22.7797	54.73	. Q . V . . .
15.417	23.1659	56.07	. Q . V . . .
15.500	23.5584	56.99	. Q . V . . .
15.583	23.9556	57.68	. Q . V . . .
15.667	24.3537	57.81	. Q . V . . .
15.750	24.7518	57.80	. Q . V . . .
15.833	25.1595	59.20	. Q . V . . .
15.917	25.5904	62.57	. Q . V . . .
16.000	26.0629	68.60	. Q . V . . .
16.083	26.7858	104.96	. Q V . . .
16.167	27.8501	154.54	. . Q V . . .
16.250	29.2021	196.30	. . VQ. . .
16.333	30.9832	258.62	. . V. Q . .
16.417	33.0771	304.04	. . .V Q . .
16.500	34.8062	251.06	. . . V Q . .
16.583	36.1930	201.36	. . Q V . . .
16.667	37.3839	172.93	. . Q . V . . .
16.750	38.3785	144.42	. . Q . V . . .
16.833	39.2751	130.17	. Q . V . . .
16.917	40.1267	123.66	. Q . V . . .
17.000	40.9173	114.80	. .Q . V . . .
17.083	41.6581	107.56	. Q . V . . .
17.167	42.3638	102.47	. Q . V . . .
17.250	43.0270	96.29	. Q. . V . . .
17.333	43.6686	93.16	. Q. . V . . .
17.417	44.2624	86.22	. Q . . V . . .
17.500	44.8242	81.58	. Q . . V . . .
17.583	45.3629	78.21	. Q . . V . . .
17.667	45.8806	75.18	. Q . . V. . .
17.750	46.3809	72.64	. Q . . V. . .
17.833	46.8562	69.01	. Q . . V. . .
17.917	47.3194	67.25	. Q . . V . .
18.000	47.7679	65.13	. Q . . V . .
18.083	48.2040	63.31	. Q . . V . .
18.167	48.6137	59.50	. Q . . V . .
18.250	49.0107	57.64	. Q . . .V . .
18.333	49.3899	55.07	. Q . . .V . .
18.417	49.7475	51.92	. Q . . .V . .
18.500	50.0950	50.45	. Q . . .V . .
18.583	50.4317	48.89	. Q . . . V . .
18.667	50.7543	46.85	. Q . . . V . .
18.750	51.0699	45.82	. Q . . . V . .
18.833	51.3793	44.92	. Q . . . V . .
18.917	51.6786	43.46	. Q . . . V . .
19.000	51.9695	42.24	. Q . . . V . .
19.083	52.2552	41.49	. Q . . . V . .
19.167	52.5360	40.77	. Q . . . V . .
19.250	52.8082	39.51	. Q . . . V . .
19.333	53.0725	38.38	. Q . . . V . .
19.417	53.3326	37.76	. Q . . . V . .
19.500	53.5886	37.17	. Q . . . V . .
19.583	53.8392	36.39	. Q . . . V . .
19.667	54.0790	34.81	. Q . . . V . .
19.750	54.3137	34.09	. Q . . . V . .
19.833	54.5449	33.56	. Q . . . V . .
19.917	54.7725	33.05	. Q . . . V . .
20.000	54.9963	32.50	. Q . . . V . .

END OF FLOODSCx ROUTING ANALYSIS

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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU41002E.FLD
  TIME/DATE OF STUDY: 08:39 03/26/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1041.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    2743.600 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.650 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  1.000
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.820
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.14
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.28
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.38
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.65
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  0.91
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.57

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.878
          30-MINUTE FACTOR = 0.878
           1-HOUR FACTOR = 0.878
           3-HOUR FACTOR = 0.982
           6-HOUR FACTOR = 0.991
          24-HOUR FACTOR = 0.994

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  12.821


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.421	471.606
2	4.761	1108.136
3	9.537	1584.829
4	16.724	2384.555
5	26.745	3325.088
6	36.327	3179.392
7	43.105	2248.901
8	48.477	1782.228
9	52.788	1430.498
10	56.002	1066.486
11	58.718	901.143
12	61.277	848.984
13	63.534	748.987
14	65.524	660.186
15	67.410	625.978
16	69.090	557.256
17	70.692	531.742
18	72.220	506.873
19	73.517	430.369
20	74.727	401.607
21	75.885	384.041
22	76.970	360.131
23	78.017	347.241
24	78.949	309.330
25	79.861	302.530
26	80.728	287.873
27	81.583	283.577
28	82.355	256.126
29	83.048	229.946
30	83.740	229.642
31	84.357	204.618
32	84.927	189.100
33	85.496	189.052
34	86.053	184.855
35	86.561	168.426
36	87.064	166.859
37	87.567	166.811
38	88.059	163.219
39	88.512	150.432
40	88.962	149.220
41	89.411	149.217
42	89.860	148.916
43	90.275	137.593
44	90.673	131.930
45	91.070	131.932
46	91.467	131.829
47	91.864	131.629
48	92.219	117.576
49	92.549	109.790
50	92.880	109.792
51	93.211	109.790
52	93.542	109.691
53	93.872	109.688
54	94.156	94.221
55	94.410	84.214
56	94.664	84.214
57	94.918	84.214
58	95.172	84.313
59	95.425	84.113
60	95.679	84.315
61	95.932	83.708
62	96.136	67.836

63	96.320	61.061
64	96.505	61.264
65	96.690	61.264
66	96.874	61.165
67	97.059	61.264
68	97.243	61.163
69	97.427	61.061
70	97.612	61.469
71	97.796	61.061
72	97.970	57.826
73	98.045	24.669
74	98.095	16.579
75	98.145	16.784
76	98.196	16.781
77	98.246	16.781
78	98.297	16.784
79	98.347	16.579
80	98.398	16.984
81	98.448	16.581
82	98.498	16.579
83	98.549	16.986
84	98.599	16.579
85	98.649	16.581
86	98.700	16.781
87	98.750	16.581
88	98.801	16.984
89	98.851	16.579
90	98.901	16.581
91	98.952	16.984
92	99.002	16.581
93	99.052	16.581
94	99.102	16.581
95	99.152	16.581
96	99.202	16.581
97	99.252	16.581
98	99.302	16.581
99	99.352	16.581
100	99.402	16.581
101	99.452	16.581
102	99.502	16.581
103	99.552	16.581
104	99.602	16.581
105	99.652	16.581
106	99.702	16.581
107	99.752	16.581
108	99.802	16.581
109	99.852	16.581
110	99.902	16.581
111	99.952	16.581
112	100.000	16.065

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 281.1196
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 75.8171

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 100.0 200.0 300.0 400.0
14.000	20.9488	41.22	. Q .V . . .
14.083	21.2385	42.07	. Q .V . . .
14.167	21.5355	43.13	. Q .V . . .
14.250	21.8410	44.36	. Q .V . . .
14.333	22.1568	45.86	. Q .V . . .
14.417	22.4851	47.66	. Q .V . . .
14.500	22.8258	49.47	. Q . V . . .
14.583	23.1773	51.04	. Q . V . . .
14.667	23.5390	52.52	. Q . V . . .
14.750	23.9106	53.95	. Q . V . . .
14.833	24.2917	55.34	. Q . V . . .
14.917	24.6825	56.75	. Q . V . . .
15.000	25.0835	58.22	. Q . V . . .
15.083	25.4951	59.76	. Q . V . . .
15.167	25.9178	61.38	. Q . V . . .
15.250	26.3525	63.11	. Q . V . . .
15.333	26.7999	64.97	. Q . V . . .
15.417	27.2589	66.65	. Q . V . . .
15.500	27.7276	68.05	. Q . V . . .
15.583	28.2053	69.36	. Q . V . . .
15.667	28.6902	70.41	. Q . V . . .
15.750	29.1798	71.09	. Q . V . . .
15.833	29.6778	72.32	. Q . V . . .
15.917	30.1967	75.34	. Q . V . . .
16.000	30.7523	80.67	. Q . V . . .
16.083	31.5736	119.26	. .Q V . . .
16.167	32.7419	169.64	. . QV . . .
16.250	34.1867	209.79	. . V Q . . .
16.333	36.0461	269.99	. . V. Q . .
16.417	38.3506	334.61	. . V . Q .
16.500	40.5632	321.27	. . .V . Q .
16.583	42.3091	253.50	. . . V Q . .
16.667	43.8053	217.25	. . .Q V . .
16.750	45.1119	189.72	. . Q . V . .
16.833	46.2291	162.21	. . Q . V . .
16.917	47.2508	148.36	. . Q . V . .
17.000	48.2308	142.29	. . Q . V . .
17.083	49.1468	133.01	. . Q . V . .
17.167	50.0036	124.40	. . Q . V . .
17.250	50.8262	119.45	. .Q . V . .
17.333	51.5989	112.19	. .Q . V . .
17.417	52.3402	107.64	. Q . V . .
17.500	53.0507	103.16	. Q . V . .
17.583	53.7093	95.63	. Q. . V . .
17.667	54.3403	91.61	. Q. . V . .
17.750	54.9504	88.58	. Q . . V . .
17.833	55.5379	85.31	. Q . . V. .
17.917	56.1086	82.86	. Q . . V. .
18.000	56.6515	78.83	. Q . . V. .
18.083	57.1811	76.90	. Q . . V .
18.167	57.6932	74.36	. Q . . V .
18.250	58.1920	72.42	. Q . . V .
18.333	58.6657	68.78	. Q . . V .
18.417	59.1140	65.10	. Q . . .V .
18.500	59.5494	63.22	. Q . . .V .
18.583	59.9626	59.99	. Q . . .V .
18.667	60.3593	57.60	. Q . . .V .
18.750	60.7475	56.37	. Q . . . V .
18.833	61.1262	54.98	. Q . . . V .
18.917	61.4903	52.87	. Q . . . V .
19.000	61.8472	51.82	. Q . . . V .
19.083	62.1979	50.92	. Q . . . V .
19.167	62.5410	49.81	. Q . . . V .
19.250	62.8724	48.12	. Q . . . V .
19.333	63.1979	47.27	. Q . . . V .
19.417	63.5185	46.54	. Q . . . V .
19.500	63.8338	45.79	. Q . . . V .
19.583	64.1391	44.33	. Q . . . V .
19.667	64.4373	43.30	. Q . . . V .
19.750	64.7312	42.67	. Q . . . V .
19.833	65.0208	42.06	. Q . . . V .
19.917	65.3061	41.42	. Q . . . V .
20.000	65.5807	39.86	. Q . . . V .

END OF FLOODSCx ROUTING ANALYSIS

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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU42002E.FLD
  TIME/DATE OF STUDY: 08:39 03/26/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1042.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    2879.300 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.700 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  1.000
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.820
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.14
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.28
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.38
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.65
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  0.91
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.56

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.871
          30-MINUTE FACTOR = 0.871
           1-HOUR FACTOR = 0.871
           3-HOUR FACTOR = 0.981
           6-HOUR FACTOR = 0.990
          24-HOUR FACTOR = 0.994

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  11.905


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.321	459.917
2	4.322	1044.948
3	8.524	1463.381
4	14.612	2119.881
5	23.247	3006.875
6	32.996	3394.583
7	40.224	2516.890
8	45.766	1929.818
9	50.331	1589.635
10	53.880	1235.763
11	56.742	996.760
12	59.181	849.260
13	61.542	822.166
14	63.610	719.969
15	65.454	642.147
16	67.218	614.180
17	68.804	552.280
18	70.292	518.160
19	71.761	511.763
20	73.014	436.295
21	74.180	406.046
22	75.268	378.881
23	76.320	366.196
24	77.313	345.947
25	78.259	329.318
26	79.112	297.016
27	79.957	294.072
28	80.759	279.245
29	81.552	276.390
30	82.280	253.484
31	82.924	224.117
32	83.568	224.117
33	84.172	210.406
34	84.703	184.814
35	85.232	184.299
36	85.761	184.184
37	86.256	172.357
38	86.723	162.591
39	87.189	162.530
40	87.656	162.591
41	88.109	157.618
42	88.528	145.910
43	88.945	145.392
44	89.364	145.564
45	89.781	145.453
46	90.176	137.451
47	90.545	128.540
48	90.914	128.540
49	91.283	128.426
50	91.653	128.655
51	92.012	125.228
52	92.325	109.003
53	92.632	106.944
54	92.940	107.061
55	93.247	106.944
56	93.554	106.947
57	93.861	106.944
58	94.130	93.464
59	94.365	82.035
60	94.601	82.038
61	94.837	82.152
62	95.072	82.038

63	95.308	82.150
64	95.544	82.038
65	95.779	82.038
66	96.005	78.608
67	96.182	61.701
68	96.354	59.757
69	96.525	59.642
70	96.697	59.757
71	96.868	59.528
72	97.039	59.531
73	97.210	59.757
74	97.382	59.642
75	97.553	59.642
76	97.724	59.642
77	97.895	59.414
78	98.018	42.961
79	98.065	16.227
80	98.112	16.453
81	98.158	15.996
82	98.205	16.453
83	98.252	16.453
84	98.299	16.224
85	98.346	16.224
86	98.392	16.227
87	98.439	16.224
88	98.486	16.453
89	98.533	16.224
90	98.579	16.224
91	98.626	16.224
92	98.673	16.453
93	98.719	15.996
94	98.767	16.684
95	98.813	15.996
96	98.859	16.224
97	98.907	16.453
98	98.953	16.224
99	99.000	16.224
100	99.046	16.224
101	99.093	16.224
102	99.140	16.224
103	99.186	16.224
104	99.233	16.224
105	99.279	16.224
106	99.326	16.224
107	99.373	16.224
108	99.419	16.224
109	99.466	16.224
110	99.512	16.224
111	99.559	16.224
112	99.606	16.224
113	99.652	16.224
114	99.699	16.224
115	99.745	16.224
116	99.792	16.224
117	99.839	16.224
118	99.885	16.224
119	99.932	16.224
120	99.978	16.224
121	100.000	7.540

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 293.1505

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 78.9526

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 100.0 200.0 300.0 400.0
14.000	21.4459	42.62	. Q V . . .
14.083	21.7455	43.50	. Q .V . . .
14.167	22.0525	44.58	. Q .V . . .
14.250	22.3681	45.82	. Q .V . . .
14.333	22.6938	47.29	. Q .V . . .
14.417	23.0318	49.08	. Q .V . . .
14.500	23.3831	51.02	. Q .V . . .
14.583	23.7463	52.73	. Q . V . . .
14.667	24.1202	54.30	. Q . V . . .
14.750	24.5047	55.83	. Q . V . . .
14.833	24.8993	57.30	. Q . V . . .
14.917	25.3041	58.77	. Q . V . . .
15.000	25.7192	60.27	. Q . V . . .
15.083	26.1452	61.86	. Q . V . . .
15.167	26.5826	63.52	. Q . V . . .
15.250	27.0321	65.27	. Q . V . . .
15.333	27.4947	67.16	. Q . V . . .
15.417	27.9689	68.85	. Q . V . . .
15.500	28.4530	70.29	. Q . V . . .
15.583	28.9467	71.68	. Q . V . . .
15.667	29.4486	72.89	. Q . V . . .
15.750	29.9563	73.71	. Q . V . . .
15.833	30.4707	74.68	. Q . V . . .
15.917	31.0037	77.39	. Q . V . . .
16.000	31.5717	82.47	. Q . V . . .
16.083	32.3948	119.51	. .Q V . . .
16.167	33.5333	165.32	. . Q . . .
16.250	34.9151	200.64	. . V Q . . .
16.333	36.6451	251.19	. . V . Q . . .
16.417	38.8033	313.37	. . V. .Q .
16.500	41.1243	337.02	. . V . Q .
16.583	43.0112	273.98	. . .V Q . . .
16.667	44.5964	230.16	. . . VQ . . .
16.750	45.9978	203.50	. . Q V . . .
16.833	47.2156	176.83	. . Q . V . . .
16.917	48.3038	158.00	. . Q . V . . .
17.000	49.3068	145.64	. . Q . V . . .
17.083	50.2799	141.29	. . Q . V . . .
17.167	51.1879	131.84	. . Q . V . . .
17.250	52.0422	124.04	. . Q . V . . .
17.333	52.8649	119.47	. .Q . V . . .
17.417	53.6403	112.58	. .Q . V . . .
17.500	54.3807	107.52	. Q . V . . .
17.583	55.1006	104.53	. Q . V . . .
17.667	55.7703	97.24	. Q. . V . . .
17.750	56.4122	93.20	. Q. . V . . .
17.833	57.0294	89.61	. Q . . V . . .
17.917	57.6298	87.18	. Q . . V. . .
18.000	58.2103	84.29	. Q . . V. . .
18.083	58.7722	81.59	. Q . . V. . .
18.167	59.3083	77.85	. Q . . V . .
18.250	59.8321	76.05	. Q . . V . .
18.333	60.3372	73.34	. Q . . V . .
18.417	60.8278	71.23	. Q . . V . .
18.500	61.2941	67.71	. Q . . .V . .
18.583	61.7353	64.06	. Q . . .V . .
18.667	62.1662	62.56	. Q . . .V . .
18.750	62.5813	60.28	. Q . . .V . .
18.833	62.9765	57.38	. Q . . .V . .
18.917	63.3639	56.26	. Q . . . V . .
19.000	63.7442	55.22	. Q . . . V . .
19.083	64.1123	53.45	. Q . . . V . .
19.167	64.4697	51.89	. Q . . . V . .
19.250	64.8213	51.05	. Q . . . V . .
19.333	65.1672	50.23	. Q . . . V . .
19.417	65.5053	49.10	. Q . . . V . .
19.500	65.8329	47.56	. Q . . . V . .
19.583	66.1553	46.81	. Q . . . V . .
19.667	66.4731	46.15	. Q . . . V . .
19.750	66.7863	45.47	. Q . . . V . .
19.833	67.0913	44.28	. Q . . . V . .
19.917	67.3879	43.07	. Q . . . V . .
20.000	67.6804	42.48	. Q . . . V . .

END OF FLOODSCx ROUTING ANALYSIS

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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU43002E.FLD
  TIME/DATE OF STUDY: 08:40 03/26/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1043.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    3355.100 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.760 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  1.000
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.820
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.13
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.28
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.38
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.65
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  0.90
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.55

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.850
          30-MINUTE FACTOR = 0.850
           1-HOUR FACTOR = 0.850
           3-HOUR FACTOR = 0.978
           6-HOUR FACTOR = 0.989
          24-HOUR FACTOR = 0.993

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  10.965


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.217	493.947
2	3.887	1083.274
3	7.595	1504.574
4	12.660	2054.912
5	19.908	2941.087
6	28.993	3686.444
7	36.806	3170.183
8	42.595	2348.910
9	47.339	1924.815
10	51.355	1629.407
11	54.406	1237.891
12	56.973	1041.780
13	59.212	908.585
14	61.396	885.926
15	63.330	784.949
16	65.044	695.328
17	66.702	672.865
18	68.225	617.991
19	69.606	560.427
20	70.977	556.124
21	72.270	524.539
22	73.374	448.289
23	74.428	427.436
24	75.425	404.562
25	76.386	390.109
26	77.300	370.844
27	78.179	356.465
28	78.967	319.673
29	79.749	317.434
30	80.498	303.773
31	81.229	296.548
32	81.946	291.053
33	82.560	249.134
34	83.153	240.532
35	83.745	240.389
36	84.278	216.178
37	84.765	197.746
38	85.253	197.746
39	85.740	197.672
40	86.201	186.976
41	86.630	174.402
42	87.061	174.547
43	87.490	174.398
44	87.918	173.535
45	88.314	160.524
46	88.698	156.115
47	89.083	156.115
48	89.468	156.115
49	89.852	155.827
50	90.210	145.129
51	90.550	138.046
52	90.890	137.900
53	91.230	138.049
54	91.569	137.755
55	91.908	137.470
56	92.208	121.567
57	92.490	114.627
58	92.774	114.918
59	93.056	114.776
60	93.340	114.918
61	93.622	114.772
62	93.905	114.485

63	94.145	97.427
64	94.362	88.032
65	94.579	88.177
66	94.796	88.032
67	95.013	88.029
68	95.230	88.177
69	95.448	88.177
70	95.665	88.029
71	95.881	88.032
72	96.072	77.191
73	96.230	64.037
74	96.387	64.034
75	96.545	63.892
76	96.703	64.183
77	96.860	63.892
78	97.019	64.180
79	97.176	64.034
80	97.334	63.892
81	97.492	64.183
82	97.649	63.601
83	97.808	64.471
84	97.960	61.867
85	98.034	29.777
86	98.076	17.348
87	98.120	17.633
88	98.163	17.348
89	98.205	17.345
90	98.248	17.345
91	98.292	17.924
92	98.335	17.348
93	98.378	17.345
94	98.420	17.345
95	98.465	17.924
96	98.507	17.348
97	98.550	17.345
98	98.594	17.924
99	98.636	17.057
100	98.680	17.636
101	98.723	17.636
102	98.765	17.057
103	98.810	17.924
104	98.852	17.345
105	98.895	17.345
106	98.938	17.348
107	98.981	17.633
108	99.025	17.636
109	99.068	17.633
110	99.112	17.633
111	99.155	17.633
112	99.199	17.633
113	99.242	17.633
114	99.285	17.633
115	99.329	17.633
116	99.372	17.633
117	99.416	17.633
118	99.459	17.633
119	99.503	17.633
120	99.546	17.633
121	99.590	17.633
122	99.633	17.633
123	99.677	17.633
124	99.720	17.633
125	99.763	17.633
126	99.807	17.633
127	99.850	17.633
128	99.894	17.633
129	99.937	17.633
130	99.981	17.633
131	100.000	7.820

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 341.6051

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 88.7952

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 100.0 200.0 300.0 400.0
14.000	24.4762	47.44	. Q .V . . .
14.083	24.8099	48.46	. Q .V . . .
14.167	25.1525	49.75	. Q .V . . .
14.250	25.5054	51.24	. Q .V . . .
14.333	25.8704	53.00	. Q .V . . .
14.417	26.2503	55.16	. Q .V . . .
14.500	26.6474	57.67	. Q . V . . .
14.583	27.0607	60.01	. Q . V . . .
14.667	27.4881	62.06	. Q . V . . .
14.750	27.9289	63.99	. Q . V . . .
14.833	28.3825	65.87	. Q . V . . .
14.917	28.8485	67.66	. Q . V . . .
15.000	29.3268	69.45	. Q . V . . .
15.083	29.8176	71.27	. Q . V . . .
15.167	30.3217	73.20	. Q . V . . .
15.250	30.8397	75.22	. Q . V . . .
15.333	31.3724	77.34	. Q . V . . .
15.417	31.9180	79.22	. Q . V . . .
15.500	32.4745	80.80	. Q . V . . .
15.583	33.0412	82.29	. Q . V . . .
15.667	33.6175	83.67	. Q . V . . .
15.750	34.2012	84.76	. Q . V . . .
15.833	34.7924	85.85	. Q . V . . .
15.917	35.4028	88.63	. Q . V . . .
16.000	36.0521	94.27	. Q. V . . .
16.083	36.9387	128.74	. . Q V . . .
16.167	38.1022	168.94	. . QV . . .
16.250	39.4808	200.18	. . V Q . . .
16.333	41.1214	238.21	. . V . Q . . .
16.417	43.1332	292.12	. . V. Q. . .
16.500	45.4249	332.76	. . V . Q .
16.583	47.4903	299.90	. . .V Q. . .
16.667	49.2069	249.24	. . . V Q . . .
16.750	50.7293	221.06	. . . Q . . .
16.833	52.1135	200.98	. . . Q V . . .
16.917	53.3262	176.08	. . Q . V . . .
17.000	54.4429	162.15	. . Q . V . . .
17.083	55.4896	151.97	. . Q . V . . .
17.167	56.5076	147.82	. . Q . V . . .
17.250	57.4662	139.19	. . Q . V . . .
17.333	58.3694	131.15	. . Q . V . . .
17.417	59.2408	126.52	. . Q . V . . .
17.500	60.0672	120.00	. . Q . V . . .
17.583	60.8503	113.70	. .Q . V . . .
17.667	61.6125	110.68	. .Q . V . . .
17.750	62.3449	106.34	. Q . V . . .
17.833	63.0323	99.81	. Q. . V . . .
17.917	63.6976	96.60	. Q. . V . . .
18.000	64.3416	93.51	. Q. . V . . .
18.083	64.9679	90.94	. Q. . V. . .
18.167	65.5739	88.00	. Q . . V. . .
18.250	66.1615	85.31	. Q . . V. . .
18.333	66.7223	81.43	. Q . . V . .
18.417	67.2689	79.37	. Q . . V . .
18.500	67.7965	76.60	. Q . . V . .
18.583	68.3083	74.32	. Q . . V . .
18.667	68.8059	72.25	. Q . . V . .
18.750	69.2768	68.38	. Q . . .V . .
18.833	69.7347	66.48	. Q . . .V . .
18.917	70.1834	65.16	. Q . . .V . .
19.000	70.6146	62.61	. Q . . .V . .
19.083	71.0311	60.47	. Q . . .V . .
19.167	71.4403	59.42	. Q . . . V . .
19.250	71.8425	58.41	. Q . . . V . .
19.333	72.2340	56.85	. Q . . . V . .
19.417	72.6144	55.23	. Q . . . V . .
19.500	72.9889	54.38	. Q . . . V . .
19.583	73.3578	53.56	. Q . . . V . .
19.667	73.7207	52.69	. Q . . . V . .
19.750	74.0732	51.19	. Q . . . V . .
19.833	74.4192	50.23	. Q . . . V . .
19.917	74.7603	49.53	. Q . . . V . .
20.000	75.0969	48.87	. Q . . . V . .

END OF FLOODSCx ROUTING ANALYSIS

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                           Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU44002E.FLD
  TIME/DATE OF STUDY: 08:40 03/26/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1044.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    3520.200 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.790 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  1.000
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.820
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.13
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.28
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.38
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.65
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  0.90
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.54

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.843
          30-MINUTE FACTOR = 0.843
           1-HOUR FACTOR = 0.843
           3-HOUR FACTOR = 0.976
           6-HOUR FACTOR = 0.988
          24-HOUR FACTOR = 0.993

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  10.549


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.171	498.705
2	3.700	1076.453
3	7.189	1485.178
4	11.876	1995.726
5	18.541	2837.235
6	27.014	3607.407
7	35.090	3438.149
8	41.109	2562.176
9	45.934	2054.310
10	49.989	1726.323
11	53.288	1404.484
12	55.913	1117.253
13	58.156	954.981
14	60.281	904.700
15	62.308	863.021
16	64.057	744.644
17	65.672	687.397
18	67.228	662.628
19	68.644	602.442
20	69.962	561.316
21	71.281	561.319
22	72.479	510.234
23	73.534	449.149
24	74.535	426.328
25	75.494	408.237
26	76.416	392.156
27	77.295	374.266
28	78.143	361.215
29	78.902	323.184
30	79.656	320.820
31	80.382	309.075
32	81.085	299.461
33	81.786	298.194
34	82.399	260.991
35	82.969	242.705
36	83.539	242.783
37	84.085	232.376
38	84.559	201.637
39	85.027	199.587
40	85.496	199.584
41	85.960	197.460
42	86.383	180.034
43	86.796	176.020
44	87.210	176.095
45	87.624	176.176
46	88.030	172.785
47	88.404	159.228
48	88.774	157.493
49	89.144	157.730
50	89.514	157.493
51	89.883	157.178
52	90.225	145.355
53	90.552	139.207
54	90.879	139.363
55	91.206	139.048
56	91.533	139.363
57	91.860	139.207
58	92.156	125.961
59	92.428	115.876
60	92.700	115.873
61	92.973	115.873
62	93.245	115.873

63	93.517	115.873
64	93.789	116.032
65	94.045	108.620
66	94.256	90.019
67	94.465	88.914
68	94.674	88.918
69	94.883	88.914
70	95.092	89.074
71	95.300	88.755
72	95.509	88.914
73	95.718	89.074
74	95.926	88.599
75	96.099	73.308
76	96.251	64.639
77	96.402	64.636
78	96.554	64.639
79	96.706	64.476
80	96.858	64.795
81	97.010	64.639
82	97.162	64.795
83	97.313	64.320
84	97.465	64.636
85	97.617	64.639
86	97.768	64.636
87	97.920	64.639
88	98.020	42.250
89	98.060	17.341
90	98.102	17.656
91	98.143	17.656
92	98.185	17.659
93	98.226	17.656
94	98.268	17.971
95	98.310	17.656
96	98.351	17.341
97	98.393	17.975
98	98.434	17.341
99	98.475	17.656
100	98.517	17.971
101	98.559	17.659
102	98.600	17.656
103	98.641	17.341
104	98.682	17.656
105	98.725	17.971
106	98.766	17.659
107	98.807	17.341
108	98.849	17.971
109	98.890	17.341
110	98.932	17.971
111	98.973	17.344
112	99.014	17.656
113	99.055	17.344
114	99.096	17.344
115	99.136	17.344
116	99.177	17.344
117	99.218	17.344
118	99.259	17.344
119	99.299	17.344
120	99.340	17.344
121	99.381	17.344
122	99.422	17.344
123	99.462	17.344
124	99.503	17.344
125	99.544	17.344
126	99.585	17.344
127	99.625	17.344
128	99.666	17.344
129	99.707	17.344
130	99.747	17.344
131	99.788	17.344
132	99.829	17.344
133	99.870	17.344
134	99.910	17.344
135	99.951	17.344
136	99.992	17.344
137	100.000	3.430

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 356.1335

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 92.3831

---

2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	100.0	200.0	300.0	400.0
14.000	25.1710	49.33	.	Q V	.	.	.
14.083	25.5181	50.39	.	Q .V	.	.	.
14.167	25.8744	51.73	.	Q .V	.	.	.
14.250	26.2413	53.28	.	Q .V	.	.	.
14.333	26.6207	55.09	.	Q .V	.	.	.
14.417	27.0153	57.29	.	Q .V	.	.	.
14.500	27.4276	59.87	.	Q .V	.	.	.
14.583	27.8575	62.42	.	Q . V	.	.	.
14.667	28.3027	64.64	.	Q . V	.	.	.
14.750	28.7622	66.71	.	Q . V	.	.	.
14.833	29.2353	68.69	.	Q . V	.	.	.
14.917	29.7215	70.61	.	Q . V	.	.	.
15.000	30.2207	72.48	.	Q . V	.	.	.
15.083	30.7330	74.39	.	Q . V	.	.	.
15.167	31.2590	76.37	.	Q . V	.	.	.
15.250	31.7995	78.47	.	Q . V	.	.	.
15.333	32.3550	80.67	.	Q . V	.	.	.
15.417	32.9238	82.59	.	Q . V	.	.	.
15.500	33.5037	84.20	.	Q . V	.	.	.
15.583	34.0942	85.74	.	Q . V	.	.	.
15.667	34.6944	87.15	.	Q . V	.	.	.
15.750	35.3027	88.33	.	Q . V	.	.	.
15.833	35.9187	89.45	.	Q . V	.	.	.
15.917	36.5521	91.96	.	Q. V	.	.	.
16.000	37.2227	97.38	.	Q. V	.	.	.
16.083	38.1283	131.49	.	. Q V	.	.	.
16.167	39.3015	170.35	.	. Q	.	.	.
16.250	40.6810	200.31	.	. V Q	.	.	.
16.333	42.3041	235.68	.	. V . Q	.	.	.
16.417	44.2810	287.03	.	. V.	Q .	.	.
16.500	46.5513	329.65	.	. V	. Q	.	.
16.583	48.7323	316.69	.	. .V	.Q	.	.
16.667	50.5498	263.90	.	. .V Q	.	.	.
16.750	52.1441	231.49	.	. . VQ	.	.	.
16.833	53.5892	209.84	.	. Q V	.	.	.
16.917	54.8910	189.02	.	. Q . V	.	.	.
17.000	56.0635	170.24	.	. Q . V	.	.	.
17.083	57.1550	158.49	.	. Q . V	.	.	.
17.167	58.2077	152.85	.	. Q . V	.	.	.
17.250	59.2237	147.52	.	. Q . V	.	.	.
17.333	60.1735	137.91	.	. Q . V	.	.	.
17.417	61.0784	131.40	.	. Q . V	.	.	.
17.500	61.9493	126.45	.	. Q . V	.	.	.
17.583	62.7745	119.83	.	.Q . V	.	.	.
17.667	63.5645	114.71	.	.Q . V	.	.	.
17.750	64.3361	112.04	.	.Q . V	.	.	.
17.833	65.0715	106.78	.	Q . V	.	.	.
17.917	65.7688	101.24	.	Q . V	.	.	.
18.000	66.4440	98.03	.	Q. . V	.	.	.
18.083	67.0994	95.17	.	Q. . V.	.	.	.
18.167	67.7358	92.40	.	Q. . V.	.	.	.
18.250	68.3521	89.49	.	Q . . V.	.	.	.
18.333	68.9498	86.79	.	Q . . V.	.	.	.
18.417	69.5193	82.69	.	Q . . V	.	.	.
18.500	70.0733	80.45	.	Q . . V	.	.	.
18.583	70.6093	77.83	.	Q . . V	.	.	.
18.667	71.1296	75.54	.	Q . . V	.	.	.
18.750	71.6375	73.75	.	Q . . .V	.	.	.
18.833	72.1208	70.18	.	Q . . .V	.	.	.
18.917	72.5878	67.80	.	Q . . .V	.	.	.
19.000	73.0459	66.52	.	Q . . .V	.	.	.
19.083	73.4917	64.73	.	Q . . .V	.	.	.
19.167	73.9181	61.91	.	Q . . . V	.	.	.
19.250	74.3364	60.74	.	Q . . . V	.	.	.
19.333	74.7480	59.75	.	Q . . . V	.	.	.
19.417	75.1520	58.67	.	Q . . . V	.	.	.
19.500	75.5430	56.77	.	Q . . . V	.	.	.
19.583	75.9264	55.67	.	Q . . . V	.	.	.
19.667	76.3042	54.85	.	Q . . . V	.	.	.
19.750	76.6764	54.04	.	Q . . . V	.	.	.
19.833	77.0418	53.06	.	Q . . . V	.	.	.
19.917	77.3971	51.58	.	Q . . . V	.	.	.
20.000	77.7467	50.77	.	Q . . . V	.	.	.

END OF FLOODSCx ROUTING ANALYSIS

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             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
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              Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU45002E.FLD
  TIME/DATE OF STUDY: 08:41 03/26/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1045.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    3859.500 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.850 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  1.000
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.820
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.13
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.28
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.38
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.64
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  0.90
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.53

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.828
          30-MINUTE FACTOR = 0.828
           1-HOUR FACTOR = 0.828
           3-HOUR FACTOR = 0.974
           6-HOUR FACTOR = 0.987
          24-HOUR FACTOR = 0.992

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   9.804


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.089	508.366
2	3.375	1066.884
3	6.515	1465.638
4	10.567	1891.309
5	16.128	2595.729
6	23.488	3435.168
7	31.787	3873.967
8	38.163	2976.028
9	43.129	2317.870
10	47.315	1953.890
11	50.959	1700.738
12	53.794	1323.275
13	56.212	1128.641
14	58.260	955.766
15	60.231	920.235
16	62.134	887.931
17	63.783	769.678
18	65.290	703.609
19	66.768	689.568
20	68.135	638.053
21	69.373	577.868
22	70.598	572.010
23	71.808	564.802
24	72.839	481.302
25	73.815	455.495
26	74.727	425.788
27	75.618	415.885
28	76.467	396.263
29	77.284	381.342
30	78.079	370.737
31	78.787	330.711
32	79.487	326.847
33	80.174	320.387
34	80.829	305.744
35	81.482	304.996
36	82.105	290.677
37	82.640	249.856
38	83.170	247.253
39	83.700	247.438
40	84.189	228.094
41	84.625	203.551
42	85.061	203.363
43	85.496	203.363
44	85.929	201.967
45	86.324	184.578
46	86.709	179.464
47	87.093	179.464
48	87.478	179.468
49	87.862	179.279
50	88.221	167.467
51	88.565	160.591
52	88.909	160.494
53	89.253	160.587
54	89.597	160.498
55	89.938	159.565
56	90.252	146.175
57	90.555	141.713
58	90.859	141.898
59	91.164	142.084
60	91.467	141.710
61	91.771	141.898
62	92.061	135.389

63	92.316	118.652
64	92.569	118.281
65	92.822	117.907
66	93.075	118.093
67	93.328	118.278
68	93.581	117.907
69	93.834	118.096
70	94.066	108.421
71	94.261	90.943
72	94.455	90.569
73	94.649	90.569
74	94.843	90.754
75	95.037	90.384
76	95.231	90.758
77	95.426	90.754
78	95.619	90.384
79	95.814	90.754
80	96.000	86.851
81	96.147	68.437
82	96.288	66.022
83	96.429	65.649
84	96.570	66.019
85	96.711	65.649
86	96.852	66.022
87	96.993	65.834
88	97.134	65.834
89	97.275	65.837
90	97.416	65.834
91	97.557	65.834
92	97.698	65.837
93	97.840	65.834
94	97.974	62.860
95	98.033	27.524
96	98.071	17.852
97	98.110	17.855
98	98.148	17.852
99	98.186	17.855
100	98.225	18.226
101	98.263	17.852
102	98.302	18.226
103	98.342	18.226
104	98.379	17.481
105	98.419	18.600
106	98.457	17.852
107	98.495	17.855
108	98.534	18.222
109	98.573	17.855
110	98.611	17.852
111	98.650	18.226
112	98.688	17.855
113	98.726	17.852
114	98.765	17.855
115	98.803	17.852
116	98.842	18.226
117	98.881	18.226
118	98.918	17.481
119	98.958	18.226
120	98.996	17.855
121	99.034	17.852
122	99.072	17.852
123	99.111	17.852
124	99.149	17.852
125	99.187	17.852
126	99.225	17.852
127	99.264	17.852
128	99.302	17.852
129	99.340	17.852
130	99.378	17.852
131	99.416	17.852
132	99.455	17.852
133	99.493	17.852
134	99.531	17.852
135	99.569	17.852
136	99.608	17.852
137	99.646	17.852
138	99.684	17.852
139	99.722	17.852
140	99.761	17.852
141	99.799	17.852
142	99.837	17.852
143	99.875	17.852
144	99.914	17.852
145	99.952	17.852
146	99.990	17.852
147	100.000	4.583

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 388.0852
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 100.1337

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 100.0 200.0 300.0 400.0
14.000	27.0326	54.90	. Q V . . .
14.083	27.4183	56.00	. Q V . . .
14.167	27.8131	57.32	. Q .V . . .
14.250	28.2182	58.83	. Q .V . . .
14.333	28.6349	60.50	. Q .V . . .
14.417	29.0652	62.48	. Q .V . . .
14.500	29.5113	64.78	. Q .V . . .
14.583	29.9746	67.28	. Q .V . . .
14.667	30.4534	69.51	. Q . V . . .
14.750	30.9463	71.58	. Q . V . . .
14.833	31.4530	73.57	. Q . V . . .
14.917	31.9735	75.57	. Q . V . . .
15.000	32.5073	77.50	. Q . V . . .
15.083	33.0546	79.47	. Q . V . . .
15.167	33.6158	81.48	. Q . V . . .
15.250	34.1917	83.62	. Q . V . . .
15.333	34.7832	85.88	. Q . V . . .
15.417	35.3883	87.87	. Q . V . . .
15.500	36.0050	89.54	. Q . V . . .
15.583	36.6330	91.19	. Q. V . . .
15.667	37.2720	92.79	. Q. V . . .
15.750	37.9212	94.26	. Q. V . . .
15.833	38.5798	95.62	. Q. V . . .
15.917	39.2540	97.89	. Q. V . . .
16.000	39.9633	102.99	. Q V . . .
16.083	40.9030	136.45	. . Q V . . .
16.167	42.0939	172.92	. . VQ . . .
16.250	43.4792	201.15	. . V Q . . .
16.333	45.0696	230.92	. . V . Q . . .
16.417	46.9610	274.64	. . V . Q . . .
16.500	49.1775	321.82	. . V. . Q . .
16.583	51.5357	342.42	. . V . Q .
16.667	53.5357	290.39	. . .V Q. . .
16.750	55.2631	250.81	. . . V Q . . .
16.833	56.8306	227.60	. . . Q . . .
16.917	58.2829	210.87	. . .Q V . . .
17.000	59.5751	187.63	. . Q . V . . .
17.083	60.7735	174.00	. . Q . V . . .
17.167	61.8885	161.90	. . Q . V . . .
17.250	62.9706	157.12	. . Q . V . . .
17.333	64.0193	152.28	. . Q . V . . .
17.417	65.0031	142.84	. . Q . V . . .
17.500	65.9398	136.01	. . Q . V . . .
17.583	66.8480	131.87	. . Q . V . . .
17.667	67.7174	126.23	. . Q . V . . .
17.750	68.5472	120.49	. . Q . V . . .
17.833	69.3581	117.74	. .Q . V . . .
17.917	70.1502	115.01	. .Q . V . . .
18.000	70.8975	108.52	. Q . V . . .
18.083	71.6211	105.06	. Q . V . . .
18.167	72.3199	101.47	. Q . V . . .
18.250	73.0010	98.90	. Q. . V. . .
18.333	73.6605	95.76	. Q. . V. . .
18.417	74.2994	92.77	. Q. . V. . .
18.500	74.9179	89.80	. Q . . V. . .
18.583	75.5052	85.28	. Q . . V . .
18.667	76.0768	82.99	. Q . . V . .
18.750	76.6335	80.83	. Q . . V . .
18.833	77.1733	78.38	. Q . . V . .
18.917	77.7014	76.68	. Q . . .V . .
19.000	78.2137	74.39	. Q . . .V . .
19.083	78.7019	70.89	. Q . . .V . .
19.167	79.1805	69.49	. Q . . .V . .
19.250	79.6507	68.26	. Q . . .V . .
19.333	80.1055	66.05	. Q . . .V . .
19.417	80.5439	63.65	. Q . . . V . .
19.500	80.9752	62.63	. Q . . . V . .
19.583	81.4000	61.68	. Q . . . V . .
19.667	81.8177	60.65	. Q . . . V . .
19.750	82.2228	58.83	. Q . . . V . .
19.833	82.6202	57.70	. Q . . . . V . .
19.917	83.0119	56.87	. Q . . . V . .
20.000	83.3981	56.08	. Q . . . V . .

END OF FLOODSCx ROUTING ANALYSIS

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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU46002E.FLD
  TIME/DATE OF STUDY: 08:41 03/26/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1046.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    4015.100 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.880 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  1.000
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.820
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.13
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.28
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.38
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.64
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  0.89
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.53

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.821
          30-MINUTE FACTOR = 0.821
           1-HOUR FACTOR = 0.821
           3-HOUR FACTOR = 0.973
           6-HOUR FACTOR = 0.987
          24-HOUR FACTOR = 0.992

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   9.470


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.052	510.886
2	3.234	1059.270
3	6.235	1457.486
4	9.989	1822.951
5	15.143	2502.384
6	21.988	3323.675
7	30.109	3943.679
8	36.671	3185.990
9	41.758	2470.490
10	46.064	2090.678
11	49.712	1771.354
12	52.817	1507.616
13	55.202	1158.172
14	57.321	1029.230
15	59.262	942.414
16	61.156	919.428
17	62.875	834.901
18	64.404	742.614
19	65.846	699.998
20	67.237	675.488
21	68.516	620.955
22	69.700	574.862
23	70.884	574.862
24	72.030	556.883
25	73.001	471.154
26	73.939	455.683
27	74.813	424.486
28	75.674	417.777
29	76.491	396.642
30	77.280	383.128
31	78.049	373.759
32	78.735	333.100
33	79.412	328.492
34	80.079	324.087
35	80.714	308.060
36	81.345	306.560
37	81.963	300.251
38	82.493	256.984
39	83.004	248.571
40	83.516	248.475
41	84.014	241.862
42	84.444	208.713
43	84.865	204.404
44	85.286	204.308
45	85.707	204.304
46	86.112	196.695
47	86.484	180.772
48	86.855	180.368
49	87.227	180.272
50	87.598	180.368
51	87.966	178.768
52	88.305	164.450
53	88.637	161.241
54	88.970	161.541
55	89.302	161.241
56	89.634	161.441
57	89.963	159.841
58	90.264	146.019
59	90.558	142.614
60	90.851	142.611
61	91.145	142.414
62	91.439	142.814

63	91.732	142.414
64	92.017	138.406
65	92.266	120.783
66	92.511	118.779
67	92.755	118.579
68	92.999	118.575
69	93.244	118.779
70	93.488	118.779
71	93.732	118.378
72	93.972	116.574
73	94.170	96.143
74	94.357	90.938
75	94.545	90.934
76	94.732	91.138
77	94.920	91.134
78	95.107	90.938
79	95.295	91.134
80	95.482	90.938
81	95.670	91.134
82	95.857	90.938
83	96.032	84.725
84	96.169	66.502
85	96.305	66.298
86	96.442	66.298
87	96.577	65.898
88	96.714	66.502
89	96.850	65.898
90	96.987	66.298
91	97.122	65.898
92	97.259	66.499
93	97.395	66.102
94	97.532	66.098
95	97.668	66.098
96	97.804	66.098
97	97.941	66.499
98	98.021	38.858
99	98.059	18.431
100	98.095	17.627
101	98.133	18.427
102	98.170	18.027
103	98.206	17.627
104	98.244	18.427
105	98.282	18.427
106	98.319	17.627
107	98.356	18.427
108	98.394	18.027
109	98.429	17.227
110	98.468	18.827
111	98.504	17.627
112	98.542	18.427
113	98.579	18.027
114	98.616	17.627
115	98.653	18.027
116	98.691	18.431
117	98.728	18.027
118	98.765	18.027
119	98.802	18.027
120	98.839	18.027
121	98.876	18.027
122	98.913	18.027
123	98.951	18.027
124	98.988	18.427
125	99.025	17.627
126	99.061	17.627
127	99.097	17.627
128	99.134	17.627
129	99.170	17.627
130	99.206	17.627
131	99.243	17.627
132	99.279	17.627
133	99.315	17.627
134	99.351	17.627
135	99.388	17.627
136	99.424	17.627
137	99.460	17.627
138	99.497	17.627
139	99.533	17.627
140	99.569	17.627
141	99.606	17.627
142	99.642	17.627
143	99.678	17.627
144	99.714	17.627
145	99.751	17.627
146	99.787	17.627
147	99.823	17.627
148	99.860	17.627
149	99.896	17.627
150	99.932	17.627

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 403.8482

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 103.8239

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 100.0 200.0 300.0 400.0
14.000	28.1175	55.09	. Q V . . .
14.083	28.5047	56.23	. Q V . . .
14.167	28.9015	57.62	. Q .V . . .
14.250	29.3093	59.21	. Q .V . . .
14.333	29.7294	61.00	. Q .V . . .
14.417	30.1640	63.11	. Q .V . . .
14.500	30.6158	65.60	. Q .V . . .
14.583	31.0870	68.41	. Q .V . . .
14.667	31.5755	70.93	. Q . V . . .
14.750	32.0798	73.23	. Q . V . . .
14.833	32.5992	75.42	. Q . V . . .
14.917	33.1334	77.57	. Q . V . . .
15.000	33.6822	79.68	. Q . V . . .
15.083	34.2452	81.75	. Q . V . . .
15.167	34.8227	83.86	. Q . V . . .
15.250	35.4156	86.08	. Q . V . . .
15.333	36.0246	88.43	. Q . V . . .
15.417	36.6478	90.49	. Q. V . . .
15.500	37.2829	92.22	. Q. V . . .
15.583	37.9295	93.89	. Q. V . . .
15.667	38.5876	95.56	. Q. V . . .
15.750	39.2565	97.12	. Q. V . . .
15.833	39.9351	98.53	. Q. V . . .
15.917	40.6284	100.67	. Q V . . .
16.000	41.3552	105.53	. Q V . . .
16.083	42.3088	138.46	. . Q V . . .
16.167	43.5052	173.72	. . VQ . . .
16.250	44.8918	201.33	. . V Q . . .
16.333	46.4583	227.46	. . V . Q . . .
16.417	48.3150	269.59	. . V . Q . . .
16.500	50.4917	316.05	. . V. .Q .
16.583	52.8786	346.58	. . V . Q .
16.667	54.9653	303.00	. . .V Q .
16.750	56.7633	261.07	. . .V Q . . .
16.833	58.3975	237.27	. . . VQ . . .
16.917	59.8954	217.50	. . .Q V . . .
17.000	61.2750	200.32	. . Q V . . .
17.083	62.5067	178.83	. . Q . V . . .
17.167	63.6704	168.97	. . Q . V . . .
17.250	64.7825	161.48	. . Q . V . . .
17.333	65.8648	157.15	. . Q . V . . .
17.417	66.8934	149.35	. . Q . V . . .
17.500	67.8643	140.97	. . Q . V . . .
17.583	68.7945	135.07	. . Q . V . . .
17.667	69.6935	130.53	. . Q . V . . .
17.750	70.5534	124.86	. . Q . V . . .
17.833	71.3791	119.90	. .Q . V . . .
17.917	72.1881	117.46	. .Q . V . . .
18.000	72.9745	114.19	. .Q . V . . .
18.083	73.7154	107.57	. Q . V . . .
18.167	74.4357	104.60	. Q . V . . .
18.250	75.1309	100.94	. Q . V . . .
18.333	75.8094	98.53	. Q. . V. . .
18.417	76.4656	95.28	. Q. . V. . .
18.500	77.1017	92.35	. Q. . V. . .
18.583	77.7182	89.52	. Q . . V. . .
18.667	78.3060	85.35	. Q . . V . .
18.750	78.8797	83.29	. Q . . V . .
18.833	79.4403	81.41	. Q . . V . .
18.917	79.9847	79.05	. Q . . V . .
19.000	80.5181	77.45	. Q . . .V . .
19.083	81.0394	75.69	. Q . . .V . .
19.167	81.5362	72.14	. Q . . .V . .
19.250	82.0217	70.49	. Q . . .V . .
19.333	82.4990	69.31	. Q . . .V . .
19.417	82.9660	67.81	. Q . . .V . .
19.500	83.4137	65.00	. Q . . . V . .
19.583	83.8529	63.77	. Q . . . V . .
19.667	84.2856	62.84	. Q . . . V . .
19.750	84.7122	61.93	. Q . . . V . .
19.833	85.1297	60.63	. Q . . . V . .
19.917	85.5357	58.95	. Q . . . V . .
20.000	85.9360	58.12	. Q . . . . V .

END OF FLOODSCx ROUTING ANALYSIS

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                           Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU47002E.FLD
  TIME/DATE OF STUDY: 08:42 03/26/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1047.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    4206.000 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.940 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  1.000
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.830
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.13
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.28
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.38
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.64
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  0.89
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.52

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.812
          30-MINUTE FACTOR = 0.812
           1-HOUR FACTOR = 0.812
           3-HOUR FACTOR = 0.972
           6-HOUR FACTOR = 0.986
          24-HOUR FACTOR = 0.992

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   8.865


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.985	501.047
2	2.987	1018.210
3	5.730	1395.181
4	9.008	1667.457
5	13.502	2285.838
6	19.478	3040.202
7	26.665	3655.373
8	33.716	3586.762
9	39.204	2791.770
10	43.557	2214.135
11	47.296	1901.790
12	50.627	1694.092
13	53.324	1371.924
14	55.536	1125.300
15	57.466	981.997
16	59.282	923.623
17	61.055	901.884
18	62.690	831.578
19	64.140	737.525
20	65.490	686.819
21	66.820	676.201
22	68.061	631.230
23	69.184	571.167
24	70.292	563.689
25	71.400	563.685
26	72.406	511.857
27	73.293	451.061
28	74.160	440.862
29	74.969	411.725
30	75.773	409.094
31	76.532	386.119
32	77.271	375.808
33	77.996	368.640
34	78.642	328.517
35	79.275	322.075
36	79.906	320.786
37	80.505	305.038
38	81.096	300.672
39	81.687	300.556
40	82.226	273.887
41	82.705	243.741
42	83.184	243.741
43	83.663	243.741
44	84.115	229.960
45	84.511	201.378
46	84.905	200.373
47	85.299	200.373
48	85.693	200.482
49	86.075	194.323
50	86.424	177.620
51	86.772	176.952
52	87.120	176.836
53	87.467	176.727
54	87.815	176.952
55	88.145	167.984
56	88.457	158.348
57	88.768	158.235
58	89.079	158.010
59	89.390	158.460
60	89.701	158.235
61	90.007	155.546
62	90.285	141.649

63	90.560	139.860
64	90.835	139.856
65	91.110	139.856
66	91.385	139.856
67	91.660	139.635
68	91.933	139.185
69	92.175	122.823
70	92.403	116.098
71	92.632	116.548
72	92.861	116.323
73	93.090	116.548
74	93.318	116.098
75	93.547	116.548
76	93.776	116.323
77	93.998	112.737
78	94.179	92.343
79	94.355	89.429
80	94.530	89.200
81	94.706	89.204
82	94.881	89.204
83	95.057	89.429
84	95.233	89.429
85	95.408	89.204
86	95.583	89.204
87	95.759	89.425
88	95.935	89.204
89	96.080	73.964
90	96.207	64.774
91	96.335	64.995
92	96.463	64.999
93	96.590	64.774
94	96.718	64.770
95	96.845	64.999
96	96.973	64.774
97	97.101	64.995
98	97.228	64.999
99	97.355	64.549
100	97.484	65.446
101	97.611	64.549
102	97.738	64.549
103	97.866	65.446
104	97.984	60.067
105	98.034	25.101
106	98.068	17.483
107	98.103	17.483
108	98.137	17.483
109	98.173	18.376
110	98.207	17.483
111	98.242	17.483
112	98.276	17.483
113	98.312	18.379
114	98.346	17.033
115	98.381	17.929
116	98.416	17.929
117	98.451	17.483
118	98.486	17.929
119	98.520	17.483
120	98.555	17.483
121	98.590	17.929
122	98.625	17.933
123	98.659	17.479
124	98.694	17.483
125	98.729	17.929
126	98.763	17.483
127	98.799	17.933
128	98.834	17.929
129	98.868	17.483
130	98.903	17.479
131	98.938	17.933
132	98.972	17.479
133	99.008	17.933
134	99.042	17.479
135	99.076	17.479
136	99.111	17.479
137	99.145	17.479
138	99.179	17.479
139	99.214	17.479
140	99.248	17.479
141	99.282	17.479
142	99.317	17.479
143	99.351	17.479
144	99.386	17.479
145	99.420	17.479
146	99.454	17.479
147	99.489	17.479
148	99.523	17.479
149	99.557	17.479
150	99.592	17.479

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 425.2619

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 102.5233

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 100.0 200.0 300.0 400.0
14.000	27.0663	53.58	. Q V . . .
14.083	27.4430	54.69	. Q V . . .
14.167	27.8290	56.04	. Q V . . .
14.250	28.2255	57.58	. Q .V . . .
14.333	28.6336	59.26	. Q .V . . .
14.417	29.0554	61.24	. Q .V . . .
14.500	29.4932	63.57	. Q .V . . .
14.583	29.9491	66.20	. Q .V . . .
14.667	30.4232	68.85	. Q .V . . .
14.750	30.9137	71.22	. Q . V . . .
14.833	31.4192	73.40	. Q . V . . .
14.917	31.9394	75.53	. Q . V . . .
15.000	32.4742	77.65	. Q . V . . .
15.083	33.0233	79.72	. Q . V . . .
15.167	33.5866	81.80	. Q . V . . .
15.250	34.1647	83.93	. Q . V . . .
15.333	34.7582	86.18	. Q . V . . .
15.417	35.3652	88.15	. Q . V . . .
15.500	35.9839	89.83	. Q . V . . .
15.583	36.6136	91.43	. Q. V . . .
15.667	37.2548	93.09	. Q. V . . .
15.750	37.9066	94.65	. Q. V . . .
15.833	38.5685	96.10	. Q. V . . .
15.917	39.2445	98.15	. Q. V . . .
16.000	39.9478	102.13	. Q V . . .
16.083	40.8652	133.20	. . Q V . . .
16.167	42.0057	165.60	. . Q . . .
16.250	43.3201	190.86	. . V Q. . .
16.333	44.7744	211.16	. . V .Q . .
16.417	46.4903	249.14	. . V . Q . .
16.500	48.5041	292.41	. . V . Q. .
16.583	50.7398	324.62	. . V. . Q
16.667	52.9297	317.98	. . V .Q
16.750	54.8102	273.04	. . .V Q . .
16.833	56.4603	239.59	. . . VQ . .
16.917	57.9793	220.56	. . . Q . .
17.000	59.4052	207.04	. . Q V . .
17.083	60.6951	187.30	. . Q . V . .
17.167	61.8757	171.41	. . Q . V . .
17.250	62.9855	161.15	. . Q . V . .
17.333	64.0559	155.42	. . Q . V . .
17.417	65.0973	151.21	. . Q . V . .
17.500	66.0904	144.19	. . Q . V . .
17.583	67.0262	135.88	. . Q . V . .
17.667	67.9214	129.98	. . Q . V . .
17.750	68.7929	126.54	. . Q . V . .
17.833	69.6306	121.64	. . Q . V . .
17.917	70.4312	116.24	. .Q . V . .
18.000	71.2140	113.67	. .Q . V . .
18.083	71.9816	111.46	. .Q . V . .
18.167	72.7160	106.64	. Q . V . .
18.250	73.4146	101.44	. Q . V . .
18.333	74.0956	98.87	. Q. . V . .
18.417	74.7524	95.37	. Q. . V. .
18.500	75.3935	93.09	. Q. . V. .
18.583	76.0113	89.71	. Q . . V. .
18.667	76.6108	87.05	. Q . . V. .
18.750	77.1944	84.74	. Q . . V .
18.833	77.7523	81.00	. Q . . V .
18.917	78.2971	79.11	. Q . . V .
19.000	78.8313	77.58	. Q . . V .
19.083	79.3510	75.45	. Q . . V .
19.167	79.8603	73.95	. Q . . .V .
19.250	80.3609	72.69	. Q . . .V .
19.333	80.8437	70.11	. Q . . .V .
19.417	81.3082	67.44	. Q . . .V .
19.500	81.7654	66.39	. Q . . .V .
19.583	82.2156	65.36	. Q . . . V .
19.667	82.6539	63.65	. Q . . . V .
19.750	83.0756	61.23	. Q . . . V .
19.833	83.4908	60.29	. Q . . . V .
19.917	83.9004	59.47	. Q . . . V .
20.000	84.3045	58.67	. Q . . . V .

END OF FLOODSCx ROUTING ANALYSIS

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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
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                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU48002E.FLD
  TIME/DATE OF STUDY: 08:42 03/26/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1048.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
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      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    4407.000 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.010 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  1.000
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.830
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.13
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.28
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.38
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.64
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  0.89
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.52

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.803
          30-MINUTE FACTOR = 0.803
           1-HOUR FACTOR = 0.803
           3-HOUR FACTOR = 0.970
           6-HOUR FACTOR = 0.985
          24-HOUR FACTOR = 0.991

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   8.251


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.917	488.606
2	2.750	976.825
3	5.212	1312.349
4	8.130	1555.375
5	11.944	2032.553
6	16.983	2685.783
7	23.208	3317.517
8	30.425	3846.914
9	36.096	3022.430
10	40.750	2480.118
11	44.674	2091.523
12	47.987	1765.456
13	51.037	1625.573
14	53.471	1297.538
15	55.533	1099.095
16	57.329	956.831
17	59.028	905.607
18	60.678	879.493
19	62.261	843.692
20	63.644	737.368
21	64.921	680.562
22	66.182	672.013
23	67.378	637.133
24	68.487	591.143
25	69.518	549.696
26	70.550	549.700
27	71.580	549.192
28	72.490	484.913
29	73.315	439.684
30	74.123	430.852
31	74.877	401.896
32	75.628	399.879
33	76.346	382.972
34	77.033	366.381
35	77.721	366.255
36	78.350	335.596
37	78.940	314.024
38	79.529	314.146
39	80.109	308.978
40	80.660	294.087
41	81.211	293.209
42	81.760	292.953
43	82.252	262.041
44	82.698	237.697
45	83.144	237.567
46	83.590	237.819
47	84.023	230.630
48	84.396	199.088
49	84.763	195.428
50	85.130	195.428
51	85.496	195.554
52	85.863	195.176
53	86.203	181.172
54	86.526	172.592
55	86.850	172.344
56	87.173	172.466
57	87.497	172.466
58	87.821	172.466
59	88.129	164.142
60	88.418	154.550
61	88.708	154.172
62	88.997	154.298

63	89.287	154.428
64	89.577	154.424
65	89.866	154.172
66	90.138	144.836
67	90.393	136.260
68	90.650	136.508
69	90.905	136.260
70	91.161	136.256
71	91.417	136.508
72	91.673	136.260
73	91.927	135.752
74	92.154	120.613
75	92.366	113.298
76	92.579	113.546
77	92.792	113.546
78	93.005	113.298
79	93.218	113.798
80	93.431	113.298
81	93.644	113.546
82	93.857	113.298
83	94.053	104.714
84	94.217	87.306
85	94.381	87.306
86	94.544	86.802
87	94.707	87.306
88	94.871	87.050
89	95.034	86.802
90	95.197	87.054
91	95.361	87.306
92	95.525	87.302
93	95.687	86.802
94	95.851	87.054
95	96.007	83.269
96	96.129	64.849
97	96.248	63.588
98	96.367	63.332
99	96.485	63.084
100	96.604	63.588
101	96.723	63.080
102	96.842	63.336
103	96.960	63.080
104	97.078	63.084
105	97.199	64.092
106	97.316	62.576
107	97.435	63.588
108	97.554	63.084
109	97.672	63.080
110	97.791	63.588
111	97.910	63.080
112	98.005	50.970
113	98.040	18.676
114	98.073	17.156
115	98.105	17.160
116	98.137	17.160
117	98.170	17.660
118	98.202	17.160
119	98.234	17.160
120	98.268	17.664
121	98.300	17.156
122	98.332	17.160
123	98.364	17.160
124	98.397	17.664
125	98.428	16.147
126	98.461	17.664
127	98.495	18.168
128	98.526	16.651
129	98.558	17.160
130	98.591	17.664
131	98.624	17.160
132	98.656	17.156
133	98.689	17.664
134	98.720	16.655
135	98.753	17.660
136	98.786	17.160
137	98.818	17.160
138	98.850	17.160
139	98.883	17.660
140	98.915	17.160
141	98.947	17.160
142	98.980	17.156
143	99.013	17.664
144	99.045	17.156
145	99.077	17.156
146	99.109	17.156
147	99.142	17.156
148	99.174	17.156
149	99.206	17.156
150	99.238	17.156

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 445.7527

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 106.6506

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 100.0 200.0 300.0 400.0
14.000	27.9080	55.22	. Q V . . .
14.083	28.2961	56.35	. Q V . . .
14.167	28.6936	57.72	. Q V . . .
14.250	29.1019	59.29	. Q V . . .
14.333	29.5219	60.98	. Q .V . . .
14.417	29.9552	62.91	. Q .V . . .
14.500	30.4041	65.17	. Q .V . . .
14.583	30.8707	67.75	. Q .V . . .
14.667	31.3570	70.61	. Q .V . . .
14.750	31.8608	73.16	. Q .V . . .
14.833	32.3809	75.52	. Q . V . . .
14.917	32.9166	77.79	. Q . V . . .
15.000	33.4674	79.98	. Q . V . . .
15.083	34.0335	82.19	. Q . V . . .
15.167	34.6145	84.36	. Q . V . . .
15.250	35.2107	86.56	. Q . V . . .
15.333	35.8225	88.83	. Q . V . . .
15.417	36.4479	90.80	. Q. V . . .
15.500	37.0851	92.53	. Q. V . . .
15.583	37.7337	94.18	. Q. V . . .
15.667	38.3940	95.88	. Q. V . . .
15.750	39.0658	97.54	. Q. V . . .
15.833	39.7488	99.17	. Q. V . . .
15.917	40.4464	101.30	. Q V . . .
16.000	41.1676	104.72	. Q V . . .
16.083	42.0904	133.98	. Q V . . .
16.167	43.2180	163.73	. Q . . .
16.250	44.4984	185.91	. Q V . . .
16.333	45.9027	203.91	. V Q . . .
16.417	47.5130	233.82	. V . Q . . .
16.500	49.3866	272.05	. V . Q . . .
16.583	51.4974	306.48	. V. Q . . .
16.667	53.7775	331.08	. V . Q . . .
16.750	55.7503	286.44	. V Q . . .
16.833	57.5087	255.33	. .V Q . . .
16.917	59.1106	232.59	. . VQ . . .
17.000	60.5841	213.95	. .QV . . .
17.083	61.9873	203.75	. Q V . . .
17.167	63.2546	184.02	. Q . V . . .
17.250	64.4313	170.85	. Q . V . . .
17.333	65.5388	160.81	. Q . V . . .
17.417	66.6096	155.48	. Q . V . . .
17.500	67.6497	151.03	. Q . V . . .
17.583	68.6531	145.68	. Q . V . . .
17.667	69.5947	136.73	. Q . V . . .
17.750	70.4958	130.82	. Q . V . . .
17.833	71.3750	127.66	. Q . V . . .
17.917	72.2251	123.44	. Q . V . . .
18.000	73.0434	118.82	.Q . V . . .
18.083	73.8321	114.52	.Q . V . . .
18.167	74.6060	112.37	.Q . V . . .
18.250	75.3644	110.12	.Q . V . . .
18.333	76.0859	104.77	Q . V . . .
18.417	76.7773	100.38	Q . V . . .
18.500	77.4506	97.77	Q. . V. . .
18.583	78.0991	94.16	Q. . V. . .
18.667	78.7316	91.83	Q. . V. . .
18.750	79.3445	89.00	. Q . V. . .
18.833	79.9391	86.34	. Q . V. . .
18.917	80.5218	84.60	. Q . V . .
19.000	81.0832	81.51	. Q . V . .
19.083	81.6272	78.99	. Q . V . .
19.167	82.1619	77.65	. Q . V . .
19.250	82.6862	76.13	. Q . .V . .
19.333	83.1974	74.23	. Q . .V . .
19.417	83.7005	73.04	. Q . .V . .
19.500	84.1953	71.85	. Q . .V . .
19.583	84.6718	69.18	. Q . .V . .
19.667	85.1327	66.92	. Q . .V . .
19.750	85.5869	65.96	. Q . . V . .
19.833	86.0348	65.03	. Q . . V . .
19.917	86.4734	63.70	. Q . . V . .
20.000	86.8951	61.23	. Q . . V . .

END OF FLOODSCx ROUTING ANALYSIS

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

TECHNICAL APPENDIX II-A
HYDROLOGIC ANALYSIS
UPSTREAM AREAS
10-YEAR EXPECTED VALUE

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
        (c) Copyright 1983-2003 Advanced Engineering Software (aes)
            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                          Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU36010E.DAT
  TIME/DATE OF STUDY: 09:50 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  3.610
   2)  10.000;  2.370
   3)  15.000;  1.890
   4)  20.000;  1.540
   5)  30.000;  1.210
   6)  60.000;  0.840
   7) 120.000;  0.590
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  ========== =================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1001.00 IS CODE =  21
--------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
==========================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   327.00
  ELEVATION DATA: UPSTREAM(FEET) =   2400.00  DOWNSTREAM(FEET) =   2280.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    8.744
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.947
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap      SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.30      0.20      1.00    81    8.74
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      0.74
  TOTAL AREA(ACRES) =      0.30   PEAK FLOW RATE(CFS) =      0.74

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

**************************************************************************
  FLOW PROCESS FROM NODE   1001.00 TO NODE   1002.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2280.00  DOWNSTREAM(FEET) =   2240.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    95.00   CHANNEL SLOPE =  0.4211
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      0.74
  FLOW VELOCITY(FEET/SEC.) =   4.57   FLOW DEPTH(FEET) =   0.14
  TRAVEL TIME(MIN.) =   0.35   Tc(MIN.) =   9.09
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1002.00 =   422.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1001.00 TO NODE   1002.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =   9.09
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.596
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.30      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.30      SUBAREA RUNOFF(CFS) =    0.65
  EFFECTIVE AREA(ACRES) =      0.60   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      0.60       PEAK FLOW RATE(CFS) =       1.29

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

**************************************************************************
  FLOW PROCESS FROM NODE   1002.00 TO NODE   1003.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2240.00  DOWNSTREAM(FEET) =   2200.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    96.00   CHANNEL SLOPE =  0.4167
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
```

```
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      1.29
  FLOW VELOCITY(FEET/SEC.) =   5.53   FLOW DEPTH(FEET) =   0.20
  TRAVEL TIME(MIN.) =   0.29   Tc(MIN.) =   9.38
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1003.00 =   518.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1002.00 TO NODE   1003.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.38
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.524
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.30      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.30      SUBAREA RUNOFF(CFS) =    0.63
  EFFECTIVE AREA(ACRES) =      0.90   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      0.90       PEAK FLOW RATE(CFS) =       1.88

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1003.00 TO NODE   1004.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2200.00  DOWNSTREAM(FEET) =   2160.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   109.00   CHANNEL SLOPE =  0.3670
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      1.88
  FLOW VELOCITY(FEET/SEC.) =   5.89   FLOW DEPTH(FEET) =   0.25
  TRAVEL TIME(MIN.) =   0.31   Tc(MIN.) =   9.69
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1004.00 =   627.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1003.00 TO NODE   1004.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.69
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.447
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.40      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.40      SUBAREA RUNOFF(CFS) =    0.81
  EFFECTIVE AREA(ACRES) =      1.30   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.30       PEAK FLOW RATE(CFS) =       2.63

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1004.00 TO NODE   1005.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2160.00  DOWNSTREAM(FEET) =   2120.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   128.00   CHANNEL SLOPE =  0.3125
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      2.63
  FLOW VELOCITY(FEET/SEC.) =   6.15   FLOW DEPTH(FEET) =   0.32
  TRAVEL TIME(MIN.) =   0.35   Tc(MIN.) =  10.03
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1005.00 =   755.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1004.00 TO NODE   1005.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.03
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.367
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.60      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.60      SUBAREA RUNOFF(CFS) =    1.17
  EFFECTIVE AREA(ACRES) =      1.90   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.90       PEAK FLOW RATE(CFS) =       3.71

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1005.00 TO NODE   1014.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2120.00  DOWNSTREAM(FEET) =   2040.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   186.00   CHANNEL SLOPE =  0.4301
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      3.71
  FLOW VELOCITY(FEET/SEC.) =   7.53   FLOW DEPTH(FEET) =   0.36
  TRAVEL TIME(MIN.) =   0.41   Tc(MIN.) =  10.45
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1014.00 =   941.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1005.00 TO NODE   1014.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.45
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.327
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.60      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.60      SUBAREA RUNOFF(CFS) =    1.15
  EFFECTIVE AREA(ACRES) =      2.50   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      2.50       PEAK FLOW RATE(CFS) =       4.79
```

```
  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1014.00 TO NODE   1014.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  10.45
  RAINFALL INTENSITY(INCH/HR) =   2.33
  AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =     2.50
  TOTAL STREAM AREA(ACRES) =     2.50
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      4.79

****************************************************************************
  FLOW PROCESS FROM NODE   1010.00 TO NODE   1011.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   325.00
  ELEVATION DATA: UPSTREAM(FEET) =   2300.00  DOWNSTREAM(FEET) =   2200.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    9.035
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.609
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.60      0.20      1.00    81    9.04
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      1.30
  TOTAL AREA(ACRES) =      0.60   PEAK FLOW RATE(CFS) =      1.30

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1011.00 TO NODE   1012.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2200.00  DOWNSTREAM(FEET) =   2160.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    89.00   CHANNEL SLOPE =  0.4494
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      1.30
  FLOW VELOCITY(FEET/SEC.) =   5.63   FLOW DEPTH(FEET) =   0.19
  TRAVEL TIME(MIN.) =   0.26   Tc(MIN.) =   9.30
  LONGEST FLOWPATH FROM NODE   1010.00 TO NODE   1012.00 =   414.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1011.00 TO NODE   1012.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.30
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.544
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
```

```
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.40      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.40      SUBAREA RUNOFF(CFS) =    0.84
  EFFECTIVE AREA(ACRES) =      1.00   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.00       PEAK FLOW RATE(CFS) =       2.11

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1012.00 TO NODE   1013.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2160.00  DOWNSTREAM(FEET) =   2120.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   114.00   CHANNEL SLOPE =  0.3509
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      2.11
  FLOW VELOCITY(FEET/SEC.) =   5.95   FLOW DEPTH(FEET) =   0.28
  TRAVEL TIME(MIN.) =   0.32   Tc(MIN.) =   9.62
  LONGEST FLOWPATH FROM NODE   1010.00 TO NODE   1013.00 =   528.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1012.00 TO NODE   1013.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.62
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.465
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.90      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.90      SUBAREA RUNOFF(CFS) =    1.83
  EFFECTIVE AREA(ACRES) =      1.90   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.90       PEAK FLOW RATE(CFS) =       3.87

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1013.00 TO NODE   1014.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2120.00  DOWNSTREAM(FEET) =   2040.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   206.00   CHANNEL SLOPE =  0.3883
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      3.87
  FLOW VELOCITY(FEET/SEC.) =   7.42   FLOW DEPTH(FEET) =   0.38
  TRAVEL TIME(MIN.) =   0.46   Tc(MIN.) =  10.08
  LONGEST FLOWPATH FROM NODE   1010.00 TO NODE   1014.00 =   734.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1013.00 TO NODE   1014.00 IS CODE =  81
----------------------------------------------------------------------------
```

```
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.08
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.362
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.10      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.10      SUBAREA RUNOFF(CFS) =    2.14
  EFFECTIVE AREA(ACRES) =      3.00   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      3.00       PEAK FLOW RATE(CFS) =       5.84

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1014.00 TO NODE   1014.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  10.08
  RAINFALL INTENSITY(INCH/HR) =   2.36
  AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =     3.00
  TOTAL STREAM AREA(ACRES) =     3.00
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      5.84

  ** CONFLUENCE DATA **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1      4.79  10.45    2.327  0.20( 0.20) 1.00     2.5    1000.00
      2      5.84  10.08    2.362  0.20( 0.20) 1.00     3.0    1010.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1     10.53  10.08    2.362  0.20( 0.20) 1.00     5.4    1010.00
      2     10.53  10.45    2.327  0.20( 0.20) 1.00     5.5    1000.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     10.53    Tc(MIN.) =    10.08
  EFFECTIVE AREA(ACRES) =     5.41   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      5.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1014.00 =   941.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1014.00 TO NODE   1015.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2040.00  DOWNSTREAM(FEET) =   2000.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   182.00   CHANNEL SLOPE =  0.2198
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     10.53
  FLOW VELOCITY(FEET/SEC.) =   7.47   FLOW DEPTH(FEET) =   0.55
  TRAVEL TIME(MIN.) =   0.41   Tc(MIN.) =  10.49
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1015.00 =  1123.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1014.00 TO NODE   1015.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.49
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.323
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        3.80      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.80      SUBAREA RUNOFF(CFS) =    7.26
  EFFECTIVE AREA(ACRES) =      9.21   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      9.30       PEAK FLOW RATE(CFS) =      17.60

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1015.00 TO NODE   1016.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2000.00  DOWNSTREAM(FEET) =   1920.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   366.00   CHANNEL SLOPE =  0.2186
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     17.60
  FLOW VELOCITY(FEET/SEC.) =   8.72   FLOW DEPTH(FEET) =   0.74
  TRAVEL TIME(MIN.) =   0.70   Tc(MIN.) =  11.19
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1016.00 =  1489.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1015.00 TO NODE   1016.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.19
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.256
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        3.40      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.40      SUBAREA RUNOFF(CFS) =    6.29
  EFFECTIVE AREA(ACRES) =     12.61   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     12.70       PEAK FLOW RATE(CFS) =      23.34

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.36; 30M = 0.65; 1HR = 0.93; 3HR = 1.80; 6HR = 2.75; 24HR = 4.92

****************************************************************************
  FLOW PROCESS FROM NODE   1016.00 TO NODE   1017.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
```

```
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1920.00  DOWNSTREAM(FEET) =   1880.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   107.00   CHANNEL SLOPE =  0.3738
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     23.34
  FLOW VELOCITY(FEET/SEC.) =  11.42   FLOW DEPTH(FEET) =   0.74
  TRAVEL TIME(MIN.) =   0.16   Tc(MIN.) =  11.34
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1017.00 =  1596.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1016.00 TO NODE   1017.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.34
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.241
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       16.20      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   16.20      SUBAREA RUNOFF(CFS) =   29.76
  EFFECTIVE AREA(ACRES) =     28.81   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     28.90       PEAK FLOW RATE(CFS) =      52.93

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.36; 30M = 0.66; 1HR = 0.94; 3HR = 1.83; 6HR = 2.80; 24HR = 5.03

****************************************************************************
  FLOW PROCESS FROM NODE   1017.00 TO NODE   1029.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1880.00  DOWNSTREAM(FEET) =   1835.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   342.00   CHANNEL SLOPE =  0.1316
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     52.93
  FLOW VELOCITY(FEET/SEC.) =   9.54   FLOW DEPTH(FEET) =   1.29
  TRAVEL TIME(MIN.) =   0.60   Tc(MIN.) =  11.94
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1029.00 =  1938.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1017.00 TO NODE   1029.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.94
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.184
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        4.60      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    4.60      SUBAREA RUNOFF(CFS) =    8.21
  EFFECTIVE AREA(ACRES) =     33.41   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     33.50       PEAK FLOW RATE(CFS) =      59.66

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.31; 30M = 0.63; 1HR = 0.86; 3HR = 1.58; 6HR = 2.33; 24HR = 4.08

****************************************************************************
  FLOW PROCESS FROM NODE   1029.00 TO NODE   1029.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  11.94
  RAINFALL INTENSITY(INCH/HR) =   2.18
  AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =    33.41
  TOTAL STREAM AREA(ACRES) =    33.50
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     59.66

****************************************************************************
  FLOW PROCESS FROM NODE   1020.00 TO NODE   1021.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   304.00
  ELEVATION DATA: UPSTREAM(FEET) =   2525.00  DOWNSTREAM(FEET) =   2360.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    7.853
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.902
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.70      0.20      1.00    81    7.85
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      1.70
  TOTAL AREA(ACRES) =      0.70   PEAK FLOW RATE(CFS) =      1.70

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1021.00 TO NODE   1022.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2360.00  DOWNSTREAM(FEET) =   2280.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   106.00   CHANNEL SLOPE =  0.7547
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      1.70
  FLOW VELOCITY(FEET/SEC.) =   7.28   FLOW DEPTH(FEET) =   0.20
  TRAVEL TIME(MIN.) =   0.24   Tc(MIN.) =   8.10
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1022.00 =   410.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1021.00 TO NODE   1022.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   8.10
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.842
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
```

```
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.50      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.50      SUBAREA RUNOFF(CFS) =    1.19
  EFFECTIVE AREA(ACRES) =      1.20   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.20       PEAK FLOW RATE(CFS) =       2.85

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1022.00 TO NODE   1023.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2280.00  DOWNSTREAM(FEET) =   2240.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    68.00   CHANNEL SLOPE =  0.5882
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      2.85
  FLOW VELOCITY(FEET/SEC.) =   7.79   FLOW DEPTH(FEET) =   0.29
  TRAVEL TIME(MIN.) =   0.15   Tc(MIN.) =   8.24
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1023.00 =   478.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1022.00 TO NODE   1023.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   8.24
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.806
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.70      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.70      SUBAREA RUNOFF(CFS) =    3.99
  EFFECTIVE AREA(ACRES) =      2.90   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      2.90       PEAK FLOW RATE(CFS) =       6.80

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1023.00 TO NODE   1024.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2240.00  DOWNSTREAM(FEET) =   2200.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    72.00   CHANNEL SLOPE =  0.5556
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      6.80
  FLOW VELOCITY(FEET/SEC.) =   9.84   FLOW DEPTH(FEET) =   0.47
  TRAVEL TIME(MIN.) =   0.12   Tc(MIN.) =   8.36
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1024.00 =   550.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1023.00 TO NODE   1024.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   8.36
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.776
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.30      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.30      SUBAREA RUNOFF(CFS) =    0.70
  EFFECTIVE AREA(ACRES) =      3.20   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      3.20       PEAK FLOW RATE(CFS) =       7.42

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1024.00 TO NODE   1025.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2200.00  DOWNSTREAM(FEET) =   2160.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   111.00   CHANNEL SLOPE =  0.3604
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      7.42
  FLOW VELOCITY(FEET/SEC.) =   8.62   FLOW DEPTH(FEET) =   0.55
  TRAVEL TIME(MIN.) =   0.21   Tc(MIN.) =   8.58
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1025.00 =   661.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1024.00 TO NODE   1025.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   8.58
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.723
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.80      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.80      SUBAREA RUNOFF(CFS) =    4.09
  EFFECTIVE AREA(ACRES) =      5.00   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      5.00       PEAK FLOW RATE(CFS) =      11.35

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
  FLOW PROCESS FROM NODE   1025.00 TO NODE   1026.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2160.00  DOWNSTREAM(FEET) =   2080.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   289.00   CHANNEL SLOPE =  0.2768
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     11.35
  FLOW VELOCITY(FEET/SEC.) =   8.30   FLOW DEPTH(FEET) =   0.54
  TRAVEL TIME(MIN.) =   0.58   Tc(MIN.) =   9.16
```

```
 LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1026.00 =   950.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1025.00 TO NODE   1026.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =   9.16
 *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.579
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      D        3.40      0.20      1.00    81
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    3.40      SUBAREA RUNOFF(CFS) =    7.28
 EFFECTIVE AREA(ACRES) =      8.40   AREA-AVERAGED Fm(INCH/HR) =  0.20
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =      8.40       PEAK FLOW RATE(CFS) =      17.98

 SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
 5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
 FLOW PROCESS FROM NODE   1026.00 TO NODE   1027.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   2080.00  DOWNSTREAM(FEET) =   2040.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   185.00   CHANNEL SLOPE =  0.2162
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     17.98
 FLOW VELOCITY(FEET/SEC.) =   8.71   FLOW DEPTH(FEET) =   0.75
 TRAVEL TIME(MIN.) =   0.35   Tc(MIN.) =   9.51
 LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1027.00 =  1135.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1026.00 TO NODE   1027.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =   9.51
 *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.491
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      D        6.20      0.20      1.00    81
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    6.20      SUBAREA RUNOFF(CFS) =   12.78
 EFFECTIVE AREA(ACRES) =     14.60   AREA-AVERAGED Fm(INCH/HR) =  0.20
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     14.60       PEAK FLOW RATE(CFS) =      30.10

 SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
 5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
 FLOW PROCESS FROM NODE   1027.00 TO NODE   1028.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   2040.00  DOWNSTREAM(FEET) =   2000.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   197.00   CHANNEL SLOPE =  0.2030
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     30.10
 FLOW VELOCITY(FEET/SEC.) =   9.80   FLOW DEPTH(FEET) =   1.02
 TRAVEL TIME(MIN.) =   0.33   Tc(MIN.) =   9.85
 LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1028.00 =  1332.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1027.00 TO NODE   1028.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =   9.85
 *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.408
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      D        9.90      0.20      1.00    81
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    9.90      SUBAREA RUNOFF(CFS) =   19.67
 EFFECTIVE AREA(ACRES) =     24.50   AREA-AVERAGED Fm(INCH/HR) =  0.20
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     24.50       PEAK FLOW RATE(CFS) =      48.69

 SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
 5M = 0.40; 30M = 0.68; 1HR = 0.99; 3HR = 2.01; 6HR = 3.14; 24HR = 5.71

****************************************************************************
 FLOW PROCESS FROM NODE   1028.00 TO NODE   1029.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   2000.00  DOWNSTREAM(FEET) =   1835.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   476.00   CHANNEL SLOPE =  0.3466
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     48.69
 FLOW VELOCITY(FEET/SEC.) =  13.61   FLOW DEPTH(FEET) =   1.14
 TRAVEL TIME(MIN.) =   0.58   Tc(MIN.) =  10.43
 LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1029.00 =  1808.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1028.00 TO NODE   1029.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  10.43
 *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.329
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      D        4.00      0.20      1.00    81
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    4.00      SUBAREA RUNOFF(CFS) =    7.66
 EFFECTIVE AREA(ACRES) =     28.50   AREA-AVERAGED Fm(INCH/HR) =  0.20
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     28.50       PEAK FLOW RATE(CFS) =      54.60

 SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
 5M = 0.33; 30M = 0.64; 1HR = 0.89; 3HR = 1.66; 6HR = 2.48; 24HR = 4.37

****************************************************************************
```

```
 FLOW PROCESS FROM NODE   1029.00 TO NODE   1029.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  10.43
 RAINFALL INTENSITY(INCH/HR) =   2.33
 AREA-AVERAGED Fm(INCH/HR) =  0.20
 AREA-AVERAGED Fp(INCH/HR) =  0.20
 AREA-AVERAGED Ap =  1.00
 EFFECTIVE STREAM AREA(ACRES) =    28.50
 TOTAL STREAM AREA(ACRES) =    28.50
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     54.60

 ** CONFLUENCE DATA **
  STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
  NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
     1     59.66  11.94    2.184  0.20( 0.20) 1.00    33.4    1010.00
     1     58.74  12.31    2.148  0.20( 0.20) 1.00    33.5    1000.00
     2     54.60  10.43    2.329  0.20( 0.20) 1.00    28.5    1020.00

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
  STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
  NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
     1    110.52  10.43    2.329  0.20( 0.20) 1.00    57.7    1020.00
     2    110.54  11.94    2.184  0.20( 0.20) 1.00    61.9    1010.00
     3    108.71  12.31    2.148  0.20( 0.20) 1.00    62.0    1000.00

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =    110.54    Tc(MIN.) =    11.94
 EFFECTIVE AREA(ACRES) =    61.91   AREA-AVERAGED Fm(INCH/HR) =  0.20
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     62.00
 LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1029.00 =  1938.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1029.00 TO NODE   1030.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   1835.00  DOWNSTREAM(FEET) =   1680.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1378.00   CHANNEL SLOPE =  0.1125
 CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   3.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    110.54
 FLOW VELOCITY(FEET/SEC.) =  10.98   FLOW DEPTH(FEET) =   2.01
 TRAVEL TIME(MIN.) =   2.09   Tc(MIN.) =  14.03
 LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1030.00 =  3316.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1029.00 TO NODE   1030.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  14.03
 *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.983
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      D       33.70      0.20      1.00    81
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   33.70      SUBAREA RUNOFF(CFS) =   54.08
 EFFECTIVE AREA(ACRES) =     95.61   AREA-AVERAGED Fm(INCH/HR) =  0.20
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     95.70       PEAK FLOW RATE(CFS) =     153.44

 SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
 5M = 0.29; 30M = 0.61; 1HR = 0.83; 3HR = 1.46; 6HR = 2.10; 24HR = 3.62

 ** PEAK FLOW RATE TABLE **
  STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
  NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
     1    158.57  12.52    2.128  0.20( 0.20) 1.00    91.4    1020.00
     2    153.44  14.03    1.983  0.20( 0.20) 1.00    95.6    1010.00
     3    150.48  14.40    1.947  0.20( 0.20) 1.00    95.7    1000.00
 NEW PEAK FLOW DATA ARE:
 PEAK FLOW RATE(CFS) =    158.57  Tc(MIN.) =  12.52
 AREA-AVERAGED Fm(INCH/HR) =  0.20  AREA-AVERAGED Fp(INCH/HR) =  0.20
 AREA-AVERAGED Ap =  1.00  EFFECTIVE AREA(ACRES) =     91.39

****************************************************************************
 FLOW PROCESS FROM NODE   1030.00 TO NODE   1031.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   1680.00  DOWNSTREAM(FEET) =   1630.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   523.00   CHANNEL SLOPE =  0.0956
 CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   4.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    158.57
 FLOW VELOCITY(FEET/SEC.) =  11.25   FLOW DEPTH(FEET) =   2.25
 TRAVEL TIME(MIN.) =   0.77   Tc(MIN.) =  13.30
 LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1031.00 =  3839.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1030.00 TO NODE   1031.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  13.30
 *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  2.054
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      D       81.00      0.20      1.00    81
 NATURAL FAIR COVER
 "GRASS"                    D        1.00      0.20      1.00    84
 NATURAL FAIR COVER
 "OPEN BRUSH"               D        1.80      0.20      1.00    83
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   83.80      SUBAREA RUNOFF(CFS) =  139.80
 EFFECTIVE AREA(ACRES) =    175.19   AREA-AVERAGED Fm(INCH/HR) =  0.20
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    179.50       PEAK FLOW RATE(CFS) =     292.25

 SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
 5M = 0.31; 30M = 0.62; 1HR = 0.85; 3HR = 1.56; 6HR = 2.28; 24HR = 3.98

****************************************************************************
 FLOW PROCESS FROM NODE   1031.00 TO NODE   1032.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   1630.00  DOWNSTREAM(FEET) =   1520.00
```

```
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1128.00   CHANNEL SLOPE =  0.0975
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    292.25
  FLOW VELOCITY(FEET/SEC.) =  13.22   FLOW DEPTH(FEET) =   2.83
  TRAVEL TIME(MIN.) =   1.42   Tc(MIN.) =  14.72
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1032.00 =  4967.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1031.00 TO NODE   1032.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  14.72
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.917
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        0.50      0.25      1.00    75
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.10      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      167.20      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.90      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        6.60      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D        0.80      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  176.10      SUBAREA RUNOFF(CFS) =  272.10
  EFFECTIVE AREA(ACRES) =    351.29   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    355.60       PEAK FLOW RATE(CFS) =     542.82

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.31; 30M = 0.62; 1HR = 0.85; 3HR = 1.55; 6HR = 2.26; 24HR = 3.93

****************************************************************************
  FLOW PROCESS FROM NODE   1032.00 TO NODE   1033.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1520.00  DOWNSTREAM(FEET) =   1320.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1992.00   CHANNEL SLOPE =  0.1004
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    542.82
  FLOW VELOCITY(FEET/SEC.) =  15.64   FLOW DEPTH(FEET) =   3.61
  TRAVEL TIME(MIN.) =   2.12   Tc(MIN.) =  16.84
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1033.00 =  6959.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1032.00 TO NODE   1033.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.84
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.761
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        0.70      0.40      1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        1.60      0.40      1.00    46
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       20.50      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        1.50      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       32.10      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       17.00      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   73.40      SUBAREA RUNOFF(CFS) =  101.72
  EFFECTIVE AREA(ACRES) =    424.69   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    429.00       PEAK FLOW RATE(CFS) =     595.24

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.82; 24HR = 3.04

****************************************************************************
  FLOW PROCESS FROM NODE   1032.00 TO NODE   1033.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.84
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.761
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        2.50      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    2.50      SUBAREA RUNOFF(CFS) =    3.51
  EFFECTIVE AREA(ACRES) =    427.19   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    431.50       PEAK FLOW RATE(CFS) =     598.75

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.82; 24HR = 3.04

****************************************************************************
  FLOW PROCESS FROM NODE   1033.00 TO NODE   1034.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1320.00  DOWNSTREAM(FEET) =   1275.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   804.00   CHANNEL SLOPE =  0.0560
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    598.75
  FLOW VELOCITY(FEET/SEC.) =  15.25   FLOW DEPTH(FEET) =   3.95
  TRAVEL TIME(MIN.) =   0.88   Tc(MIN.) =  17.72
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1034.00 =  7763.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1033.00 TO NODE   1034.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.72
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.700
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        1.90      0.40      1.00    40
```

```
  NATURAL FAIR COVER
  "OPEN BRUSH"                A        2.20      0.40      1.00    46
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C       27.10      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        7.20      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D       45.90      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D       48.60      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  132.90      SUBAREA RUNOFF(CFS) =  177.08
  EFFECTIVE AREA(ACRES) =    560.09   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    564.40       PEAK FLOW RATE(CFS) =     752.18

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1034.00 TO NODE   1035.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1275.00  DOWNSTREAM(FEET) =   1200.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1266.00   CHANNEL SLOPE =  0.0592
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    752.18
  FLOW VELOCITY(FEET/SEC.) =  16.44   FLOW DEPTH(FEET) =   4.12
  TRAVEL TIME(MIN.) =   1.28   Tc(MIN.) =  19.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1035.00 =  9029.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1034.00 TO NODE   1035.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.00
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.610
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       A       11.50      0.40      1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"                A        2.70      0.40      1.00    46
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C       14.60      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       16.60      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      C        0.10      0.25      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        1.10      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   46.60      SUBAREA RUNOFF(CFS) =   55.16
  EFFECTIVE AREA(ACRES) =    606.69   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    611.00       PEAK FLOW RATE(CFS) =     762.07

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
```

```
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1036.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1200.00  DOWNSTREAM(FEET) =   1100.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1639.00   CHANNEL SLOPE =  0.0610
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    762.07
  FLOW VELOCITY(FEET/SEC.) =  16.69   FLOW DEPTH(FEET) =   4.11
  TRAVEL TIME(MIN.) =   1.64   Tc(MIN.) =  20.64
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1036.00 = 10668.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1036.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  20.64
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.519
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       A       11.80      0.40      1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"                A        5.20      0.40      1.00    46
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C       20.30      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       21.80      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   59.10      SUBAREA RUNOFF(CFS) =   65.20
  EFFECTIVE AREA(ACRES) =    665.79   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    670.10       PEAK FLOW RATE(CFS) =     777.65

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1036.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>PEAK FLOW RATE ESTIMATOR CHANGED TO UNIT-HYDROGRAPH METHOD<<<<<
  >>>>>USING TIME-OF-CONCENTRATION OF LONGEST FLOWPATH<<<<<
============================================================================
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.29;30M= 0.61;1H= 0.83;3H= 1.47;6H= 2.11;24H= 3.62
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.38; LAG(HR) = 0.30; Fm(INCH/HR) = 0.22; Ybar = 0.54
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.97; 30M = 0.97; 1HR = 0.97;
  3HR = 1.00; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =    670.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1036.00 = 10668.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0399; Lca/L=0.4,n=.0357; Lca/L=0.5,n=.0328;Lca/L=0.6,n=.0306
  TIME OF PEAK FLOW(HR) = 16.25  RUNOFF VOLUME(AF) =     104.69
  UNIT-HYDROGRAPH METHOD PEAK FLOW RATE(CFS) =    642.85
  TOTAL PEAK FLOW RATE(CFS) =    642.85 (SOURCE FLOW INCLUDED)
  RATIONAL METHOD PEAK FLOW RATE(CFS) =    777.65
   (UPSTREAM NODE PEAK FLOW RATE(CFS) =    777.65)
  PEAK FLOW RATE(CFS) USED =    777.65
============================================================================
  END OF STUDY SUMMARY:
```

```
  TOTAL AREA(ACRES)     =    670.10  TC(MIN.) =     22.68
  AREA-AVERAGED Fm(INCH/HR)=  0.22   Ybar =  0.54
  PEAK FLOW RATE(CFS)   =    777.65
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU37010E.DAT
  TIME/DATE OF STUDY: 09:50 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  3.610
   2)  10.000;  2.370
   3)  15.000;  1.890
   4)  20.000;  1.540
   5)  30.000;  1.210
   6)  60.000;  0.840
   7) 120.000;  0.590
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1036.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU36010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      777.65    Tc(MIN.) =  22.68
  AREA-AVERAGED Fm(INCH/HR) =  0.22    Ybar = 0.54
  TOTAL AREA(ACRES) =     670.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1036.00 = 10668.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1036.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      777.65    Tc(MIN.) =  22.68
  AREA-AVERAGED Fm(INCH/HR) =  0.22    Ybar = 0.54
  TOTAL AREA(ACRES) =     670.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1036.00 = 10668.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1036.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1037.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1100.00  DOWNSTREAM(FEET) =   1010.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1517.00   CHANNEL SLOPE =  0.0593
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    777.65
  FLOW VELOCITY(FEET/SEC.) =  16.61   FLOW DEPTH(FEET) =   4.19
  TRAVEL TIME(MIN.) =   1.52   Tc(MIN.) =  24.21
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1037.00 = 12185.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1037.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  24.21
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.644
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       23.70      0.40      1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        6.70      0.40      1.00    46
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       82.50      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      114.00      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       24.20      0.25      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        2.50      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  253.60
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.28;30M= 0.60;1H= 0.81;3H= 1.43;6H= 2.03;24H= 3.48
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.40; LAG(HR) = 0.32; Fm(INCH/HR) = 0.23; Ybar = 0.58
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.96; 30M = 0.96; 1HR = 0.96;
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =    923.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1037.00 = 12185.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0380; Lca/L=0.4,n=.0340; Lca/L=0.5,n=.0313;Lca/L=0.6,n=.0292
  TIME OF PEAK FLOW(HR) = 16.25  RUNOFF VOLUME(AF) =     129.54
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =    809.69
  TOTAL AREA(ACRES) =    923.70       PEAK FLOW RATE(CFS) =     809.69

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.33; 6HR = 1.84; 24HR = 3.09

****************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1037.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  24.21
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.401
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       84.70      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       10.60      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   95.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.28;30M= 0.60;1H= 0.81;3H= 1.42;6H= 2.01;24H= 3.44
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.40; LAG(HR) = 0.32; Fm(INCH/HR) = 0.23; Ybar = 0.57
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.95; 30M = 0.95; 1HR = 0.95;
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1019.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1037.00 = 12185.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0380; Lca/L=0.4,n=.0340; Lca/L=0.5,n=.0313;Lca/L=0.6,n=.0292
  TIME OF PEAK FLOW(HR) = 16.25  RUNOFF VOLUME(AF) =     143.29
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =    887.03
  TOTAL AREA(ACRES) =   1019.00       PEAK FLOW RATE(CFS) =     887.03

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.33; 6HR = 1.84; 24HR = 3.09
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   1019.00  TC(MIN.) =     24.21
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.57
  PEAK FLOW RATE(CFS)   =    887.03
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: MU38010E.DAT
  TIME/DATE OF STUDY: 09:50 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  3.610
   2)  10.000;  2.370
   3)  15.000;  1.890
   4)  20.000;  1.540
   5)  30.000;  1.210
   6)  60.000;  0.840
   7) 120.000;  0.590
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1037.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU37010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      887.03    Tc(MIN.) =  24.21
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.57
  TOTAL AREA(ACRES) =    1019.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1037.00 = 12185.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1037.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      887.03    Tc(MIN.) =  24.21
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.57
  TOTAL AREA(ACRES) =    1019.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1037.00 = 12185.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1037.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1038.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1010.00  DOWNSTREAM(FEET) =    925.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2069.00   CHANNEL SLOPE =  0.0411
  CHANNEL BASE(FEET) =    8.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   8.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    887.03
  FLOW VELOCITY(FEET/SEC.) =  14.94   FLOW DEPTH(FEET) =   4.68
  TRAVEL TIME(MIN.) =   2.31   Tc(MIN.) =  26.51
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1038.00 = 14254.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1038.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  26.51
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.561
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       10.20      0.40      1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        0.40      0.40      1.00    46
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       31.20      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       17.50      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        4.70      0.25      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.20      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   65.20
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.28;30M= 0.60;1H= 0.81;3H= 1.41;6H= 2.00;24H= 3.42
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.44; LAG(HR) = 0.35; Fm(INCH/HR) = 0.23; Ybar = 0.58
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.95; 30M = 0.95; 1HR = 0.95;
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1084.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1038.00 = 14254.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0362; Lca/L=0.4,n=.0325; Lca/L=0.5,n=.0298;Lca/L=0.6,n=.0279
  TIME OF PEAK FLOW(HR) = 16.25  RUNOFF VOLUME(AF) =     149.10
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =    868.06
  TOTAL AREA(ACRES) =   1084.20       PEAK FLOW RATE(CFS) =     887.03
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1038.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  26.51
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.325
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       17.00      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        1.90      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   18.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.28;30M= 0.60;1H= 0.81;3H= 1.41;6H= 2.00;24H= 3.41
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.44; LAG(HR) = 0.35; Fm(INCH/HR) = 0.23; Ybar = 0.58
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.95; 30M = 0.95; 1HR = 0.95;
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1103.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1038.00 = 14254.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0362; Lca/L=0.4,n=.0325; Lca/L=0.5,n=.0298;Lca/L=0.6,n=.0279
  TIME OF PEAK FLOW(HR) = 16.25  RUNOFF VOLUME(AF) =     151.75
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =    882.17
  TOTAL AREA(ACRES) =   1103.10       PEAK FLOW RATE(CFS) =     887.03
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   1103.10  TC(MIN.) =     26.51
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.58
  PEAK FLOW RATE(CFS)   =    887.03
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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             Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: MU39010E.DAT
  TIME/DATE OF STUDY: 09:50 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  3.610
   2)  10.000;  2.370
   3)  15.000;  1.890
   4)  20.000;  1.540
   5)  30.000;  1.210
   6)  60.000;  0.840
   7) 120.000;  0.590
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1038.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU38010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      887.03    Tc(MIN.) =  26.51
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.58
  TOTAL AREA(ACRES) =    1103.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1038.00 = 14254.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1038.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      887.03    Tc(MIN.) =  26.51
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.58
  TOTAL AREA(ACRES) =    1103.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1038.00 = 14254.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1038.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1039.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    925.00  DOWNSTREAM(FEET) =    873.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1383.00   CHANNEL SLOPE =  0.0376
  CHANNEL BASE(FEET) =    8.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   8.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    887.03
  FLOW VELOCITY(FEET/SEC.) =  14.46   FLOW DEPTH(FEET) =   4.79
  TRAVEL TIME(MIN.) =   1.59   Tc(MIN.) =  28.11
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1039.00 = 15637.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1039.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  28.11
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.509
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       55.80      0.40      1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        2.30      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A        0.20      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      106.00      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      112.00      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        1.90      0.25      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  278.20
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.28;30M= 0.60;1H= 0.81;3H= 1.41;6H= 2.00;24H= 3.42
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.47; LAG(HR) = 0.37; Fm(INCH/HR) = 0.24; Ybar = 0.60
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.94; 30M = 0.94; 1HR = 0.94;
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1381.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1039.00 = 15637.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0354; Lca/L=0.4,n=.0318; Lca/L=0.5,n=.0292;Lca/L=0.6,n=.0272
  TIME OF PEAK FLOW(HR) = 16.25  RUNOFF VOLUME(AF) =     181.76
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1016.50
  TOTAL AREA(ACRES) =   1381.30       PEAK FLOW RATE(CFS) =    1016.50

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.28; 30M = 0.60; 1HR = 0.81; 3HR = 1.42; 6HR = 2.02; 24HR = 3.46

****************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1039.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  28.11
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.272
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  C        0.70      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D       28.50      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                     D       25.50      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D       92.90      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      D        0.80      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  148.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.28;30M= 0.60;1H= 0.81;3H= 1.41;6H= 2.01;24H= 3.42
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.47; LAG(HR) = 0.37; Fm(INCH/HR) = 0.24; Ybar = 0.59
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.93; 30M = 0.93; 1HR = 0.93;
  3HR = 0.99; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1529.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1039.00 = 15637.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0354; Lca/L=0.4,n=.0318; Lca/L=0.5,n=.0292;Lca/L=0.6,n=.0272
  TIME OF PEAK FLOW(HR) = 16.25  RUNOFF VOLUME(AF) =     205.66
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1122.65
  TOTAL AREA(ACRES) =   1529.70       PEAK FLOW RATE(CFS) =    1122.65

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.28; 30M = 0.60; 1HR = 0.81; 3HR = 1.42; 6HR = 2.02; 24HR = 3.46
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   1529.70  TC(MIN.) =     28.11
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.59
  PEAK FLOW RATE(CFS)   =   1122.65
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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             Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                         Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU40010E.DAT
  TIME/DATE OF STUDY: 09:50 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  3.610
   2)  10.000;  2.370
   3)  15.000;  1.890
   4)  20.000;  1.540
   5)  30.000;  1.210
   6)  60.000;  0.840
   7) 120.000;  0.590
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1039.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU39010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1122.65    Tc(MIN.) =  28.11
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.59
  TOTAL AREA(ACRES) =    1529.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1039.00 = 15637.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1039.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1122.65    Tc(MIN.) =  28.11
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.59
  TOTAL AREA(ACRES) =    1529.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1039.00 = 15637.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1039.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1040.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    873.00  DOWNSTREAM(FEET) =    780.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2714.00   CHANNEL SLOPE =  0.0343
  CHANNEL BASE(FEET) =    9.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   9.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1122.65
  FLOW VELOCITY(FEET/SEC.) =  14.81   FLOW DEPTH(FEET) =   5.30
  TRAVEL TIME(MIN.) =   3.05   Tc(MIN.) =  31.16
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1040.00 = 18351.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1040.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  31.16
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.423
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       31.10      0.40      1.00    40
  NATURAL FAIR COVER
  "GRASS"                    A        2.20      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A       12.10      0.40      1.00    46
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A        0.10      0.40      1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A        8.70      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      122.30      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  176.50
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.28;30M= 0.60;1H= 0.81;3H= 1.41;6H= 2.00;24H= 3.41
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.52; LAG(HR) = 0.42; Fm(INCH/HR) = 0.24; Ybar = 0.61
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.92; 30M = 0.92; 1HR = 0.92;
  3HR = 0.99; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1706.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1040.00 = 18351.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0341; Lca/L=0.4,n=.0306; Lca/L=0.5,n=.0281;Lca/L=0.6,n=.0262
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     220.95
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1194.41
  TOTAL AREA(ACRES) =   1706.20       PEAK FLOW RATE(CFS) =    1194.41

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.28; 30M = 0.60; 1HR = 0.80; 3HR = 1.39; 6HR = 1.96; 24HR = 3.32

****************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1040.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  31.16
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.196
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        1.60      0.25      1.00    79
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 C        1.30      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      137.40      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.90      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      129.90      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                    D       12.70      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  283.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.28;30M= 0.60;1H= 0.81;3H= 1.41;6H= 1.99;24H= 3.40
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.52; LAG(HR) = 0.42; Fm(INCH/HR) = 0.24; Ybar = 0.60
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.91; 30M = 0.91; 1HR = 0.91;
  3HR = 0.99; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1990.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1040.00 = 18351.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0341; Lca/L=0.4,n=.0306; Lca/L=0.5,n=.0281;Lca/L=0.6,n=.0262
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     258.77
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1375.08
  TOTAL AREA(ACRES) =   1990.00       PEAK FLOW RATE(CFS) =    1375.08

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.28; 30M = 0.60; 1HR = 0.80; 3HR = 1.39; 6HR = 1.96; 24HR = 3.32

****************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1040.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  31.16
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.196
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      116.40      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        4.40      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D        2.90      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  123.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.28;30M= 0.60;1H= 0.81;3H= 1.41;6H= 1.99;24H= 3.40
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.52; LAG(HR) = 0.42; Fm(INCH/HR) = 0.24; Ybar = 0.59
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.91; 30M = 0.91; 1HR = 0.91;
  3HR = 0.99; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   2113.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1040.00 = 18351.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0341; Lca/L=0.4,n=.0306; Lca/L=0.5,n=.0281;Lca/L=0.6,n=.0262
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     277.61
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1454.93
  TOTAL AREA(ACRES) =   2113.70       PEAK FLOW RATE(CFS) =    1454.93

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.28; 30M = 0.60; 1HR = 0.80; 3HR = 1.39; 6HR = 1.96; 24HR = 3.32
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   2113.70  TC(MIN.) =     31.16
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.59
  PEAK FLOW RATE(CFS)   =   1454.93
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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             Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                         Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU41010E.DAT
  TIME/DATE OF STUDY: 09:50 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  3.610
   2)  10.000;  2.370
   3)  15.000;  1.890
   4)  20.000;  1.540
   5)  30.000;  1.210
   6)  60.000;  0.840
   7) 120.000;  0.590
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1040.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU40010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1454.93    Tc(MIN.) =  31.16
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.59
  TOTAL AREA(ACRES) =    2113.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1040.00 = 18351.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1040.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1454.93    Tc(MIN.) =  31.16
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.59
  TOTAL AREA(ACRES) =    2113.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1040.00 = 18351.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1040.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1041.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    780.00  DOWNSTREAM(FEET) =    695.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2758.00   CHANNEL SLOPE =  0.0308
  CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1454.93
  FLOW VELOCITY(FEET/SEC.) =  15.18   FLOW DEPTH(FEET) =   5.99
  TRAVEL TIME(MIN.) =   3.03   Tc(MIN.) =  34.19
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1041.00 = 21109.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1041.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  34.19
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.349
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       30.00      0.40      1.00    40
  NATURAL FAIR COVER
  "GRASS"                    A        1.20      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A       28.60      0.40      1.00    46
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A        1.60      0.40      1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A       14.70      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       87.40      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.32
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  163.50
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.28;30M= 0.60;1H= 0.80;3H= 1.40;6H= 1.98;24H= 3.37
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.57; LAG(HR) = 0.46; Fm(INCH/HR) = 0.24; Ybar = 0.61
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.90; 30M = 0.90; 1HR = 0.90;
  3HR = 0.98; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   2277.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1041.00 = 21109.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0331; Lca/L=0.4,n=.0297; Lca/L=0.5,n=.0272;Lca/L=0.6,n=.0254
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     286.70
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1474.69
  TOTAL AREA(ACRES) =   2277.20       PEAK FLOW RATE(CFS) =    1474.69

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.04

****************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1041.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  34.19
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.158
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C       10.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      138.60      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        2.90      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       36.10      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                    D       56.80      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      220.70      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  465.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.28;30M= 0.60;1H= 0.80;3H= 1.38;6H= 1.95;24H= 3.31
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.57; LAG(HR) = 0.46; Fm(INCH/HR) = 0.24; Ybar = 0.60
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.88; 30M = 0.88; 1HR = 0.88;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   2742.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1041.00 = 21109.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0331; Lca/L=0.4,n=.0297; Lca/L=0.5,n=.0272;Lca/L=0.6,n=.0254
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     344.76
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1727.42
  TOTAL AREA(ACRES) =   2742.70       PEAK FLOW RATE(CFS) =    1727.42

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.04

****************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1041.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  34.19
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.158
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 D        0.90      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.28;30M= 0.60;1H= 0.80;3H= 1.38;6H= 1.95;24H= 3.31
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.57; LAG(HR) = 0.46; Fm(INCH/HR) = 0.24; Ybar = 0.60
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.88; 30M = 0.88; 1HR = 0.88;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   2743.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1041.00 = 21109.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0331; Lca/L=0.4,n=.0297; Lca/L=0.5,n=.0272;Lca/L=0.6,n=.0254
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     344.86
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1727.90
  TOTAL AREA(ACRES) =   2743.60       PEAK FLOW RATE(CFS) =    1727.90

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.04
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   2743.60  TC(MIN.) =     34.19
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.60
  PEAK FLOW RATE(CFS)   =   1727.90
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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             Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                         Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU42010E.DAT
  TIME/DATE OF STUDY: 09:50 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  3.610
   2)  10.000;  2.370
   3)  15.000;  1.890
   4)  20.000;  1.540
   5)  30.000;  1.210
   6)  60.000;  0.840
   7) 120.000;  0.590
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1041.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU41010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1727.90    Tc(MIN.) =  34.19
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.60
  TOTAL AREA(ACRES) =    2743.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1041.00 = 21109.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1041.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1727.90    Tc(MIN.) =  34.19
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.60
  TOTAL AREA(ACRES) =    2743.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1041.00 = 21109.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1041.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1042.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    695.00  DOWNSTREAM(FEET) =    650.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1846.00   CHANNEL SLOPE =  0.0244
  CHANNEL BASE(FEET) =   15.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1727.90
  FLOW VELOCITY(FEET/SEC.) =  14.25   FLOW DEPTH(FEET) =   5.82
  TRAVEL TIME(MIN.) =   2.16   Tc(MIN.) =  36.35
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1042.00 = 22955.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1042.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  36.35
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.303
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        1.30      0.40      1.00    40
  NATURAL FAIR COVER
  "GRASS"                    A        0.20      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        2.20      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A        5.30      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       25.10      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                    C        3.20      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   37.30
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.27;30M= 0.60;1H= 0.80;3H= 1.38;6H= 1.95;24H= 3.31
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.61; LAG(HR) = 0.48; Fm(INCH/HR) = 0.24; Ybar = 0.60
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.88; 30M = 0.88; 1HR = 0.88;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   2780.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1042.00 = 22955.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0326; Lca/L=0.4,n=.0293; Lca/L=0.5,n=.0269;Lca/L=0.6,n=.0251
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     347.66
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1670.14
  TOTAL AREA(ACRES) =   2780.90       PEAK FLOW RATE(CFS) =    1727.90
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1042.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  36.35
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.132
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       28.60      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.90      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       18.00      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                    D        2.20      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       44.10      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D        4.60      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   98.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.27;30M= 0.60;1H= 0.80;3H= 1.38;6H= 1.94;24H= 3.30
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.61; LAG(HR) = 0.48; Fm(INCH/HR) = 0.24; Ybar = 0.60
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.87; 30M = 0.87; 1HR = 0.87;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   2879.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1042.00 = 22955.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0326; Lca/L=0.4,n=.0293; Lca/L=0.5,n=.0269;Lca/L=0.6,n=.0251
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     359.56
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1719.24
  TOTAL AREA(ACRES) =   2879.30       PEAK FLOW RATE(CFS) =    1727.90
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   2879.30  TC(MIN.) =     36.35
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.60
  PEAK FLOW RATE(CFS)   =   1727.90
```

```
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU43010E.DAT
  TIME/DATE OF STUDY: 09:50 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  3.610
   2)  10.000;  2.370
   3)  15.000;  1.890
   4)  20.000;  1.540
   5)  30.000;  1.210
   6)  60.000;  0.840
   7) 120.000;  0.590
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1042.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU42010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1727.90    Tc(MIN.) =  36.35
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.60
  TOTAL AREA(ACRES) =    2879.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1042.00 = 22955.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1042.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1727.90    Tc(MIN.) =  36.35
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.60
  TOTAL AREA(ACRES) =    2879.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1042.00 = 22955.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1042.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1043.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    650.00  DOWNSTREAM(FEET) =    600.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2257.00   CHANNEL SLOPE =  0.0222
  CHANNEL BASE(FEET) =   15.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1727.90
  FLOW VELOCITY(FEET/SEC.) =  13.78   FLOW DEPTH(FEET) =   5.98
  TRAVEL TIME(MIN.) =   2.73   Tc(MIN.) =  39.08
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1043.00 = 25212.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1043.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  39.08
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.250
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        5.50      0.40      1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        8.00      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A        1.10      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        6.40      0.30      1.00    63
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        2.60      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        9.60      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.34
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   33.20
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.27;30M= 0.60;1H= 0.80;3H= 1.38;6H= 1.94;24H= 3.30
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.65; LAG(HR) = 0.52; Fm(INCH/HR) = 0.24; Ybar = 0.61
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.87; 30M = 0.87; 1HR = 0.87;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   2912.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1043.00 = 25212.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0323; Lca/L=0.4,n=.0289; Lca/L=0.5,n=.0266;Lca/L=0.6,n=.0248
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     360.60
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1623.41
  TOTAL AREA(ACRES) =   2912.50       PEAK FLOW RATE(CFS) =    1727.90
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1043.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  39.08
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.098
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       52.90      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       57.90      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       13.50      0.25      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       95.60      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                    D        0.60      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      213.70      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  434.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.27;30M= 0.60;1H= 0.80;3H= 1.37;6H= 1.93;24H= 3.26
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.65; LAG(HR) = 0.52; Fm(INCH/HR) = 0.24; Ybar = 0.60
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.85; 30M = 0.85; 1HR = 0.85;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   3346.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1043.00 = 25212.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0323; Lca/L=0.4,n=.0289; Lca/L=0.5,n=.0266;Lca/L=0.6,n=.0248
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     412.84
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1819.42
  TOTAL AREA(ACRES) =   3346.70       PEAK FLOW RATE(CFS) =    1819.42

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1043.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  39.08
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.098
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 D       8.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    8.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.27;30M= 0.60;1H= 0.80;3H= 1.37;6H= 1.93;24H= 3.26
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.65; LAG(HR) = 0.52; Fm(INCH/HR) = 0.24; Ybar = 0.60
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.85; 30M = 0.85; 1HR = 0.85;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   3355.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1043.00 = 25212.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0323; Lca/L=0.4,n=.0289; Lca/L=0.5,n=.0266;Lca/L=0.6,n=.0248
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     413.79
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1823.13
  TOTAL AREA(ACRES) =   3355.10       PEAK FLOW RATE(CFS) =    1823.13

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   3355.10  TC(MIN.) =     39.08
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.60
  PEAK FLOW RATE(CFS)   =   1823.13
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU44010E.DAT
  TIME/DATE OF STUDY: 09:50 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  3.610
   2)  10.000;  2.370
   3)  15.000;  1.890
   4)  20.000;  1.540
   5)  30.000;  1.210
   6)  60.000;  0.840
   7) 120.000;  0.590
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1043.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU43010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1823.13    Tc(MIN.) =  39.08
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.60
  TOTAL AREA(ACRES) =    3355.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1043.00 = 25212.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1043.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1823.13    Tc(MIN.) =  39.08
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.60
  TOTAL AREA(ACRES) =    3355.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1043.00 = 25212.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1043.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1044.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    600.00  DOWNSTREAM(FEET) =    580.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1011.00   CHANNEL SLOPE =  0.0198
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1823.13
  FLOW VELOCITY(FEET/SEC.) =  13.03   FLOW DEPTH(FEET) =   5.49
  TRAVEL TIME(MIN.) =   1.29   Tc(MIN.) =  40.37
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1044.00 = 26223.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1044.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  40.37
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.227
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        1.30      0.40      1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        1.30      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A        0.90      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.40      0.30      1.00    63
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.60      0.30      1.00    66
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        0.70      0.30      1.00    72
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.36
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    6.20
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.27;30M= 0.60;1H= 0.80;3H= 1.37;6H= 1.92;24H= 3.26
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.67; LAG(HR) = 0.54; Fm(INCH/HR) = 0.24; Ybar = 0.60
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.85; 30M = 0.85; 1HR = 0.85;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   3361.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1044.00 = 26223.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0322; Lca/L=0.4,n=.0289; Lca/L=0.5,n=.0265;Lca/L=0.6,n=.0247
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =     413.98
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1768.41
  TOTAL AREA(ACRES) =   3361.30       PEAK FLOW RATE(CFS) =    1823.13
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1044.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  40.37
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.082
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                B        2.80      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"     C       27.50      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"              C       32.50      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"    C        7.60      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                C        0.90      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"     D       33.20      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  104.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.27;30M= 0.60;1H= 0.80;3H= 1.37;6H= 1.92;24H= 3.25
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.67; LAG(HR) = 0.54; Fm(INCH/HR) = 0.24; Ybar = 0.60
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.85; 30M = 0.85; 1HR = 0.85;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   3465.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1044.00 = 26223.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0322; Lca/L=0.4,n=.0289; Lca/L=0.5,n=.0265;Lca/L=0.6,n=.0247
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =     424.87
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1810.17
  TOTAL AREA(ACRES) =   3465.80       PEAK FLOW RATE(CFS) =    1823.13
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1044.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  40.37
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.082
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"              D       50.70      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                D        3.70      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   54.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.27;30M= 0.60;1H= 0.80;3H= 1.37;6H= 1.92;24H= 3.25
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.67; LAG(HR) = 0.54; Fm(INCH/HR) = 0.24; Ybar = 0.60
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.84; 30M = 0.84; 1HR = 0.84;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   3520.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1044.00 = 26223.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0322; Lca/L=0.4,n=.0289; Lca/L=0.5,n=.0265;Lca/L=0.6,n=.0247
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =     431.88
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1833.44
  TOTAL AREA(ACRES) =   3520.20       PEAK FLOW RATE(CFS) =    1833.44

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   3520.20  TC(MIN.) =     40.37
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.60
  PEAK FLOW RATE(CFS)   =   1833.44
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU45010E.DAT
  TIME/DATE OF STUDY: 09:50 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  3.610
   2)  10.000;  2.370
   3)  15.000;  1.890
   4)  20.000;  1.540
   5)  30.000;  1.210
   6)  60.000;  0.840
   7) 120.000;  0.590
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1044.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU44010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1833.44    Tc(MIN.) =  40.37
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.60
  TOTAL AREA(ACRES) =    3520.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1044.00 = 26223.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1044.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1833.44    Tc(MIN.) =  40.37
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.60
  TOTAL AREA(ACRES) =    3520.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1044.00 = 26223.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1044.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1045.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    580.00  DOWNSTREAM(FEET) =    540.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1918.00   CHANNEL SLOPE =  0.0209
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1833.44
  FLOW VELOCITY(FEET/SEC.) =  13.30   FLOW DEPTH(FEET) =   5.42
  TRAVEL TIME(MIN.) =   2.40   Tc(MIN.) =  42.77
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1045.00 = 28141.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1045.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  42.77
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.187
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        6.20      0.40      1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        2.00      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A        6.00      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        4.50      0.30      1.00    63
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        2.40      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.20      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.37
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   21.30
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.27;30M= 0.60;1H= 0.80;3H= 1.37;6H= 1.92;24H= 3.25
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.71; LAG(HR) = 0.57; Fm(INCH/HR) = 0.24; Ybar = 0.60
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.84; 30M = 0.84; 1HR = 0.84;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   3541.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1045.00 = 28141.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0320; Lca/L=0.4,n=.0287; Lca/L=0.5,n=.0264;Lca/L=0.6,n=.0246
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =     432.35
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1829.98
  TOTAL AREA(ACRES) =   3541.50       PEAK FLOW RATE(CFS) =    1833.44
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1045.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  42.77
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.052
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       90.40      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       49.60      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        2.20      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C        6.70      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       75.70      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       85.10      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  309.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.27;30M= 0.60;1H= 0.79;3H= 1.36;6H= 1.91;24H= 3.23
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.71; LAG(HR) = 0.57; Fm(INCH/HR) = 0.24; Ybar = 0.60
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.83; 30M = 0.83; 1HR = 0.83;
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   3851.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1045.00 = 28141.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0320; Lca/L=0.4,n=.0287; Lca/L=0.5,n=.0264;Lca/L=0.6,n=.0246
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =     466.44
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1951.34
  TOTAL AREA(ACRES) =   3851.20       PEAK FLOW RATE(CFS) =    1951.34

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1045.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  42.77
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.052
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 D        8.30      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    8.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.27;30M= 0.60;1H= 0.79;3H= 1.36;6H= 1.91;24H= 3.23
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.71; LAG(HR) = 0.57; Fm(INCH/HR) = 0.24; Ybar = 0.60
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.83; 30M = 0.83; 1HR = 0.83;
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   3859.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1045.00 = 28141.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0320; Lca/L=0.4,n=.0287; Lca/L=0.5,n=.0264;Lca/L=0.6,n=.0246
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =     467.35
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1954.63
  TOTAL AREA(ACRES) =   3859.50       PEAK FLOW RATE(CFS) =    1954.63

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   3859.50  TC(MIN.) =     42.77
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.60
  PEAK FLOW RATE(CFS)   =   1954.63
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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             Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                         Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU46010E.DAT
  TIME/DATE OF STUDY: 09:50 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  3.610
   2)  10.000;  2.370
   3)  15.000;  1.890
   4)  20.000;  1.540
   5)  30.000;  1.210
   6)  60.000;  0.840
   7) 120.000;  0.590
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1045.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU45010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1954.63    Tc(MIN.) =  42.77
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.60
  TOTAL AREA(ACRES) =    3859.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1045.00 = 28141.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1045.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1954.63    Tc(MIN.) =  42.77
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.60
  TOTAL AREA(ACRES) =    3859.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1045.00 = 28141.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1045.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1046.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    540.00  DOWNSTREAM(FEET) =    515.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1273.00   CHANNEL SLOPE =  0.0196
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1954.63
  FLOW VELOCITY(FEET/SEC.) =  13.27   FLOW DEPTH(FEET) =   5.72
  TRAVEL TIME(MIN.) =   1.60   Tc(MIN.) =  44.37
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1046.00 = 29414.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1046.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  44.37
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.162
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        0.10      0.40      1.00    40
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        6.70      0.30      1.00    63
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.10      0.30      1.00    66
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        0.20      0.30      1.00    72
  NATURAL FAIR COVER
  "WOODLAND"                 B        1.00      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       90.00      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   99.10
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.27;30M= 0.60;1H= 0.79;3H= 1.36;6H= 1.91;24H= 3.23
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.74; LAG(HR) = 0.59; Fm(INCH/HR) = 0.24; Ybar = 0.61
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.82; 30M = 0.82; 1HR = 0.82;
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   3958.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1046.00 = 29414.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0319; Lca/L=0.4,n=.0286; Lca/L=0.5,n=.0263;Lca/L=0.6,n=.0245
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =     475.98
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1959.80
  TOTAL AREA(ACRES) =   3958.60       PEAK FLOW RATE(CFS) =    1959.80

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1046.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  44.37
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.033
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       42.90      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        3.80      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.80      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.60      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        1.70      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D        5.70      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   56.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.27;30M= 0.60;1H= 0.79;3H= 1.36;6H= 1.91;24H= 3.22
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.74; LAG(HR) = 0.59; Fm(INCH/HR) = 0.24; Ybar = 0.61
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.82; 30M = 0.82; 1HR = 0.82;
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4015.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1046.00 = 29414.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0319; Lca/L=0.4,n=.0286; Lca/L=0.5,n=.0263;Lca/L=0.6,n=.0245
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =     481.75
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1980.06
  TOTAL AREA(ACRES) =   4015.10       PEAK FLOW RATE(CFS) =    1980.06

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   4015.10  TC(MIN.) =     44.37
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.61
  PEAK FLOW RATE(CFS)   =   1980.06
============================================================================
============================================================================
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```
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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                         Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU47010E.DAT
  TIME/DATE OF STUDY: 09:50 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  3.610
   2)  10.000;  2.370
   3)  15.000;  1.890
   4)  20.000;  1.540
   5)  30.000;  1.210
   6)  60.000;  0.840
   7) 120.000;  0.590
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1046.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU46010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1980.06    Tc(MIN.) =  44.37
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.61
  TOTAL AREA(ACRES) =    4015.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1046.00 = 29414.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1046.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1980.06    Tc(MIN.) =  44.37
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.61
  TOTAL AREA(ACRES) =    4015.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1046.00 = 29414.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1046.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1047.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    515.00  DOWNSTREAM(FEET) =    485.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1705.00   CHANNEL SLOPE =  0.0176
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1980.06
  FLOW VELOCITY(FEET/SEC.) =  12.81   FLOW DEPTH(FEET) =   5.95
  TRAVEL TIME(MIN.) =   2.22   Tc(MIN.) =  46.59
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1047.00 = 31119.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1047.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  46.59
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.130
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        7.40      0.30      1.00    63
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        4.70      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        2.70      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       88.50      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                    C        0.70      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       48.30      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  152.30
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.27;30M= 0.60;1H= 0.79;3H= 1.36;6H= 1.90;24H= 3.22
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.78; LAG(HR) = 0.62; Fm(INCH/HR) = 0.24; Ybar = 0.61
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.81; 30M = 0.81; 1HR = 0.81;
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4167.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1047.00 = 31119.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0319; Lca/L=0.4,n=.0286; Lca/L=0.5,n=.0263;Lca/L=0.6,n=.0245
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =     495.30
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1967.22
  TOTAL AREA(ACRES) =   4167.40       PEAK FLOW RATE(CFS) =    1980.06
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1047.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  46.59
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.005
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       12.70      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C        5.70      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        2.60      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                    D        1.10      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        7.10      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        0.70      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   29.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.27;30M= 0.60;1H= 0.79;3H= 1.36;6H= 1.90;24H= 3.22
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.78; LAG(HR) = 0.62; Fm(INCH/HR) = 0.24; Ybar = 0.61
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.81; 30M = 0.81; 1HR = 0.81;
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4197.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1047.00 = 31119.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0319; Lca/L=0.4,n=.0286; Lca/L=0.5,n=.0263;Lca/L=0.6,n=.0245
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =     498.70
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1977.67
  TOTAL AREA(ACRES) =   4197.30       PEAK FLOW RATE(CFS) =    1980.06
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1047.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
```

```
============================================================================
  MAINLINE Tc(MIN) =  46.59
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.005
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 D        8.70      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    8.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.27;30M= 0.60;1H= 0.79;3H= 1.36;6H= 1.90;24H= 3.22
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.78; LAG(HR) = 0.62; Fm(INCH/HR) = 0.24; Ybar = 0.61
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.81; 30M = 0.81; 1HR = 0.81;
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4206.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1047.00 = 31119.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0319; Lca/L=0.4,n=.0286; Lca/L=0.5,n=.0263;Lca/L=0.6,n=.0245
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =     499.65
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1980.81
  TOTAL AREA(ACRES) =   4206.00       PEAK FLOW RATE(CFS) =    1980.81

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   4206.00  TC(MIN.) =     46.59
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.61
  PEAK FLOW RATE(CFS)   =   1980.81
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: MU48010E.DAT
  TIME/DATE OF STUDY: 09:50 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  3.610
   2)  10.000;  2.370
   3)  15.000;  1.890
   4)  20.000;  1.540
   5)  30.000;  1.210
   6)  60.000;  0.840
   7) 120.000;  0.590
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1047.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU47010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1980.81    Tc(MIN.) =  46.59
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.61
  TOTAL AREA(ACRES) =    4206.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1047.00 = 31119.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1047.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1980.81    Tc(MIN.) =  46.59
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.61
  TOTAL AREA(ACRES) =    4206.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1047.00 = 31119.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1047.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1048.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    485.00  DOWNSTREAM(FEET) =    445.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2398.00   CHANNEL SLOPE =  0.0167
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1980.81
  FLOW VELOCITY(FEET/SEC.) =  12.58   FLOW DEPTH(FEET) =   6.05
  TRAVEL TIME(MIN.) =   3.18   Tc(MIN.) =  49.77
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 33517.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1048.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  49.77
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.088
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        1.80      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                    B        3.00      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B        8.10      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       86.10      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                    C        4.70      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       47.30      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  151.00
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.27;30M= 0.60;1H= 0.79;3H= 1.36;6H= 1.90;24H= 3.21
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.83; LAG(HR) = 0.66; Fm(INCH/HR) = 0.24; Ybar = 0.61
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.81; 30M = 0.81; 1HR = 0.81;
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4357.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 33517.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0319; Lca/L=0.4,n=.0286; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0245
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =     513.09
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1920.39
  TOTAL AREA(ACRES) =   4357.00       PEAK FLOW RATE(CFS) =    1980.81
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1048.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  49.77
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.966
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C       22.40      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        6.80      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                    D        6.30      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        2.80      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D       11.70      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   50.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.27;30M= 0.60;1H= 0.79;3H= 1.36;6H= 1.90;24H= 3.21
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.83; LAG(HR) = 0.66; Fm(INCH/HR) = 0.24; Ybar = 0.61
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.80; 30M = 0.80; 1HR = 0.80;
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4407.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 33517.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0319; Lca/L=0.4,n=.0286; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0245
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =     518.19
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1936.29
  TOTAL AREA(ACRES) =   4407.00       PEAK FLOW RATE(CFS) =    1980.81
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   4407.00  TC(MIN.) =     49.77
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.61
  PEAK FLOW RATE(CFS)   =   1980.81
============================================================================
============================================================================
```

```
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

TECHNICAL APPENDIX II-A
HYDROLOGIC ANALYSIS
UPSTREAM AREAS
100-YEAR EXPECTED VALUE

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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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                          Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU36100E.DAT
  TIME/DATE OF STUDY: 10:29 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.440
   2)  10.000;  3.530
   3)  15.000;  2.790
   4)  20.000;  2.320
   5)  30.000;  1.830
   6)  60.000;  1.260
   7) 120.000;  0.890
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1001.00 IS CODE =  21
--------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
==========================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   327.00
  ELEVATION DATA: UPSTREAM(FEET) =   2400.00  DOWNSTREAM(FEET) =   2280.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    8.744
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.492
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.30      0.20      1.00    81    8.74
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      1.16
  TOTAL AREA(ACRES) =      0.30   PEAK FLOW RATE(CFS) =      1.16

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

**************************************************************************
  FLOW PROCESS FROM NODE   1001.00 TO NODE   1002.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2280.00  DOWNSTREAM(FEET) =   2240.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    95.00   CHANNEL SLOPE =  0.4211
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      1.16
  FLOW VELOCITY(FEET/SEC.) =   5.25   FLOW DEPTH(FEET) =   0.19
  TRAVEL TIME(MIN.) =   0.30   Tc(MIN.) =   9.05
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1002.00 =   422.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1001.00 TO NODE   1002.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =   9.05
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.895
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.30      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.30      SUBAREA RUNOFF(CFS) =    1.00
  EFFECTIVE AREA(ACRES) =      0.60   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      0.60       PEAK FLOW RATE(CFS) =       2.00

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

**************************************************************************
  FLOW PROCESS FROM NODE   1002.00 TO NODE   1003.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2240.00  DOWNSTREAM(FEET) =   2200.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    96.00   CHANNEL SLOPE =  0.4167
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
```

```
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      2.00
  FLOW VELOCITY(FEET/SEC.) =   6.25   FLOW DEPTH(FEET) =   0.25
  TRAVEL TIME(MIN.) =   0.26   Tc(MIN.) =   9.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1003.00 =   518.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1002.00 TO NODE   1003.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.30
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.797
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.30      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.30      SUBAREA RUNOFF(CFS) =    0.97
  EFFECTIVE AREA(ACRES) =      0.90   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      0.90       PEAK FLOW RATE(CFS) =       2.91

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1003.00 TO NODE   1004.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2200.00  DOWNSTREAM(FEET) =   2160.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   109.00   CHANNEL SLOPE =  0.3670
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      2.91
  FLOW VELOCITY(FEET/SEC.) =   6.62   FLOW DEPTH(FEET) =   0.33
  TRAVEL TIME(MIN.) =   0.27   Tc(MIN.) =   9.58
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1004.00 =   627.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1003.00 TO NODE   1004.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.58
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.692
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.40      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.40      SUBAREA RUNOFF(CFS) =    1.26
  EFFECTIVE AREA(ACRES) =      1.30   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.30       PEAK FLOW RATE(CFS) =       4.09

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1004.00 TO NODE   1005.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2160.00  DOWNSTREAM(FEET) =   2120.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   128.00   CHANNEL SLOPE =  0.3125
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      4.09
  FLOW VELOCITY(FEET/SEC.) =   6.96   FLOW DEPTH(FEET) =   0.41
  TRAVEL TIME(MIN.) =   0.31   Tc(MIN.) =   9.88
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1005.00 =   755.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1004.00 TO NODE   1005.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.88
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.575
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.60      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.60      SUBAREA RUNOFF(CFS) =    1.82
  EFFECTIVE AREA(ACRES) =      1.90   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.90       PEAK FLOW RATE(CFS) =       5.77

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1005.00 TO NODE   1014.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2120.00  DOWNSTREAM(FEET) =   2040.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   186.00   CHANNEL SLOPE =  0.4301
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      5.77
  FLOW VELOCITY(FEET/SEC.) =   8.58   FLOW DEPTH(FEET) =   0.46
  TRAVEL TIME(MIN.) =   0.36   Tc(MIN.) =  10.24
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1014.00 =   941.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1005.00 TO NODE   1014.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.24
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.494
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.60      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.60      SUBAREA RUNOFF(CFS) =    1.78
  EFFECTIVE AREA(ACRES) =      2.50   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      2.50       PEAK FLOW RATE(CFS) =       7.41
```

```
  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1014.00 TO NODE   1014.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  10.24
  RAINFALL INTENSITY(INCH/HR) =   3.49
  AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =     2.50
  TOTAL STREAM AREA(ACRES) =     2.50
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      7.41

****************************************************************************
  FLOW PROCESS FROM NODE   1010.00 TO NODE   1011.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   325.00
  ELEVATION DATA: UPSTREAM(FEET) =   2300.00  DOWNSTREAM(FEET) =   2200.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    9.035
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.899
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.60      0.20      1.00    81    9.04
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      2.00
  TOTAL AREA(ACRES) =      0.60   PEAK FLOW RATE(CFS) =      2.00

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1011.00 TO NODE   1012.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2200.00  DOWNSTREAM(FEET) =   2160.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    89.00   CHANNEL SLOPE =  0.4494
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      2.00
  FLOW VELOCITY(FEET/SEC.) =   6.42   FLOW DEPTH(FEET) =   0.25
  TRAVEL TIME(MIN.) =   0.23   Tc(MIN.) =   9.27
  LONGEST FLOWPATH FROM NODE   1010.00 TO NODE   1012.00 =   414.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1011.00 TO NODE   1012.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.27
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.810
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
```

```
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.40      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.40      SUBAREA RUNOFF(CFS) =    1.30
  EFFECTIVE AREA(ACRES) =      1.00   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.00       PEAK FLOW RATE(CFS) =       3.25

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1012.00 TO NODE   1013.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2160.00  DOWNSTREAM(FEET) =   2120.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   114.00   CHANNEL SLOPE =  0.3509
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      3.25
  FLOW VELOCITY(FEET/SEC.) =   6.78   FLOW DEPTH(FEET) =   0.35
  TRAVEL TIME(MIN.) =   0.28   Tc(MIN.) =   9.55
  LONGEST FLOWPATH FROM NODE   1010.00 TO NODE   1013.00 =   528.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1012.00 TO NODE   1013.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.55
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.703
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.90      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.90      SUBAREA RUNOFF(CFS) =    2.84
  EFFECTIVE AREA(ACRES) =      1.90   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.90       PEAK FLOW RATE(CFS) =       5.99

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1013.00 TO NODE   1014.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2120.00  DOWNSTREAM(FEET) =   2040.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   206.00   CHANNEL SLOPE =  0.3883
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      5.99
  FLOW VELOCITY(FEET/SEC.) =   8.35   FLOW DEPTH(FEET) =   0.48
  TRAVEL TIME(MIN.) =   0.41   Tc(MIN.) =   9.96
  LONGEST FLOWPATH FROM NODE   1010.00 TO NODE   1014.00 =   734.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1013.00 TO NODE   1014.00 IS CODE =  81
----------------------------------------------------------------------------
```

```
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.96
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.546
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.10      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.10      SUBAREA RUNOFF(CFS) =    3.31
  EFFECTIVE AREA(ACRES) =      3.00   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      3.00       PEAK FLOW RATE(CFS) =       9.04

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1014.00 TO NODE   1014.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =   9.96
  RAINFALL INTENSITY(INCH/HR) =   3.55
  AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =     3.00
  TOTAL STREAM AREA(ACRES) =     3.00
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      9.04

  ** CONFLUENCE DATA **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1      7.41  10.24    3.494  0.20( 0.20) 1.00     2.5    1000.00
      2      9.04   9.96    3.546  0.20( 0.20) 1.00     3.0    1010.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1     16.35   9.96    3.546  0.20( 0.20) 1.00     5.4    1010.00
      2     16.30  10.24    3.494  0.20( 0.20) 1.00     5.5    1000.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     16.35    Tc(MIN.) =     9.96
  EFFECTIVE AREA(ACRES) =     5.43   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      5.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1014.00 =   941.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1014.00 TO NODE   1015.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2040.00  DOWNSTREAM(FEET) =   2000.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   182.00   CHANNEL SLOPE =  0.2198
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     16.35
  FLOW VELOCITY(FEET/SEC.) =   8.55   FLOW DEPTH(FEET) =   0.71
  TRAVEL TIME(MIN.) =   0.35   Tc(MIN.) =  10.31
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1015.00 =  1123.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1014.00 TO NODE   1015.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.31
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.484
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        3.80      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.80      SUBAREA RUNOFF(CFS) =   11.23
  EFFECTIVE AREA(ACRES) =      9.23   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      9.30       PEAK FLOW RATE(CFS) =      27.28

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1015.00 TO NODE   1016.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2000.00  DOWNSTREAM(FEET) =   1920.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   366.00   CHANNEL SLOPE =  0.2186
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     27.28
  FLOW VELOCITY(FEET/SEC.) =   9.83   FLOW DEPTH(FEET) =   0.94
  TRAVEL TIME(MIN.) =   0.62   Tc(MIN.) =  10.93
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1016.00 =  1489.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1015.00 TO NODE   1016.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.93
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.392
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        3.40      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.40      SUBAREA RUNOFF(CFS) =    9.77
  EFFECTIVE AREA(ACRES) =     12.63   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     12.70       PEAK FLOW RATE(CFS) =      36.28

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.56; 30M = 0.99; 1HR = 1.40; 3HR = 2.74; 6HR = 4.19; 24HR = 7.50

****************************************************************************
  FLOW PROCESS FROM NODE   1016.00 TO NODE   1017.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
```

```
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1920.00  DOWNSTREAM(FEET) =   1880.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   107.00   CHANNEL SLOPE =  0.3738
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     36.28
  FLOW VELOCITY(FEET/SEC.) =  12.93   FLOW DEPTH(FEET) =   0.95
  TRAVEL TIME(MIN.) =   0.14   Tc(MIN.) =  11.07
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1017.00 =  1596.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1016.00 TO NODE   1017.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  11.07
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.372
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       16.20      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   16.20      SUBAREA RUNOFF(CFS) =   46.24
  EFFECTIVE AREA(ACRES) =     28.83   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     28.90       PEAK FLOW RATE(CFS) =      82.29

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.57; 30M = 1.00; 1HR = 1.42; 3HR = 2.79; 6HR = 4.28; 24HR = 7.68

****************************************************************************
  FLOW PROCESS FROM NODE   1017.00 TO NODE   1029.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1880.00  DOWNSTREAM(FEET) =   1835.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   342.00   CHANNEL SLOPE =  0.1316
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     82.29
  FLOW VELOCITY(FEET/SEC.) =  10.77   FLOW DEPTH(FEET) =   1.65
  TRAVEL TIME(MIN.) =   0.53   Tc(MIN.) =  11.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1029.00 =  1938.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1017.00 TO NODE   1029.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  11.60
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.293
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        4.60      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    4.60      SUBAREA RUNOFF(CFS) =   12.81
  EFFECTIVE AREA(ACRES) =     33.43   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     33.50       PEAK FLOW RATE(CFS) =      93.07

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.49; 30M = 0.94; 1HR = 1.29; 3HR = 2.39; 6HR = 3.53; 24HR = 6.16

****************************************************************************
  FLOW PROCESS FROM NODE   1029.00 TO NODE   1029.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
================================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  11.60
  RAINFALL INTENSITY(INCH/HR) =   3.29
  AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =    33.43
  TOTAL STREAM AREA(ACRES) =    33.50
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     93.07

****************************************************************************
  FLOW PROCESS FROM NODE   1020.00 TO NODE   1021.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
================================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   304.00
  ELEVATION DATA: UPSTREAM(FEET) =   2525.00  DOWNSTREAM(FEET) =   2360.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    7.853
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.350
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.70      0.20      1.00    81    7.85
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      2.61
  TOTAL AREA(ACRES) =      0.70   PEAK FLOW RATE(CFS) =      2.61

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1021.00 TO NODE   1022.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2360.00  DOWNSTREAM(FEET) =   2280.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   106.00   CHANNEL SLOPE =  0.7547
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      2.61
  FLOW VELOCITY(FEET/SEC.) =   8.41   FLOW DEPTH(FEET) =   0.25
  TRAVEL TIME(MIN.) =   0.21   Tc(MIN.) =   8.06
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1022.00 =   410.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1021.00 TO NODE   1022.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =   8.06
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.270
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
```

```
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.50      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.50      SUBAREA RUNOFF(CFS) =    1.83
  EFFECTIVE AREA(ACRES) =      1.20   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.20       PEAK FLOW RATE(CFS) =       4.40

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1022.00 TO NODE   1023.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2280.00  DOWNSTREAM(FEET) =   2240.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    68.00   CHANNEL SLOPE =  0.5882
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      4.40
  FLOW VELOCITY(FEET/SEC.) =   8.87   FLOW DEPTH(FEET) =   0.36
  TRAVEL TIME(MIN.) =   0.13   Tc(MIN.) =   8.19
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1023.00 =   478.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1022.00 TO NODE   1023.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   8.19
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.221
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.70      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.70      SUBAREA RUNOFF(CFS) =    6.15
  EFFECTIVE AREA(ACRES) =      2.90   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      2.90       PEAK FLOW RATE(CFS) =      10.50

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1023.00 TO NODE   1024.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2240.00  DOWNSTREAM(FEET) =   2200.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    72.00   CHANNEL SLOPE =  0.5556
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     10.50
  FLOW VELOCITY(FEET/SEC.) =  11.13   FLOW DEPTH(FEET) =   0.59
  TRAVEL TIME(MIN.) =   0.11   Tc(MIN.) =   8.30
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1024.00 =   550.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1023.00 TO NODE   1024.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
```

```
============================================================================
  MAINLINE Tc(MIN) =   8.30
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.180
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.30      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.30      SUBAREA RUNOFF(CFS) =    1.07
  EFFECTIVE AREA(ACRES) =      3.20   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      3.20       PEAK FLOW RATE(CFS) =      11.46

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1024.00 TO NODE   1025.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2200.00  DOWNSTREAM(FEET) =   2160.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   111.00   CHANNEL SLOPE =  0.3604
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     11.46
  FLOW VELOCITY(FEET/SEC.) =   9.65   FLOW DEPTH(FEET) =   0.70
  TRAVEL TIME(MIN.) =   0.19   Tc(MIN.) =   8.49
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1025.00 =   661.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1024.00 TO NODE   1025.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   8.49
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.107
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.80      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.80      SUBAREA RUNOFF(CFS) =    6.33
  EFFECTIVE AREA(ACRES) =      5.00   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      5.00       PEAK FLOW RATE(CFS) =      17.58

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
  FLOW PROCESS FROM NODE   1025.00 TO NODE   1026.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2160.00  DOWNSTREAM(FEET) =   2080.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   289.00   CHANNEL SLOPE =  0.2768
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     17.58
  FLOW VELOCITY(FEET/SEC.) =   9.45   FLOW DEPTH(FEET) =   0.69
  TRAVEL TIME(MIN.) =   0.51   Tc(MIN.) =   9.00
```

```
 LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1026.00 =   950.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1025.00 TO NODE   1026.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =   9.00
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.912
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      D        3.40      0.20      1.00    81
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    3.40      SUBAREA RUNOFF(CFS) =   11.36
 EFFECTIVE AREA(ACRES) =      8.40   AREA-AVERAGED Fm(INCH/HR) =  0.20
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =      8.40       PEAK FLOW RATE(CFS) =      28.06

 SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
 5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
 FLOW PROCESS FROM NODE   1026.00 TO NODE   1027.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   2080.00  DOWNSTREAM(FEET) =   2040.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   185.00   CHANNEL SLOPE =  0.2162
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     28.06
 FLOW VELOCITY(FEET/SEC.) =   9.90   FLOW DEPTH(FEET) =   0.96
 TRAVEL TIME(MIN.) =   0.31   Tc(MIN.) =   9.31
 LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1027.00 =  1135.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1026.00 TO NODE   1027.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =   9.31
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.793
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      D        6.20      0.20      1.00    81
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    6.20      SUBAREA RUNOFF(CFS) =   20.05
 EFFECTIVE AREA(ACRES) =     14.60   AREA-AVERAGED Fm(INCH/HR) =  0.20
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     14.60       PEAK FLOW RATE(CFS) =      47.21

 SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
 5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
 FLOW PROCESS FROM NODE   1027.00 TO NODE   1028.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   2040.00  DOWNSTREAM(FEET) =   2000.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   197.00   CHANNEL SLOPE =  0.2030
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     47.21
 FLOW VELOCITY(FEET/SEC.) =  11.07   FLOW DEPTH(FEET) =   1.29
 TRAVEL TIME(MIN.) =   0.30   Tc(MIN.) =   9.61
 LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1028.00 =  1332.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1027.00 TO NODE   1028.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =   9.61
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.680
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      D        9.90      0.20      1.00    81
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    9.90      SUBAREA RUNOFF(CFS) =   31.00
 EFFECTIVE AREA(ACRES) =     24.50   AREA-AVERAGED Fm(INCH/HR) =  0.20
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     24.50       PEAK FLOW RATE(CFS) =      76.73

 SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
 5M = 0.63; 30M = 1.04; 1HR = 1.51; 3HR = 3.08; 6HR = 4.81; 24HR = 8.76

****************************************************************************
 FLOW PROCESS FROM NODE   1028.00 TO NODE   1029.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   2000.00  DOWNSTREAM(FEET) =   1835.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   476.00   CHANNEL SLOPE =  0.3466
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     76.73
 FLOW VELOCITY(FEET/SEC.) =  15.30   FLOW DEPTH(FEET) =   1.45
 TRAVEL TIME(MIN.) =   0.52   Tc(MIN.) =  10.13
 LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1029.00 =  1808.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1028.00 TO NODE   1029.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  10.13
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.511
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      D        4.00      0.20      1.00    81
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    4.00      SUBAREA RUNOFF(CFS) =   11.92
 EFFECTIVE AREA(ACRES) =     28.50   AREA-AVERAGED Fm(INCH/HR) =  0.20
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     28.50       PEAK FLOW RATE(CFS) =      84.93

 SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
 5M = 0.52; 30M = 0.96; 1HR = 1.33; 3HR = 2.51; 6HR = 3.76; 24HR = 6.63

****************************************************************************
```

```
 FLOW PROCESS FROM NODE   1029.00 TO NODE   1029.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  10.13
 RAINFALL INTENSITY(INCH/HR) =   3.51
 AREA-AVERAGED Fm(INCH/HR) =  0.20
 AREA-AVERAGED Fp(INCH/HR) =  0.20
 AREA-AVERAGED Ap =  1.00
 EFFECTIVE STREAM AREA(ACRES) =    28.50
 TOTAL STREAM AREA(ACRES) =    28.50
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     84.93

 ** CONFLUENCE DATA **
  STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
  NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
     1     93.07  11.60    3.293  0.20( 0.20) 1.00    33.4    1010.00
     1     91.96  11.89    3.250  0.20( 0.20) 1.00    33.5    1000.00
     2     84.93  10.13    3.511  0.20( 0.20) 1.00    28.5    1020.00

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
  STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
  NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
     1    171.91  10.13    3.511  0.20( 0.20) 1.00    57.7    1020.00
     2    172.41  11.60    3.293  0.20( 0.20) 1.00    61.9    1010.00
     3    170.19  11.89    3.250  0.20( 0.20) 1.00    62.0    1000.00

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =    172.41    Tc(MIN.) =    11.60
 EFFECTIVE AREA(ACRES) =    61.93   AREA-AVERAGED Fm(INCH/HR) =  0.20
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     62.00
 LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1029.00 =  1938.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1029.00 TO NODE   1030.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   1835.00  DOWNSTREAM(FEET) =   1680.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1378.00   CHANNEL SLOPE =  0.1125
 CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   3.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    172.41
 FLOW VELOCITY(FEET/SEC.) =  12.34   FLOW DEPTH(FEET) =   2.53
 TRAVEL TIME(MIN.) =   1.86   Tc(MIN.) =  13.46
 LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1030.00 =  3316.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1029.00 TO NODE   1030.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  13.46
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.018
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      D       33.70      0.20      1.00    81
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   33.70      SUBAREA RUNOFF(CFS) =   85.46
 EFFECTIVE AREA(ACRES) =     95.63   AREA-AVERAGED Fm(INCH/HR) =  0.20
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     95.70       PEAK FLOW RATE(CFS) =     242.51

 SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
 5M = 0.45; 30M = 0.91; 1HR = 1.23; 3HR = 2.19; 6HR = 3.17; 24HR = 5.43

 ** PEAK FLOW RATE TABLE **
  STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
  NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
     1    249.68  11.99    3.236  0.20( 0.20) 1.00    91.4    1020.00
     2    242.51  13.46    3.018  0.20( 0.20) 1.00    95.6    1010.00
     3    238.87  13.76    2.973  0.20( 0.20) 1.00    95.7    1000.00
 NEW PEAK FLOW DATA ARE:
 PEAK FLOW RATE(CFS) =    249.68  Tc(MIN.) =  11.99
 AREA-AVERAGED Fm(INCH/HR) =  0.20  AREA-AVERAGED Fp(INCH/HR) =  0.20
 AREA-AVERAGED Ap =  1.00  EFFECTIVE AREA(ACRES) =     91.38

****************************************************************************
 FLOW PROCESS FROM NODE   1030.00 TO NODE   1031.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   1680.00  DOWNSTREAM(FEET) =   1630.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   523.00   CHANNEL SLOPE =  0.0956
 CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   4.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    249.68
 FLOW VELOCITY(FEET/SEC.) =  12.70   FLOW DEPTH(FEET) =   2.86
 TRAVEL TIME(MIN.) =   0.69   Tc(MIN.) =  12.67
 LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1031.00 =  3839.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1030.00 TO NODE   1031.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  12.67
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.134
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      D       81.00      0.20      1.00    81
 NATURAL FAIR COVER
 "GRASS"                    D        1.00      0.20      1.00    84
 NATURAL FAIR COVER
 "OPEN BRUSH"               D        1.80      0.20      1.00    83
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   83.80      SUBAREA RUNOFF(CFS) =  221.30
 EFFECTIVE AREA(ACRES) =    175.18   AREA-AVERAGED Fm(INCH/HR) =  0.20
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    179.50       PEAK FLOW RATE(CFS) =     462.63

 SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
 5M = 0.48; 30M = 0.93; 1HR = 1.28; 3HR = 2.34; 6HR = 3.45; 24HR = 6.00

****************************************************************************
 FLOW PROCESS FROM NODE   1031.00 TO NODE   1032.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   1630.00  DOWNSTREAM(FEET) =   1520.00
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```
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1128.00   CHANNEL SLOPE =  0.0975
 CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   5.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    462.63
 FLOW VELOCITY(FEET/SEC.) =  14.92   FLOW DEPTH(FEET) =   3.60
 TRAVEL TIME(MIN.) =   1.26   Tc(MIN.) =  13.93
 LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1032.00 =  4967.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1031.00 TO NODE   1032.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  13.93
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.948
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      C        0.50      0.25      1.00    75
 NATURAL FAIR COVER
 "WOODLAND"                 C        0.10      0.25      1.00    73
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      D      167.20      0.20      1.00    81
 NATURAL FAIR COVER
 "OPEN BRUSH"               D        0.90      0.20      1.00    83
 NATURAL FAIR COVER
 "CHAPARRAL,NARROWLEAF"     D        6.60      0.20      1.00    86
 NATURAL FAIR COVER
 "WOODLAND"                 D        0.80      0.20      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =  176.10      SUBAREA RUNOFF(CFS) =  435.47
 EFFECTIVE AREA(ACRES) =    351.28   AREA-AVERAGED Fm(INCH/HR) =  0.20
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    355.60       PEAK FLOW RATE(CFS) =     868.70

 SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
 5M = 0.48; 30M = 0.93; 1HR = 1.27; 3HR = 2.32; 6HR = 3.42; 24HR = 5.93

****************************************************************************
 FLOW PROCESS FROM NODE   1032.00 TO NODE   1033.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   1520.00  DOWNSTREAM(FEET) =   1320.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1992.00   CHANNEL SLOPE =  0.1004
 CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   6.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    868.70
 FLOW VELOCITY(FEET/SEC.) =  17.70   FLOW DEPTH(FEET) =   4.62
 TRAVEL TIME(MIN.) =   1.88   Tc(MIN.) =  15.81
 LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1033.00 =  6959.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1032.00 TO NODE   1033.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  15.81
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.714
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      A        0.70      0.40      1.00    40
 NATURAL FAIR COVER
 "OPEN BRUSH"               A        1.60      0.40      1.00    46
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      C       20.50      0.25      1.00    75
 NATURAL FAIR COVER
 "OPEN BRUSH"               C        1.50      0.25      1.00    77
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      D       32.10      0.20      1.00    81
 NATURAL FAIR COVER
 "OPEN BRUSH"               D       17.00      0.20      1.00    83
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   73.40      SUBAREA RUNOFF(CFS) =  164.66
 EFFECTIVE AREA(ACRES) =    424.68   AREA-AVERAGED Fm(INCH/HR) =  0.20
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    429.00       PEAK FLOW RATE(CFS) =     959.43

 SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
 5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.72; 24HR = 4.51

****************************************************************************
 FLOW PROCESS FROM NODE   1032.00 TO NODE   1033.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  15.81
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.714
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,NARROWLEAF"     D        2.50      0.20      1.00    86
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    2.50      SUBAREA RUNOFF(CFS) =    5.66
 EFFECTIVE AREA(ACRES) =    427.18   AREA-AVERAGED Fm(INCH/HR) =  0.20
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    431.50       PEAK FLOW RATE(CFS) =     965.08

 SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
 5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.72; 24HR = 4.51

****************************************************************************
 FLOW PROCESS FROM NODE   1033.00 TO NODE   1034.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   1320.00  DOWNSTREAM(FEET) =   1275.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   804.00   CHANNEL SLOPE =  0.0560
 CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    965.08
 FLOW VELOCITY(FEET/SEC.) =  17.27   FLOW DEPTH(FEET) =   5.06
 TRAVEL TIME(MIN.) =   0.78   Tc(MIN.) =  16.59
 LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1034.00 =  7763.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1033.00 TO NODE   1034.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  16.59
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.641
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      A        1.90      0.40      1.00    40
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  NATURAL FAIR COVER
  "OPEN BRUSH"                A        2.20      0.40      1.00    46
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C       27.10      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        7.20      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D       45.90      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D       48.60      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  132.90      SUBAREA RUNOFF(CFS) =  289.68
  EFFECTIVE AREA(ACRES) =    560.08   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    564.40       PEAK FLOW RATE(CFS) =    1226.72

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1034.00 TO NODE   1035.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1275.00  DOWNSTREAM(FEET) =   1200.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1266.00   CHANNEL SLOPE =  0.0592
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1226.72
  FLOW VELOCITY(FEET/SEC.) =  18.70   FLOW DEPTH(FEET) =   5.32
  TRAVEL TIME(MIN.) =   1.13   Tc(MIN.) =  17.71
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1035.00 =  9029.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1034.00 TO NODE   1035.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.71
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.535
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       A       11.50      0.40      1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"                A        2.70      0.40      1.00    46
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C       14.60      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       16.60      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      C        0.10      0.25      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        1.10      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   46.60      SUBAREA RUNOFF(CFS) =   93.96
  EFFECTIVE AREA(ACRES) =    606.68   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    611.00       PEAK FLOW RATE(CFS) =    1267.23

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
```

```
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1036.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1200.00  DOWNSTREAM(FEET) =   1100.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1639.00   CHANNEL SLOPE =  0.0610
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1267.23
  FLOW VELOCITY(FEET/SEC.) =  19.06   FLOW DEPTH(FEET) =   5.37
  TRAVEL TIME(MIN.) =   1.43   Tc(MIN.) =  19.15
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1036.00 = 10668.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1036.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.15
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.400
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       A       11.80      0.40      1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"                A        5.20      0.40      1.00    46
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C       20.30      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       21.80      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   59.10      SUBAREA RUNOFF(CFS) =  112.07
  EFFECTIVE AREA(ACRES) =    665.78   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    670.10       PEAK FLOW RATE(CFS) =    1305.73

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1036.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>PEAK FLOW RATE ESTIMATOR CHANGED TO UNIT-HYDROGRAPH METHOD<<<<<
  >>>>>USING TIME-OF-CONCENTRATION OF LONGEST FLOWPATH<<<<<
============================================================================
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.45;30M= 0.91;1H= 1.23;3H= 2.19;6H= 3.18;24H= 5.44
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.35; LAG(HR) = 0.28; Fm(INCH/HR) = 0.22; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.97; 30M = 0.97; 1HR = 0.97;
  3HR = 1.00; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =    670.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1036.00 = 10668.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0370; Lca/L=0.4,n=.0332; Lca/L=0.5,n=.0305;Lca/L=0.6,n=.0284
  TIME OF PEAK FLOW(HR) = 16.25  RUNOFF VOLUME(AF) =     191.70
  UNIT-HYDROGRAPH METHOD PEAK FLOW RATE(CFS) =   1074.14
  TOTAL PEAK FLOW RATE(CFS) =   1074.14 (SOURCE FLOW INCLUDED)
  RATIONAL METHOD PEAK FLOW RATE(CFS) =   1305.73
   (UPSTREAM NODE PEAK FLOW RATE(CFS) =   1305.73)
  PEAK FLOW RATE(CFS) USED =   1305.73
============================================================================
  END OF STUDY SUMMARY:
```

```
  TOTAL AREA(ACRES)     =    670.10  TC(MIN.) =     21.05
  AREA-AVERAGED Fm(INCH/HR)=  0.22   Ybar =  0.42
  PEAK FLOW RATE(CFS)   =   1305.73
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU37100E.DAT
  TIME/DATE OF STUDY: 10:29 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.440
   2)  10.000;  3.530
   3)  15.000;  2.790
   4)  20.000;  2.320
   5)  30.000;  1.830
   6)  60.000;  1.260
   7) 120.000;  0.890
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1036.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU36100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1305.73    Tc(MIN.) =  21.05
  AREA-AVERAGED Fm(INCH/HR) =  0.22    Ybar = 0.42
  TOTAL AREA(ACRES) =     670.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1036.00 = 10668.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1036.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1305.73    Tc(MIN.) =  21.05
  AREA-AVERAGED Fm(INCH/HR) =  0.22    Ybar = 0.42
  TOTAL AREA(ACRES) =     670.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1036.00 = 10668.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1036.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1037.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1100.00  DOWNSTREAM(FEET) =   1010.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1517.00   CHANNEL SLOPE =  0.0593
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1305.73
  FLOW VELOCITY(FEET/SEC.) =  19.01   FLOW DEPTH(FEET) =   5.50
  TRAVEL TIME(MIN.) =   1.33   Tc(MIN.) =  22.38
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1037.00 = 12185.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1037.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  22.38
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.622
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       23.70      0.40      1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        6.70      0.40      1.00    46
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       82.50      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      114.00      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       24.20      0.25      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        2.50      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  253.60
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.44;30M= 0.90;1H= 1.21;3H= 2.13;6H= 3.06;24H= 5.20
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.37; LAG(HR) = 0.30; Fm(INCH/HR) = 0.23; Ybar = 0.46
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.96; 30M = 0.96; 1HR = 0.96;
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =    923.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1037.00 = 12185.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0351; Lca/L=0.4,n=.0315; Lca/L=0.5,n=.0289;Lca/L=0.6,n=.0270
  TIME OF PEAK FLOW(HR) = 16.25  RUNOFF VOLUME(AF) =     240.23
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1383.21
  TOTAL AREA(ACRES) =    923.70       PEAK FLOW RATE(CFS) =    1383.21

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.41; 30M = 0.87; 1HR = 1.16; 3HR = 1.97; 6HR = 2.76; 24HR = 4.58

****************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1037.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  22.38
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.203
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       84.70      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       10.60      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   95.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.44;30M= 0.90;1H= 1.21;3H= 2.12;6H= 3.03;24H= 5.14
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.37; LAG(HR) = 0.30; Fm(INCH/HR) = 0.23; Ybar = 0.45
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.95; 30M = 0.95; 1HR = 0.95;
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1019.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1037.00 = 12185.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0351; Lca/L=0.4,n=.0315; Lca/L=0.5,n=.0289;Lca/L=0.6,n=.0270
  TIME OF PEAK FLOW(HR) = 16.25  RUNOFF VOLUME(AF) =     264.48
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1513.98
  TOTAL AREA(ACRES) =   1019.00       PEAK FLOW RATE(CFS) =    1513.98

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.41; 30M = 0.87; 1HR = 1.16; 3HR = 1.97; 6HR = 2.76; 24HR = 4.58
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   1019.00  TC(MIN.) =     22.38
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.45
  PEAK FLOW RATE(CFS)   =   1513.98
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: MU38100E.DAT
  TIME/DATE OF STUDY: 10:29 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.440
   2)  10.000;  3.530
   3)  15.000;  2.790
   4)  20.000;  2.320
   5)  30.000;  1.830
   6)  60.000;  1.260
   7) 120.000;  0.890
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1037.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU37100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1513.98    Tc(MIN.) =  22.38
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.45
  TOTAL AREA(ACRES) =    1019.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1037.00 = 12185.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1037.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1513.98    Tc(MIN.) =  22.38
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.45
  TOTAL AREA(ACRES) =    1019.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1037.00 = 12185.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1037.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1038.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1010.00  DOWNSTREAM(FEET) =    925.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2069.00   CHANNEL SLOPE =  0.0411
  CHANNEL BASE(FEET) =    8.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   8.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1513.98
  FLOW VELOCITY(FEET/SEC.) =  17.20   FLOW DEPTH(FEET) =   6.20
  TRAVEL TIME(MIN.) =   2.01   Tc(MIN.) =  24.38
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1038.00 = 14254.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1038.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  24.38
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.496
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       10.20      0.40      1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        0.40      0.40      1.00    46
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       31.20      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       17.50      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        4.70      0.25      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.20      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   65.20
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.43;30M= 0.89;1H= 1.20;3H= 2.10;6H= 3.01;24H= 5.11
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.41; LAG(HR) = 0.33; Fm(INCH/HR) = 0.23; Ybar = 0.46
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.95; 30M = 0.95; 1HR = 0.95;
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1084.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1038.00 = 14254.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0333; Lca/L=0.4,n=.0299; Lca/L=0.5,n=.0274;Lca/L=0.6,n=.0256
  TIME OF PEAK FLOW(HR) = 16.25  RUNOFF VOLUME(AF) =     275.97
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1513.74
  TOTAL AREA(ACRES) =   1084.20       PEAK FLOW RATE(CFS) =    1513.98
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1038.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  24.38
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.105
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       17.00      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        1.90      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   18.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.43;30M= 0.89;1H= 1.20;3H= 2.10;6H= 3.01;24H= 5.09
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.41; LAG(HR) = 0.33; Fm(INCH/HR) = 0.23; Ybar = 0.46
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.95; 30M = 0.95; 1HR = 0.95;
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1103.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1038.00 = 14254.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0333; Lca/L=0.4,n=.0299; Lca/L=0.5,n=.0274;Lca/L=0.6,n=.0256
  TIME OF PEAK FLOW(HR) = 16.25  RUNOFF VOLUME(AF) =     280.64
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1537.78
  TOTAL AREA(ACRES) =   1103.10       PEAK FLOW RATE(CFS) =    1537.78

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   1103.10  TC(MIN.) =     24.38
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.46
  PEAK FLOW RATE(CFS)   =   1537.78
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU39100E.DAT
  TIME/DATE OF STUDY: 10:29 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.440
   2)  10.000;  3.530
   3)  15.000;  2.790
   4)  20.000;  2.320
   5)  30.000;  1.830
   6)  60.000;  1.260
   7) 120.000;  0.890
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1038.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU38100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1537.78    Tc(MIN.) =  24.38
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.46
  TOTAL AREA(ACRES) =    1103.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1038.00 = 14254.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1038.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1537.78    Tc(MIN.) =  24.38
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.46
  TOTAL AREA(ACRES) =    1103.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1038.00 = 14254.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1038.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1039.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    925.00  DOWNSTREAM(FEET) =    873.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1383.00   CHANNEL SLOPE =  0.0376
  CHANNEL BASE(FEET) =    8.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   8.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1537.78
  FLOW VELOCITY(FEET/SEC.) =  16.70   FLOW DEPTH(FEET) =   6.40
  TRAVEL TIME(MIN.) =   1.38   Tc(MIN.) =  25.76
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1039.00 = 15637.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1039.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  25.76
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.418
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       55.80      0.40      1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        2.30      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A        0.20      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      106.00      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      112.00      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        1.90      0.25      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  278.20
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.44;30M= 0.89;1H= 1.20;3H= 2.11;6H= 3.02;24H= 5.11
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.43; LAG(HR) = 0.34; Fm(INCH/HR) = 0.24; Ybar = 0.48
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.94; 30M = 0.94; 1HR = 0.94;
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1381.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1039.00 = 15637.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0325; Lca/L=0.4,n=.0291; Lca/L=0.5,n=.0267;Lca/L=0.6,n=.0249
  TIME OF PEAK FLOW(HR) = 16.25  RUNOFF VOLUME(AF) =     339.79
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1810.38
  TOTAL AREA(ACRES) =   1381.30       PEAK FLOW RATE(CFS) =    1810.38

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.44; 30M = 0.90; 1HR = 1.21; 3HR = 2.12; 6HR = 3.04; 24HR = 5.17

****************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1039.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  25.76
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.038
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.70      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       28.50      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                    D       25.50      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       92.90      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        0.80      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  148.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.44;30M= 0.90;1H= 1.20;3H= 2.11;6H= 3.02;24H= 5.12
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.43; LAG(HR) = 0.34; Fm(INCH/HR) = 0.24; Ybar = 0.47
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.93; 30M = 0.93; 1HR = 0.93;
  3HR = 0.99; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1529.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1039.00 = 15637.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0325; Lca/L=0.4,n=.0291; Lca/L=0.5,n=.0267;Lca/L=0.6,n=.0249
  TIME OF PEAK FLOW(HR) = 16.25  RUNOFF VOLUME(AF) =     382.56
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1998.09
  TOTAL AREA(ACRES) =   1529.70       PEAK FLOW RATE(CFS) =    1998.09

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.44; 30M = 0.90; 1HR = 1.21; 3HR = 2.12; 6HR = 3.04; 24HR = 5.17
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   1529.70  TC(MIN.) =     25.76
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.47
  PEAK FLOW RATE(CFS)   =   1998.09
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: MU40100E.DAT
  TIME/DATE OF STUDY: 10:29 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.440
   2)  10.000;  3.530
   3)  15.000;  2.790
   4)  20.000;  2.320
   5)  30.000;  1.830
   6)  60.000;  1.260
   7) 120.000;  0.890
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1039.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU39100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1998.09    Tc(MIN.) =  25.76
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.47
  TOTAL AREA(ACRES) =    1529.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1039.00 = 15637.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1039.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1998.09    Tc(MIN.) =  25.76
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.47
  TOTAL AREA(ACRES) =    1529.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1039.00 = 15637.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1039.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1040.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    873.00  DOWNSTREAM(FEET) =    780.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2714.00   CHANNEL SLOPE =  0.0343
  CHANNEL BASE(FEET) =    9.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   9.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1998.09
  FLOW VELOCITY(FEET/SEC.) =  17.22   FLOW DEPTH(FEET) =   7.17
  TRAVEL TIME(MIN.) =   2.63   Tc(MIN.) =  28.39
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1040.00 = 18351.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1040.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  28.39
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.287
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       31.10      0.40      1.00    40
  NATURAL FAIR COVER
  "GRASS"                    A        2.20      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A       12.10      0.40      1.00    46
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A        0.10      0.40      1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A        8.70      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      122.30      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  176.50
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.44;30M= 0.89;1H= 1.20;3H= 2.10;6H= 3.01;24H= 5.10
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.47; LAG(HR) = 0.38; Fm(INCH/HR) = 0.24; Ybar = 0.49
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.92; 30M = 0.92; 1HR = 0.92;
  3HR = 0.99; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1706.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1040.00 = 18351.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0311; Lca/L=0.4,n=.0279; Lca/L=0.5,n=.0256;Lca/L=0.6,n=.0239
  TIME OF PEAK FLOW(HR) = 16.25  RUNOFF VOLUME(AF) =     414.05
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2005.67
  TOTAL AREA(ACRES) =   1706.20       PEAK FLOW RATE(CFS) =    2005.67

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.43; 30M = 0.89; 1HR = 1.19; 3HR = 2.06; 6HR = 2.94; 24HR = 4.96

****************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1040.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  28.39
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.909
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        1.60      0.25      1.00    79
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 C        1.30      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      137.40      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.90      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      129.90      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                    D       12.70      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  283.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.43;30M= 0.89;1H= 1.20;3H= 2.10;6H= 3.00;24H= 5.08
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.47; LAG(HR) = 0.38; Fm(INCH/HR) = 0.24; Ybar = 0.48
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.91; 30M = 0.91; 1HR = 0.91;
  3HR = 0.99; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1990.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1040.00 = 18351.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0311; Lca/L=0.4,n=.0279; Lca/L=0.5,n=.0256;Lca/L=0.6,n=.0239
  TIME OF PEAK FLOW(HR) = 16.25  RUNOFF VOLUME(AF) =     484.79
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2307.60
  TOTAL AREA(ACRES) =   1990.00       PEAK FLOW RATE(CFS) =    2307.60

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.43; 30M = 0.89; 1HR = 1.19; 3HR = 2.06; 6HR = 2.94; 24HR = 4.96

****************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1040.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  28.39
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.909
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      116.40      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        4.40      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D        2.90      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  123.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.43;30M= 0.89;1H= 1.20;3H= 2.09;6H= 3.00;24H= 5.07
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.47; LAG(HR) = 0.38; Fm(INCH/HR) = 0.24; Ybar = 0.48
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.91; 30M = 0.91; 1HR = 0.91;
  3HR = 0.99; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   2113.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1040.00 = 18351.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0311; Lca/L=0.4,n=.0279; Lca/L=0.5,n=.0256;Lca/L=0.6,n=.0239
  TIME OF PEAK FLOW(HR) = 16.25  RUNOFF VOLUME(AF) =     518.58
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2439.45
  TOTAL AREA(ACRES) =   2113.70       PEAK FLOW RATE(CFS) =    2439.45

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.43; 30M = 0.89; 1HR = 1.19; 3HR = 2.06; 6HR = 2.94; 24HR = 4.96
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   2113.70  TC(MIN.) =     28.39
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.48
  PEAK FLOW RATE(CFS)   =   2439.45
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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 ************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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             Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                         Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

 ----------------------------------------------------------------------------
  FILE NAME: MU41100E.DAT
  TIME/DATE OF STUDY: 10:29 03/26/2004
 ============================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
 ============================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.440
   2)  10.000;  3.530
   3)  15.000;  2.790
   4)  20.000;  2.320
   5)  30.000;  1.830
   6)  60.000;  1.260
   7) 120.000;  0.890
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


 ************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1040.00 IS CODE = 15.1
 ----------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
 ============================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU40100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2439.45    Tc(MIN.) =  28.39
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.48
  TOTAL AREA(ACRES) =    2113.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1040.00 = 18351.00 FEET.

 ****************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1040.00 IS CODE = 14.0
 ----------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
 ============================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2439.45    Tc(MIN.) =  28.39
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.48
  TOTAL AREA(ACRES) =    2113.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1040.00 = 18351.00 FEET.

 ****************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1040.00 IS CODE =  12
 ----------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
 ============================================================================

 ****************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1041.00 IS CODE =  51
 ----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
 ============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    780.00  DOWNSTREAM(FEET) =    695.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2758.00   CHANNEL SLOPE =  0.0308
  CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2439.45
  FLOW VELOCITY(FEET/SEC.) =  17.39   FLOW DEPTH(FEET) =   7.86
  TRAVEL TIME(MIN.) =   2.64   Tc(MIN.) =  31.03
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1041.00 = 21109.00 FEET.

 ****************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1041.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) =  31.03
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.174
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       30.00      0.40      1.00    40
  NATURAL FAIR COVER
  "GRASS"                    A        1.20      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A       28.60      0.40      1.00    46
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A        1.60      0.40      1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A       14.70      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       87.40      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.32
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  163.50
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.43;30M= 0.89;1H= 1.20;3H= 2.08;6H= 2.98;24H= 5.03
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.52; LAG(HR) = 0.41; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.90; 30M = 0.90; 1HR = 0.90;
  3HR = 0.98; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   2277.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1041.00 = 21109.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0300; Lca/L=0.4,n=.0269; Lca/L=0.5,n=.0247;Lca/L=0.6,n=.0231
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     538.82
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2545.13
  TOTAL AREA(ACRES) =   2277.20       PEAK FLOW RATE(CFS) =    2545.13

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.50

****************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1041.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  31.03
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.810
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C       10.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      138.60      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        2.90      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       36.10      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                    D       56.80      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      220.70      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  465.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.43;30M= 0.89;1H= 1.19;3H= 2.06;6H= 2.93;24H= 4.94
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.52; LAG(HR) = 0.41; Fm(INCH/HR) = 0.24; Ybar = 0.48
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.88; 30M = 0.88; 1HR = 0.88;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   2742.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1041.00 = 21109.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0300; Lca/L=0.4,n=.0269; Lca/L=0.5,n=.0247;Lca/L=0.6,n=.0231
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     644.98
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2975.36
  TOTAL AREA(ACRES) =   2742.70       PEAK FLOW RATE(CFS) =    2975.36

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.50

****************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1041.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  31.03
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.810
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 D        0.90      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.43;30M= 0.89;1H= 1.19;3H= 2.06;6H= 2.93;24H= 4.94
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.52; LAG(HR) = 0.41; Fm(INCH/HR) = 0.24; Ybar = 0.48
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.88; 30M = 0.88; 1HR = 0.88;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   2743.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1041.00 = 21109.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0300; Lca/L=0.4,n=.0269; Lca/L=0.5,n=.0247;Lca/L=0.6,n=.0231
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     645.18
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2976.18
  TOTAL AREA(ACRES) =   2743.60       PEAK FLOW RATE(CFS) =    2976.18

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.50
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   2743.60  TC(MIN.) =     31.03
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.48
  PEAK FLOW RATE(CFS)   =   2976.18
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU42100E.DAT
  TIME/DATE OF STUDY: 10:29 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.440
   2)  10.000;  3.530
   3)  15.000;  2.790
   4)  20.000;  2.320
   5)  30.000;  1.830
   6)  60.000;  1.260
   7) 120.000;  0.890
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1041.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU41100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2976.18    Tc(MIN.) =  31.03
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.48
  TOTAL AREA(ACRES) =    2743.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1041.00 = 21109.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1041.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2976.18    Tc(MIN.) =  31.03
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.48
  TOTAL AREA(ACRES) =    2743.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1041.00 = 21109.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1041.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1042.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    695.00  DOWNSTREAM(FEET) =    650.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1846.00   CHANNEL SLOPE =  0.0244
  CHANNEL BASE(FEET) =   15.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2976.18
  FLOW VELOCITY(FEET/SEC.) =  16.56   FLOW DEPTH(FEET) =   7.86
  TRAVEL TIME(MIN.) =   1.86   Tc(MIN.) =  32.89
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1042.00 = 22955.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1042.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  32.89
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.102
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        1.30      0.40      1.00    40
  NATURAL FAIR COVER
  "GRASS"                    A        0.20      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        2.20      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A        5.30      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       25.10      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                    C        3.20      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   37.30
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.43;30M= 0.89;1H= 1.19;3H= 2.06;6H= 2.93;24H= 4.94
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.55; LAG(HR) = 0.44; Fm(INCH/HR) = 0.24; Ybar = 0.49
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.88; 30M = 0.88; 1HR = 0.88;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   2780.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1042.00 = 22955.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0295; Lca/L=0.4,n=.0265; Lca/L=0.5,n=.0243;Lca/L=0.6,n=.0227
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     650.98
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2957.18
  TOTAL AREA(ACRES) =   2780.90       PEAK FLOW RATE(CFS) =    2976.18
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1042.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  32.89
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.775
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       28.60      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.90      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       18.00      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                    D        2.20      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       44.10      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D        4.60      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   98.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.43;30M= 0.89;1H= 1.19;3H= 2.05;6H= 2.92;24H= 4.92
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.55; LAG(HR) = 0.44; Fm(INCH/HR) = 0.24; Ybar = 0.49
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.87; 30M = 0.87; 1HR = 0.87;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   2879.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1042.00 = 22955.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0295; Lca/L=0.4,n=.0265; Lca/L=0.5,n=.0243;Lca/L=0.6,n=.0227
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     673.00
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3043.30
  TOTAL AREA(ACRES) =   2879.30       PEAK FLOW RATE(CFS) =    3043.30

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   2879.30  TC(MIN.) =     32.89
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.49
  PEAK FLOW RATE(CFS)   =   3043.30
============================================================================
```

```
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU43100E.DAT
  TIME/DATE OF STUDY: 10:29 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.440
   2)  10.000;  3.530
   3)  15.000;  2.790
   4)  20.000;  2.320
   5)  30.000;  1.830
   6)  60.000;  1.260
   7) 120.000;  0.890
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1042.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU42100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3043.30    Tc(MIN.) =  32.89
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.49
  TOTAL AREA(ACRES) =    2879.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1042.00 = 22955.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1042.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3043.30    Tc(MIN.) =  32.89
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.49
  TOTAL AREA(ACRES) =    2879.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1042.00 = 22955.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1042.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1043.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    650.00  DOWNSTREAM(FEET) =    600.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2257.00   CHANNEL SLOPE =  0.0222
  CHANNEL BASE(FEET) =   15.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3043.30
  FLOW VELOCITY(FEET/SEC.) =  16.09   FLOW DEPTH(FEET) =   8.17
  TRAVEL TIME(MIN.) =   2.34   Tc(MIN.) =  35.23
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1043.00 = 25212.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1043.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  35.23
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.021
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        5.50      0.40      1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        8.00      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A        1.10      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        6.40      0.30      1.00    63
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        2.60      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        9.60      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.34
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   33.20
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.42;30M= 0.89;1H= 1.19;3H= 2.05;6H= 2.92;24H= 4.92
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.59; LAG(HR) = 0.47; Fm(INCH/HR) = 0.24; Ybar = 0.49
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.87; 30M = 0.87; 1HR = 0.87;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   2912.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1043.00 = 25212.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0291; Lca/L=0.4,n=.0261; Lca/L=0.5,n=.0240;Lca/L=0.6,n=.0224
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     676.00
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2939.64
  TOTAL AREA(ACRES) =   2912.50       PEAK FLOW RATE(CFS) =    3043.30
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1043.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  35.23
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.731
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       52.90      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       57.90      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       13.50      0.25      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       95.60      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                    D        0.60      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      213.70      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  434.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.42;30M= 0.89;1H= 1.18;3H= 2.04;6H= 2.89;24H= 4.86
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.59; LAG(HR) = 0.47; Fm(INCH/HR) = 0.24; Ybar = 0.48
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.85; 30M = 0.85; 1HR = 0.85;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   3346.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1043.00 = 25212.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0291; Lca/L=0.4,n=.0261; Lca/L=0.5,n=.0240;Lca/L=0.6,n=.0224
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     773.00
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3292.11
  TOTAL AREA(ACRES) =   3346.70       PEAK FLOW RATE(CFS) =    3292.11

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1043.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  35.23
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.731
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 D        8.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    8.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.42;30M= 0.89;1H= 1.18;3H= 2.04;6H= 2.89;24H= 4.86
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.59; LAG(HR) = 0.47; Fm(INCH/HR) = 0.24; Ybar = 0.48
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.85; 30M = 0.85; 1HR = 0.85;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   3355.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1043.00 = 25212.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0291; Lca/L=0.4,n=.0261; Lca/L=0.5,n=.0240;Lca/L=0.6,n=.0224
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     774.80
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3298.80
  TOTAL AREA(ACRES) =   3355.10       PEAK FLOW RATE(CFS) =    3298.80

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   3355.10  TC(MIN.) =     35.23
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.48
  PEAK FLOW RATE(CFS)   =   3298.80
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU44100E.DAT
  TIME/DATE OF STUDY: 10:29 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.440
   2)  10.000;  3.530
   3)  15.000;  2.790
   4)  20.000;  2.320
   5)  30.000;  1.830
   6)  60.000;  1.260
   7) 120.000;  0.890
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1043.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU43100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3298.80    Tc(MIN.) =  35.23
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.48
  TOTAL AREA(ACRES) =    3355.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1043.00 = 25212.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1043.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3298.80    Tc(MIN.) =  35.23
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.48
  TOTAL AREA(ACRES) =    3355.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1043.00 = 25212.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1043.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1044.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    600.00  DOWNSTREAM(FEET) =    580.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1011.00   CHANNEL SLOPE =  0.0198
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3298.80
  FLOW VELOCITY(FEET/SEC.) =  15.48   FLOW DEPTH(FEET) =   7.69
  TRAVEL TIME(MIN.) =   1.09   Tc(MIN.) =  36.32
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1044.00 = 26223.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1044.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  36.32
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.986
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        1.30      0.40      1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        1.30      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A        0.90      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.40      0.30      1.00    63
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.60      0.30      1.00    66
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        0.70      0.30      1.00    72
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.36
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    6.20
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.42;30M= 0.88;1H= 1.18;3H= 2.04;6H= 2.89;24H= 4.86
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.61; LAG(HR) = 0.48; Fm(INCH/HR) = 0.24; Ybar = 0.48
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.85; 30M = 0.85; 1HR = 0.85;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   3361.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1044.00 = 26223.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0290; Lca/L=0.4,n=.0260; Lca/L=0.5,n=.0238;Lca/L=0.6,n=.0222
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     775.35
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3233.01
  TOTAL AREA(ACRES) =   3361.30       PEAK FLOW RATE(CFS) =    3298.80
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1044.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  36.32
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.710
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 B        2.80      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       27.50      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       32.50      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        7.60      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.90      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       33.20      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  104.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.42;30M= 0.88;1H= 1.18;3H= 2.03;6H= 2.88;24H= 4.85
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.61; LAG(HR) = 0.48; Fm(INCH/HR) = 0.24; Ybar = 0.48
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.85; 30M = 0.85; 1HR = 0.85;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   3465.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1044.00 = 26223.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0290; Lca/L=0.4,n=.0260; Lca/L=0.5,n=.0238;Lca/L=0.6,n=.0222
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     796.55
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3310.97
  TOTAL AREA(ACRES) =   3465.80       PEAK FLOW RATE(CFS) =    3310.97

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1044.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  36.32
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.710
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       50.70      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D        3.70      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   54.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.42;30M= 0.88;1H= 1.18;3H= 2.03;6H= 2.88;24H= 4.84
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.61; LAG(HR) = 0.48; Fm(INCH/HR) = 0.24; Ybar = 0.48
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.84; 30M = 0.84; 1HR = 0.84;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   3520.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1044.00 = 26223.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0290; Lca/L=0.4,n=.0260; Lca/L=0.5,n=.0238;Lca/L=0.6,n=.0222
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     809.31
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3353.04
  TOTAL AREA(ACRES) =   3520.20       PEAK FLOW RATE(CFS) =    3353.04

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   3520.20  TC(MIN.) =     36.32
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.48
  PEAK FLOW RATE(CFS)   =   3353.04
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU45100E.DAT
  TIME/DATE OF STUDY: 10:29 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.440
   2)  10.000;  3.530
   3)  15.000;  2.790
   4)  20.000;  2.320
   5)  30.000;  1.830
   6)  60.000;  1.260
   7) 120.000;  0.890
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1044.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU44100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3353.04    Tc(MIN.) =  36.32
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.48
  TOTAL AREA(ACRES) =    3520.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1044.00 = 26223.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1044.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3353.04    Tc(MIN.) =  36.32
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.48
  TOTAL AREA(ACRES) =    3520.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1044.00 = 26223.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1044.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1045.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    580.00  DOWNSTREAM(FEET) =    540.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1918.00   CHANNEL SLOPE =  0.0209
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3353.04
  FLOW VELOCITY(FEET/SEC.) =  15.85   FLOW DEPTH(FEET) =   7.65
  TRAVEL TIME(MIN.) =   2.02   Tc(MIN.) =  38.33
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1045.00 = 28141.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1045.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  38.33
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.926
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        6.20      0.40      1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        2.00      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A        6.00      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        4.50      0.30      1.00    63
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        2.40      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.20      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.37
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   21.30
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.42;30M= 0.88;1H= 1.18;3H= 2.03;6H= 2.88;24H= 4.84
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.64; LAG(HR) = 0.51; Fm(INCH/HR) = 0.24; Ybar = 0.49
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.84; 30M = 0.84; 1HR = 0.84;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   3541.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1045.00 = 28141.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0287; Lca/L=0.4,n=.0257; Lca/L=0.5,n=.0236;Lca/L=0.6,n=.0221
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     810.81
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3220.94
  TOTAL AREA(ACRES) =   3541.50       PEAK FLOW RATE(CFS) =    3353.04
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1045.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  38.33
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.672
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       90.40      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       49.60      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        2.20      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C        6.70      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       75.70      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       85.10      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  309.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.42;30M= 0.88;1H= 1.18;3H= 2.02;6H= 2.87;24H= 4.81
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.64; LAG(HR) = 0.51; Fm(INCH/HR) = 0.24; Ybar = 0.48
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.83; 30M = 0.83; 1HR = 0.83;
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   3851.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1045.00 = 28141.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0287; Lca/L=0.4,n=.0257; Lca/L=0.5,n=.0236;Lca/L=0.6,n=.0221
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     876.09
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3437.47
  TOTAL AREA(ACRES) =   3851.20       PEAK FLOW RATE(CFS) =    3437.47

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1045.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  38.33
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.672
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 D        8.30      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    8.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.42;30M= 0.88;1H= 1.18;3H= 2.02;6H= 2.87;24H= 4.81
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.64; LAG(HR) = 0.51; Fm(INCH/HR) = 0.24; Ybar = 0.48
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.83; 30M = 0.83; 1HR = 0.83;
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   3859.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1045.00 = 28141.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0287; Lca/L=0.4,n=.0257; Lca/L=0.5,n=.0236;Lca/L=0.6,n=.0221
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     877.86
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3443.29
  TOTAL AREA(ACRES) =   3859.50       PEAK FLOW RATE(CFS) =    3443.29

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   3859.50  TC(MIN.) =     38.33
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.48
  PEAK FLOW RATE(CFS)   =   3443.29
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
 ************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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             Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                         Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

 ------------------------------------------------------------------------
  FILE NAME: MU46100E.DAT
  TIME/DATE OF STUDY: 10:29 03/26/2004
 ========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
 ========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.440
   2)  10.000;  3.530
   3)  15.000;  2.790
   4)  20.000;  2.320
   5)  30.000;  1.830
   6)  60.000;  1.260
   7) 120.000;  0.890
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


 ************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1045.00 IS CODE = 15.1
 ------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
 ========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU45100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3443.29    Tc(MIN.) =  38.33
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.48
  TOTAL AREA(ACRES) =    3859.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1045.00 = 28141.00 FEET.

 ************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1045.00 IS CODE = 14.0
 ------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
 ========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3443.29    Tc(MIN.) =  38.33
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.48
  TOTAL AREA(ACRES) =    3859.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1045.00 = 28141.00 FEET.

 ************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1045.00 IS CODE =  12
 ------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
 ========================================================================

 ************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1046.00 IS CODE =  51
 ------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
 ========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    540.00  DOWNSTREAM(FEET) =    515.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1273.00   CHANNEL SLOPE =  0.0196
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3443.29
  FLOW VELOCITY(FEET/SEC.) =  15.64   FLOW DEPTH(FEET) =   7.89
  TRAVEL TIME(MIN.) =   1.36   Tc(MIN.) =  39.69
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1046.00 = 29414.00 FEET.

 ************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1046.00 IS CODE =  81
 ------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ========================================================================
  MAINLINE Tc(MIN) =  39.69
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.888
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        0.10      0.40      1.00    40
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        6.70      0.30      1.00    63
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.10      0.30      1.00    66
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        0.20      0.30      1.00    72
  NATURAL FAIR COVER
  "WOODLAND"                 B        1.00      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       90.00      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   99.10
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.42;30M= 0.88;1H= 1.18;3H= 2.02;6H= 2.86;24H= 4.80
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.66; LAG(HR) = 0.53; Fm(INCH/HR) = 0.24; Ybar = 0.49
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.82; 30M = 0.82; 1HR = 0.82;
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   3958.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1046.00 = 29414.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0286; Lca/L=0.4,n=.0256; Lca/L=0.5,n=.0235;Lca/L=0.6,n=.0219
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     895.73
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3392.71
  TOTAL AREA(ACRES) =   3958.60       PEAK FLOW RATE(CFS) =    3443.29
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1046.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  39.69
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.646
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       42.90      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        3.80      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.80      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.60      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        1.70      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D        5.70      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   56.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.42;30M= 0.88;1H= 1.18;3H= 2.02;6H= 2.86;24H= 4.80
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.66; LAG(HR) = 0.53; Fm(INCH/HR) = 0.24; Ybar = 0.49
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.82; 30M = 0.82; 1HR = 0.82;
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4015.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1046.00 = 29414.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0286; Lca/L=0.4,n=.0256; Lca/L=0.5,n=.0235;Lca/L=0.6,n=.0219
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     907.05
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3428.61
  TOTAL AREA(ACRES) =   4015.10       PEAK FLOW RATE(CFS) =    3443.29
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   4015.10  TC(MIN.) =     39.69
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.49
  PEAK FLOW RATE(CFS)   =   3443.29
```

```
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: MU47100E.DAT
  TIME/DATE OF STUDY: 10:29 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.440
   2)  10.000;  3.530
   3)  15.000;  2.790
   4)  20.000;  2.320
   5)  30.000;  1.830
   6)  60.000;  1.260
   7) 120.000;  0.890
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  ========== ================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1046.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU46100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3443.29    Tc(MIN.) =  39.69
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.49
  TOTAL AREA(ACRES) =    4015.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1046.00 = 29414.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1046.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3443.29    Tc(MIN.) =  39.69
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.49
  TOTAL AREA(ACRES) =    4015.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1046.00 = 29414.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1046.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1047.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    515.00  DOWNSTREAM(FEET) =    485.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1705.00   CHANNEL SLOPE =  0.0176
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3443.29
  FLOW VELOCITY(FEET/SEC.) =  15.02   FLOW DEPTH(FEET) =   8.14
  TRAVEL TIME(MIN.) =   1.89   Tc(MIN.) =  41.58
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1047.00 = 31119.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1047.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  41.58
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.838
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        7.40      0.30      1.00    63
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        4.70      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        2.70      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       88.50      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                    C        0.70      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       48.30      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  152.30
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.42;30M= 0.88;1H= 1.18;3H= 2.02;6H= 2.86;24H= 4.79
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.69; LAG(HR) = 0.55; Fm(INCH/HR) = 0.24; Ybar = 0.49
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.81; 30M = 0.81; 1HR = 0.81;
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4167.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1047.00 = 31119.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0284; Lca/L=0.4,n=.0255; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0219
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =     934.93
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3481.90
  TOTAL AREA(ACRES) =   4167.40       PEAK FLOW RATE(CFS) =    3481.90

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1047.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  41.58
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.610
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       12.70      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C        5.70      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        2.60      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                    D        1.10      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        7.10      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        0.70      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   29.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.42;30M= 0.88;1H= 1.18;3H= 2.02;6H= 2.85;24H= 4.78
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.69; LAG(HR) = 0.55; Fm(INCH/HR) = 0.24; Ybar = 0.49
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.81; 30M = 0.81; 1HR = 0.81;
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4197.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1047.00 = 31119.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0284; Lca/L=0.4,n=.0255; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0219
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =     941.35
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3500.59
  TOTAL AREA(ACRES) =   4197.30       PEAK FLOW RATE(CFS) =    3500.59

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1047.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  41.58
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.610
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 D        8.70      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    8.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.42;30M= 0.88;1H= 1.18;3H= 2.02;6H= 2.85;24H= 4.78
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.69; LAG(HR) = 0.55; Fm(INCH/HR) = 0.24; Ybar = 0.49
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.81; 30M = 0.81; 1HR = 0.81;
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4206.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1047.00 = 31119.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0284; Lca/L=0.4,n=.0255; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0219
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =     943.20
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3506.17
  TOTAL AREA(ACRES) =   4206.00       PEAK FLOW RATE(CFS) =    3506.17

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   4206.00  TC(MIN.) =     41.58
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.49
  PEAK FLOW RATE(CFS)   =   3506.17
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: MU48100E.DAT
  TIME/DATE OF STUDY: 10:29 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.440
   2)  10.000;  3.530
   3)  15.000;  2.790
   4)  20.000;  2.320
   5)  30.000;  1.830
   6)  60.000;  1.260
   7) 120.000;  0.890
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1047.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU47100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3506.17    Tc(MIN.) =  41.58
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.49
  TOTAL AREA(ACRES) =    4206.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1047.00 = 31119.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1047.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3506.17    Tc(MIN.) =  41.58
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.49
  TOTAL AREA(ACRES) =    4206.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1047.00 = 31119.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1047.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1048.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    485.00  DOWNSTREAM(FEET) =    445.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2398.00   CHANNEL SLOPE =  0.0167
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3506.17
  FLOW VELOCITY(FEET/SEC.) =  14.81   FLOW DEPTH(FEET) =   8.35
  TRAVEL TIME(MIN.) =   2.70   Tc(MIN.) =  44.28
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 33517.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1048.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  44.28
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.773
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        1.80      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                    B        3.00      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B        8.10      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       86.10      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                    C        4.70      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       47.30      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  151.00
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.42;30M= 0.88;1H= 1.17;3H= 2.01;6H= 2.85;24H= 4.77
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.74; LAG(HR) = 0.59; Fm(INCH/HR) = 0.24; Ybar = 0.49
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.81; 30M = 0.81; 1HR = 0.81;
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4357.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 33517.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =     970.94
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3526.35
  TOTAL AREA(ACRES) =   4357.00       PEAK FLOW RATE(CFS) =    3526.35

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1048.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  44.28
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.559
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C       22.40      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        6.80      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                    D        6.30      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        2.80      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D       11.70      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   50.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.42;30M= 0.88;1H= 1.17;3H= 2.01;6H= 2.85;24H= 4.77
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.74; LAG(HR) = 0.59; Fm(INCH/HR) = 0.24; Ybar = 0.49
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.80; 30M = 0.80; 1HR = 0.80;
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4407.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 33517.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0283; Lca/L=0.4,n=.0254; Lca/L=0.5,n=.0233;Lca/L=0.6,n=.0218
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =     981.02
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3556.21
  TOTAL AREA(ACRES) =   4407.00       PEAK FLOW RATE(CFS) =    3556.21

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   4407.00  TC(MIN.) =     44.28
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.49
  PEAK FLOW RATE(CFS)   =   3556.21
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

TECHNICAL APPENDIX II-A
HYDROLOGIC ANALYSIS
UPSTREAM AREAS
100-YEAR HIGH CONFIDENCE

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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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                          Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU36100H.DAT
  TIME/DATE OF STUDY: 10:54 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.030
   2)  10.000;  4.570
   3)  15.000;  3.560
   4)  20.000;  2.970
   5)  30.000;  2.340
   6)  60.000;  1.590
   7) 120.000;  1.120
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  ========== ================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1001.00 IS CODE =  21
--------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
==========================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   327.00
  ELEVATION DATA: UPSTREAM(FEET) =   2400.00  DOWNSTREAM(FEET) =   2280.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    8.744
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.492
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.30      0.20      1.00    81    8.74
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      1.16
  TOTAL AREA(ACRES) =      0.30   PEAK FLOW RATE(CFS) =      1.16

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

**************************************************************************
  FLOW PROCESS FROM NODE   1001.00 TO NODE   1002.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2280.00  DOWNSTREAM(FEET) =   2240.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    95.00   CHANNEL SLOPE =  0.4211
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      1.16
  FLOW VELOCITY(FEET/SEC.) =   5.25   FLOW DEPTH(FEET) =   0.19
  TRAVEL TIME(MIN.) =   0.30   Tc(MIN.) =   9.05
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1002.00 =   422.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1001.00 TO NODE   1002.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =   9.05
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.040
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.30      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.30      SUBAREA RUNOFF(CFS) =    1.31
  EFFECTIVE AREA(ACRES) =      0.60   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      0.60       PEAK FLOW RATE(CFS) =       2.61

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

**************************************************************************
  FLOW PROCESS FROM NODE   1002.00 TO NODE   1003.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2240.00  DOWNSTREAM(FEET) =   2200.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    96.00   CHANNEL SLOPE =  0.4167
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
```

```
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      2.61
  FLOW VELOCITY(FEET/SEC.) =   6.85   FLOW DEPTH(FEET) =   0.29
  TRAVEL TIME(MIN.) =   0.23   Tc(MIN.) =   9.28
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1003.00 =   518.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1002.00 TO NODE   1003.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.28
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.925
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.30      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.30      SUBAREA RUNOFF(CFS) =    1.28
  EFFECTIVE AREA(ACRES) =      0.90   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      0.90       PEAK FLOW RATE(CFS) =       3.83

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1003.00 TO NODE   1004.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2200.00  DOWNSTREAM(FEET) =   2160.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   109.00   CHANNEL SLOPE =  0.3670
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      3.83
  FLOW VELOCITY(FEET/SEC.) =   7.19   FLOW DEPTH(FEET) =   0.38
  TRAVEL TIME(MIN.) =   0.25   Tc(MIN.) =   9.53
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1004.00 =   627.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1003.00 TO NODE   1004.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.53
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.801
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.40      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.40      SUBAREA RUNOFF(CFS) =    1.66
  EFFECTIVE AREA(ACRES) =      1.30   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.30       PEAK FLOW RATE(CFS) =       5.38

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1004.00 TO NODE   1005.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2160.00  DOWNSTREAM(FEET) =   2120.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   128.00   CHANNEL SLOPE =  0.3125
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      5.38
  FLOW VELOCITY(FEET/SEC.) =   7.50   FLOW DEPTH(FEET) =   0.48
  TRAVEL TIME(MIN.) =   0.28   Tc(MIN.) =   9.82
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1005.00 =   755.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1004.00 TO NODE   1005.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.82
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.661
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.60      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.60      SUBAREA RUNOFF(CFS) =    2.41
  EFFECTIVE AREA(ACRES) =      1.90   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.90       PEAK FLOW RATE(CFS) =       7.63

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1005.00 TO NODE   1014.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2120.00  DOWNSTREAM(FEET) =   2040.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   186.00   CHANNEL SLOPE =  0.4301
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      7.63
  FLOW VELOCITY(FEET/SEC.) =   9.24   FLOW DEPTH(FEET) =   0.54
  TRAVEL TIME(MIN.) =   0.34   Tc(MIN.) =  10.15
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1014.00 =   941.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1005.00 TO NODE   1014.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.15
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.540
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.60      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.60      SUBAREA RUNOFF(CFS) =    2.34
  EFFECTIVE AREA(ACRES) =      2.50   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      2.50       PEAK FLOW RATE(CFS) =       9.76
```

```
  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1014.00 TO NODE   1014.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  10.15
  RAINFALL INTENSITY(INCH/HR) =   4.54
  AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =     2.50
  TOTAL STREAM AREA(ACRES) =     2.50
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      9.76

****************************************************************************
  FLOW PROCESS FROM NODE   1010.00 TO NODE   1011.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   325.00
  ELEVATION DATA: UPSTREAM(FEET) =   2300.00  DOWNSTREAM(FEET) =   2200.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    9.035
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.045
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.60      0.20      1.00    81    9.04
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      2.62
  TOTAL AREA(ACRES) =      0.60   PEAK FLOW RATE(CFS) =      2.62

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1011.00 TO NODE   1012.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2200.00  DOWNSTREAM(FEET) =   2160.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    89.00   CHANNEL SLOPE =  0.4494
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      2.62
  FLOW VELOCITY(FEET/SEC.) =   6.91   FLOW DEPTH(FEET) =   0.29
  TRAVEL TIME(MIN.) =   0.21   Tc(MIN.) =   9.25
  LONGEST FLOWPATH FROM NODE   1010.00 TO NODE   1012.00 =   414.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1011.00 TO NODE   1012.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.25
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.939
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
```

```
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.40      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.40      SUBAREA RUNOFF(CFS) =    1.71
  EFFECTIVE AREA(ACRES) =      1.00   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.00       PEAK FLOW RATE(CFS) =       4.27

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1012.00 TO NODE   1013.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2160.00  DOWNSTREAM(FEET) =   2120.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   114.00   CHANNEL SLOPE =  0.3509
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      4.27
  FLOW VELOCITY(FEET/SEC.) =   7.27   FLOW DEPTH(FEET) =   0.41
  TRAVEL TIME(MIN.) =   0.26   Tc(MIN.) =   9.51
  LONGEST FLOWPATH FROM NODE   1010.00 TO NODE   1013.00 =   528.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1012.00 TO NODE   1013.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.51
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.810
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.90      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.90      SUBAREA RUNOFF(CFS) =    3.73
  EFFECTIVE AREA(ACRES) =      1.90   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.90       PEAK FLOW RATE(CFS) =       7.88

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1013.00 TO NODE   1014.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2120.00  DOWNSTREAM(FEET) =   2040.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   206.00   CHANNEL SLOPE =  0.3883
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      7.88
  FLOW VELOCITY(FEET/SEC.) =   8.99   FLOW DEPTH(FEET) =   0.56
  TRAVEL TIME(MIN.) =   0.38   Tc(MIN.) =   9.89
  LONGEST FLOWPATH FROM NODE   1010.00 TO NODE   1014.00 =   734.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1013.00 TO NODE   1014.00 IS CODE =  81
----------------------------------------------------------------------------
```

```
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.89
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.623
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.10      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.10      SUBAREA RUNOFF(CFS) =    4.38
  EFFECTIVE AREA(ACRES) =      3.00   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      3.00       PEAK FLOW RATE(CFS) =      11.94

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1014.00 TO NODE   1014.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =   9.89
  RAINFALL INTENSITY(INCH/HR) =   4.62
  AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =     3.00
  TOTAL STREAM AREA(ACRES) =     3.00
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     11.94

  ** CONFLUENCE DATA **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1      9.76  10.15    4.540  0.20( 0.20) 1.00     2.5    1000.00
      2     11.94   9.89    4.623  0.20( 0.20) 1.00     3.0    1010.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1     21.64   9.89    4.623  0.20( 0.20) 1.00     5.4    1010.00
      2     21.48  10.15    4.540  0.20( 0.20) 1.00     5.5    1000.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     21.64    Tc(MIN.) =     9.89
  EFFECTIVE AREA(ACRES) =     5.44   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      5.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1014.00 =   941.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1014.00 TO NODE   1015.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2040.00  DOWNSTREAM(FEET) =   2000.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   182.00   CHANNEL SLOPE =  0.2198
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     21.64
  FLOW VELOCITY(FEET/SEC.) =   9.23   FLOW DEPTH(FEET) =   0.83
  TRAVEL TIME(MIN.) =   0.33   Tc(MIN.) =  10.22
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1015.00 =  1123.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1014.00 TO NODE   1015.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.22
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.525
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        3.80      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.80      SUBAREA RUNOFF(CFS) =   14.79
  EFFECTIVE AREA(ACRES) =      9.24   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      9.30       PEAK FLOW RATE(CFS) =      35.95

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1015.00 TO NODE   1016.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2000.00  DOWNSTREAM(FEET) =   1920.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   366.00   CHANNEL SLOPE =  0.2186
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     35.95
  FLOW VELOCITY(FEET/SEC.) =  10.60   FLOW DEPTH(FEET) =   1.10
  TRAVEL TIME(MIN.) =   0.58   Tc(MIN.) =  10.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1016.00 =  1489.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1015.00 TO NODE   1016.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.80
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.409
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        3.40      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.40      SUBAREA RUNOFF(CFS) =   12.88
  EFFECTIVE AREA(ACRES) =     12.64   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     12.70       PEAK FLOW RATE(CFS) =      47.87

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.70; 30M = 1.27; 1HR = 1.80; 3HR = 3.51; 6HR = 5.36; 24HR = 9.61

****************************************************************************
  FLOW PROCESS FROM NODE   1016.00 TO NODE   1017.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
```

```
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1920.00  DOWNSTREAM(FEET) =   1880.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   107.00   CHANNEL SLOPE =  0.3738
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     47.87
  FLOW VELOCITY(FEET/SEC.) =  13.88   FLOW DEPTH(FEET) =   1.11
  TRAVEL TIME(MIN.) =   0.13   Tc(MIN.) =  10.93
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1017.00 =  1596.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1016.00 TO NODE   1017.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.93
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.383
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       16.20      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   16.20      SUBAREA RUNOFF(CFS) =   60.99
  EFFECTIVE AREA(ACRES) =     28.84   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     28.90       PEAK FLOW RATE(CFS) =     108.56

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.71; 30M = 1.28; 1HR = 1.82; 3HR = 3.57; 6HR = 5.47; 24HR = 9.84

****************************************************************************
  FLOW PROCESS FROM NODE   1017.00 TO NODE   1029.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1880.00  DOWNSTREAM(FEET) =   1835.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   342.00   CHANNEL SLOPE =  0.1316
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    108.56
  FLOW VELOCITY(FEET/SEC.) =  11.57   FLOW DEPTH(FEET) =   1.91
  TRAVEL TIME(MIN.) =   0.49   Tc(MIN.) =  11.42
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1029.00 =  1938.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1017.00 TO NODE   1029.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.42
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.283
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        4.60      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    4.60      SUBAREA RUNOFF(CFS) =   16.91
  EFFECTIVE AREA(ACRES) =     33.44   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     33.50       PEAK FLOW RATE(CFS) =     122.88

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.62; 30M = 1.19; 1HR = 1.64; 3HR = 3.03; 6HR = 4.47; 24HR = 7.84

****************************************************************************
  FLOW PROCESS FROM NODE   1029.00 TO NODE   1029.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  11.42
  RAINFALL INTENSITY(INCH/HR) =   4.28
  AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =    33.44
  TOTAL STREAM AREA(ACRES) =    33.50
  PEAK FLOW RATE(CFS) AT CONFLUENCE =    122.88

****************************************************************************
  FLOW PROCESS FROM NODE   1020.00 TO NODE   1021.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   304.00
  ELEVATION DATA: UPSTREAM(FEET) =   2525.00  DOWNSTREAM(FEET) =   2360.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    7.853
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.626
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.70      0.20      1.00    81    7.85
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      3.42
  TOTAL AREA(ACRES) =      0.70   PEAK FLOW RATE(CFS) =      3.42

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1021.00 TO NODE   1022.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2360.00  DOWNSTREAM(FEET) =   2280.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   106.00   CHANNEL SLOPE =  0.7547
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      3.42
  FLOW VELOCITY(FEET/SEC.) =   9.03   FLOW DEPTH(FEET) =   0.29
  TRAVEL TIME(MIN.) =   0.20   Tc(MIN.) =   8.05
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1022.00 =   410.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1021.00 TO NODE   1022.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   8.05
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.530
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
```

```
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.50      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.50      SUBAREA RUNOFF(CFS) =    2.40
  EFFECTIVE AREA(ACRES) =      1.20   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.20       PEAK FLOW RATE(CFS) =       5.76

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1022.00 TO NODE   1023.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2280.00  DOWNSTREAM(FEET) =   2240.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    68.00   CHANNEL SLOPE =  0.5882
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      5.76
  FLOW VELOCITY(FEET/SEC.) =   9.58   FLOW DEPTH(FEET) =   0.42
  TRAVEL TIME(MIN.) =   0.12   Tc(MIN.) =   8.17
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1023.00 =   478.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1022.00 TO NODE   1023.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   8.17
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.472
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.70      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.70      SUBAREA RUNOFF(CFS) =    8.07
  EFFECTIVE AREA(ACRES) =      2.90   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      2.90       PEAK FLOW RATE(CFS) =      13.76

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1023.00 TO NODE   1024.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2240.00  DOWNSTREAM(FEET) =   2200.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    72.00   CHANNEL SLOPE =  0.5556
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     13.76
  FLOW VELOCITY(FEET/SEC.) =  11.95   FLOW DEPTH(FEET) =   0.68
  TRAVEL TIME(MIN.) =   0.10   Tc(MIN.) =   8.27
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1024.00 =   550.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1023.00 TO NODE   1024.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   8.27
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.423
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.30      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.30      SUBAREA RUNOFF(CFS) =    1.41
  EFFECTIVE AREA(ACRES) =      3.20   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      3.20       PEAK FLOW RATE(CFS) =      15.04

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1024.00 TO NODE   1025.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2200.00  DOWNSTREAM(FEET) =   2160.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   111.00   CHANNEL SLOPE =  0.3604
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     15.04
  FLOW VELOCITY(FEET/SEC.) =  10.37   FLOW DEPTH(FEET) =   0.80
  TRAVEL TIME(MIN.) =   0.18   Tc(MIN.) =   8.45
  LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1025.00 =   661.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1024.00 TO NODE   1025.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   8.45
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.335
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.80      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.80      SUBAREA RUNOFF(CFS) =    8.32
  EFFECTIVE AREA(ACRES) =      5.00   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      5.00       PEAK FLOW RATE(CFS) =      23.11

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
  FLOW PROCESS FROM NODE   1025.00 TO NODE   1026.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2160.00  DOWNSTREAM(FEET) =   2080.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   289.00   CHANNEL SLOPE =  0.2768
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     23.11
  FLOW VELOCITY(FEET/SEC.) =  10.22   FLOW DEPTH(FEET) =   0.81
  TRAVEL TIME(MIN.) =   0.47   Tc(MIN.) =   8.92
```

```
 LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1026.00 =   950.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1025.00 TO NODE   1026.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =   8.92
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.103
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      D        3.40      0.20      1.00    81
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    3.40      SUBAREA RUNOFF(CFS) =   15.00
 EFFECTIVE AREA(ACRES) =      8.40   AREA-AVERAGED Fm(INCH/HR) =  0.20
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =      8.40       PEAK FLOW RATE(CFS) =      37.07

 SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
 5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
 FLOW PROCESS FROM NODE   1026.00 TO NODE   1027.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   2080.00  DOWNSTREAM(FEET) =   2040.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   185.00   CHANNEL SLOPE =  0.2162
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     37.07
 FLOW VELOCITY(FEET/SEC.) =  10.62   FLOW DEPTH(FEET) =   1.12
 TRAVEL TIME(MIN.) =   0.29   Tc(MIN.) =   9.21
 LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1027.00 =  1135.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1026.00 TO NODE   1027.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =   9.21
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.960
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      D        6.20      0.20      1.00    81
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    6.20      SUBAREA RUNOFF(CFS) =   26.56
 EFFECTIVE AREA(ACRES) =     14.60   AREA-AVERAGED Fm(INCH/HR) =  0.20
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     14.60       PEAK FLOW RATE(CFS) =      62.55

 SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
 5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
 FLOW PROCESS FROM NODE   1027.00 TO NODE   1028.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   2040.00  DOWNSTREAM(FEET) =   2000.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   197.00   CHANNEL SLOPE =  0.2030
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     62.55
 FLOW VELOCITY(FEET/SEC.) =  11.93   FLOW DEPTH(FEET) =   1.50
 TRAVEL TIME(MIN.) =   0.28   Tc(MIN.) =   9.48
 LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1028.00 =  1332.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1027.00 TO NODE   1028.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =   9.48
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.825
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      D        9.90      0.20      1.00    81
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    9.90      SUBAREA RUNOFF(CFS) =   41.21
 EFFECTIVE AREA(ACRES) =     24.50   AREA-AVERAGED Fm(INCH/HR) =  0.20
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     24.50       PEAK FLOW RATE(CFS) =     101.97

 SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
 5M = 0.78; 30M = 1.34; 1HR = 1.94; 3HR = 3.96; 6HR = 6.19; 24HR =11.27

****************************************************************************
 FLOW PROCESS FROM NODE   1028.00 TO NODE   1029.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   2000.00  DOWNSTREAM(FEET) =   1835.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   476.00   CHANNEL SLOPE =  0.3466
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    101.97
 FLOW VELOCITY(FEET/SEC.) =  16.48   FLOW DEPTH(FEET) =   1.68
 TRAVEL TIME(MIN.) =   0.48   Tc(MIN.) =   9.96
 LONGEST FLOWPATH FROM NODE   1020.00 TO NODE   1029.00 =  1808.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1028.00 TO NODE   1029.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =   9.96
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.588
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      D        4.00      0.20      1.00    81
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    4.00      SUBAREA RUNOFF(CFS) =   15.80
 EFFECTIVE AREA(ACRES) =     28.50   AREA-AVERAGED Fm(INCH/HR) =  0.20
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     28.50       PEAK FLOW RATE(CFS) =     112.55

 SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
 5M = 0.65; 30M = 1.22; 1HR = 1.70; 3HR = 3.20; 6HR = 4.78; 24HR = 8.45

****************************************************************************
```

```
  FLOW PROCESS FROM NODE   1029.00 TO NODE   1029.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =   9.96
  RAINFALL INTENSITY(INCH/HR) =   4.59
  AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =    28.50
  TOTAL STREAM AREA(ACRES) =    28.50
  PEAK FLOW RATE(CFS) AT CONFLUENCE =    112.55

  ** CONFLUENCE DATA **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1    122.88  11.42    4.283  0.20( 0.20) 1.00    33.4    1010.00
      1    121.53  11.68    4.231  0.20( 0.20) 1.00    33.5    1000.00
      2    112.55   9.96    4.588  0.20( 0.20) 1.00    28.5    1020.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1    227.77   9.96    4.588  0.20( 0.20) 1.00    57.7    1020.00
      2    227.63  11.42    4.283  0.20( 0.20) 1.00    61.9    1010.00
      3    224.91  11.68    4.231  0.20( 0.20) 1.00    62.0    1000.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =    227.77    Tc(MIN.) =     9.96
  EFFECTIVE AREA(ACRES) =    57.68   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     62.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1029.00 =  1938.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1029.00 TO NODE   1030.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1835.00  DOWNSTREAM(FEET) =   1680.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1378.00   CHANNEL SLOPE =  0.1125
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    227.77
  FLOW VELOCITY(FEET/SEC.) =  13.25   FLOW DEPTH(FEET) =   2.91
  TRAVEL TIME(MIN.) =   1.73   Tc(MIN.) =  11.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1030.00 =  3316.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1029.00 TO NODE   1030.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.70
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.227
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       33.70      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   33.70      SUBAREA RUNOFF(CFS) =  122.14
  EFFECTIVE AREA(ACRES) =     91.38   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     95.70       PEAK FLOW RATE(CFS) =     331.18

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.58; 30M = 1.14; 1HR = 1.56; 3HR = 2.77; 6HR = 3.98; 24HR = 6.87

****************************************************************************
  FLOW PROCESS FROM NODE   1030.00 TO NODE   1031.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1680.00  DOWNSTREAM(FEET) =   1630.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   523.00   CHANNEL SLOPE =  0.0956
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    331.18
  FLOW VELOCITY(FEET/SEC.) =  13.66   FLOW DEPTH(FEET) =   3.31
  TRAVEL TIME(MIN.) =   0.64   Tc(MIN.) =  12.34
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1031.00 =  3839.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1030.00 TO NODE   1031.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.34
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.098
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       81.00      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                    D        1.00      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        1.80      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   83.80      SUBAREA RUNOFF(CFS) =  294.00
  EFFECTIVE AREA(ACRES) =    175.18   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    179.50       PEAK FLOW RATE(CFS) =     614.59

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.61; 30M = 1.18; 1HR = 1.62; 3HR = 2.97; 6HR = 4.36; 24HR = 7.63

****************************************************************************
  FLOW PROCESS FROM NODE   1031.00 TO NODE   1032.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1630.00  DOWNSTREAM(FEET) =   1520.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1128.00   CHANNEL SLOPE =  0.0975
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    614.59
  FLOW VELOCITY(FEET/SEC.) =  16.07   FLOW DEPTH(FEET) =   4.17
  TRAVEL TIME(MIN.) =   1.17   Tc(MIN.) =  13.51
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1032.00 =  4967.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1031.00 TO NODE   1032.00 IS CODE =  81
----------------------------------------------------------------------------
```

```
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  13.51
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.862
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        0.50      0.25      1.00    75
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.10      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      167.20      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.90      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        6.60      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D        0.80      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  176.10      SUBAREA RUNOFF(CFS) =  580.34
  EFFECTIVE AREA(ACRES) =    351.28   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    355.60       PEAK FLOW RATE(CFS) =    1157.68

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.61; 30M = 1.17; 1HR = 1.61; 3HR = 2.94; 6HR = 4.31; 24HR = 7.53

********************************************************************************
  FLOW PROCESS FROM NODE   1032.00 TO NODE   1033.00 IS CODE =  51
--------------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1520.00  DOWNSTREAM(FEET) =   1320.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1992.00   CHANNEL SLOPE =  0.1004
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.050   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1157.68
  FLOW VELOCITY(FEET/SEC.) =  19.05   FLOW DEPTH(FEET) =   5.35
  TRAVEL TIME(MIN.) =   1.74   Tc(MIN.) =  15.25
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1033.00 =  6959.00 FEET.

********************************************************************************
  FLOW PROCESS FROM NODE   1032.00 TO NODE   1033.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  15.25
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.531
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        0.70      0.40      1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        1.60      0.40      1.00    46
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       20.50      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        1.50      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       32.10      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       17.00      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   73.40      SUBAREA RUNOFF(CFS) =  218.62
  EFFECTIVE AREA(ACRES) =    424.68   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    429.00       PEAK FLOW RATE(CFS) =    1271.59

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.44; 6HR = 3.37; 24HR = 5.65

********************************************************************************
  FLOW PROCESS FROM NODE   1032.00 TO NODE   1033.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  15.25
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.531
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        2.50      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    2.50      SUBAREA RUNOFF(CFS) =    7.49
  EFFECTIVE AREA(ACRES) =    427.18   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    431.50       PEAK FLOW RATE(CFS) =    1279.09

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.44; 6HR = 3.37; 24HR = 5.65

********************************************************************************
  FLOW PROCESS FROM NODE   1033.00 TO NODE   1034.00 IS CODE =  51
--------------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1320.00  DOWNSTREAM(FEET) =   1275.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   804.00   CHANNEL SLOPE =  0.0560
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1279.09
  FLOW VELOCITY(FEET/SEC.) =  18.54   FLOW DEPTH(FEET) =   5.83
  TRAVEL TIME(MIN.) =   0.72   Tc(MIN.) =  15.97
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1034.00 =  7763.00 FEET.

********************************************************************************
  FLOW PROCESS FROM NODE   1033.00 TO NODE   1034.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  15.97
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.445
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        1.90      0.40      1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        2.20      0.40      1.00    46
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       27.10      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        7.20      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       45.90      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       48.60      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
```

```
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  132.90      SUBAREA RUNOFF(CFS) =  385.90
  EFFECTIVE AREA(ACRES) =    560.08   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    564.40       PEAK FLOW RATE(CFS) =    1632.19

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1034.00 TO NODE   1035.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1275.00  DOWNSTREAM(FEET) =   1200.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1266.00   CHANNEL SLOPE =  0.0592
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1632.19
  FLOW VELOCITY(FEET/SEC.) =  20.13   FLOW DEPTH(FEET) =   6.16
  TRAVEL TIME(MIN.) =   1.05   Tc(MIN.) =  17.02
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1035.00 =  9029.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1034.00 TO NODE   1035.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.02
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.322
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       11.50      0.40      1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        2.70      0.40      1.00    46
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       14.60      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       16.60      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        0.10      0.25      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        1.10      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   46.60      SUBAREA RUNOFF(CFS) =  126.96
  EFFECTIVE AREA(ACRES) =    606.68   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    611.00       PEAK FLOW RATE(CFS) =    1696.79

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1036.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1200.00  DOWNSTREAM(FEET) =   1100.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1639.00   CHANNEL SLOPE =  0.0610
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1696.79
  FLOW VELOCITY(FEET/SEC.) =  20.55   FLOW DEPTH(FEET) =   6.24
  TRAVEL TIME(MIN.) =   1.33   Tc(MIN.) =  18.35
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1036.00 = 10668.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1035.00 TO NODE   1036.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.35
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.165
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       11.80      0.40      1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        5.20      0.40      1.00    46
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       20.30      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       21.80      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   59.10      SUBAREA RUNOFF(CFS) =  152.74
  EFFECTIVE AREA(ACRES) =    665.78   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    670.10       PEAK FLOW RATE(CFS) =    1763.88

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1036.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>PEAK FLOW RATE ESTIMATOR CHANGED TO UNIT-HYDROGRAPH METHOD<<<<<
  >>>>>USING TIME-OF-CONCENTRATION OF LONGEST FLOWPATH<<<<<
============================================================================
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.58;30M= 1.14;1H= 1.56;3H= 2.77;6H= 3.99;24H= 6.88
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.34; LAG(HR) = 0.27; Fm(INCH/HR) = 0.22; Ybar = 0.36
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.97; 30M = 0.97; 1HR = 0.97;
  3HR = 1.00; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =    670.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1036.00 = 10668.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0355; Lca/L=0.4,n=.0318; Lca/L=0.5,n=.0292;Lca/L=0.6,n=.0273
  TIME OF PEAK FLOW(HR) = 16.25  RUNOFF VOLUME(AF) =     265.12
  UNIT-HYDROGRAPH METHOD PEAK FLOW RATE(CFS) =   1415.24
  TOTAL PEAK FLOW RATE(CFS) =   1415.24 (SOURCE FLOW INCLUDED)
  RATIONAL METHOD PEAK FLOW RATE(CFS) =   1763.88
   (UPSTREAM NODE PEAK FLOW RATE(CFS) =   1763.88)
  PEAK FLOW RATE(CFS) USED =   1763.88
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =    670.10  TC(MIN.) =     20.19
  AREA-AVERAGED Fm(INCH/HR)=  0.22   Ybar =  0.36
  PEAK FLOW RATE(CFS)   =   1763.88
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                         Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU37100H.DAT
  TIME/DATE OF STUDY: 10:54 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.030
   2)  10.000;  4.570
   3)  15.000;  3.560
   4)  20.000;  2.970
   5)  30.000;  2.340
   6)  60.000;  1.590
   7) 120.000;  1.120
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1036.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU36100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1763.88    Tc(MIN.) =  20.19
  AREA-AVERAGED Fm(INCH/HR) =  0.22    Ybar = 0.36
  TOTAL AREA(ACRES) =     670.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1036.00 = 10668.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1036.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1763.88    Tc(MIN.) =  20.19
  AREA-AVERAGED Fm(INCH/HR) =  0.22    Ybar = 0.36
  TOTAL AREA(ACRES) =     670.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1036.00 = 10668.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1036.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1037.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1100.00  DOWNSTREAM(FEET) =   1010.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1517.00   CHANNEL SLOPE =  0.0593
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1763.88
  FLOW VELOCITY(FEET/SEC.) =  20.54   FLOW DEPTH(FEET) =   6.41
  TRAVEL TIME(MIN.) =   1.23   Tc(MIN.) =  21.42
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1037.00 = 12185.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1037.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  21.42
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.688
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       23.70      0.40      1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        6.70      0.40      1.00    46
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       82.50      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      114.00      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       24.20      0.25      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        2.50      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  253.60
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.56;30M= 1.13;1H= 1.53;3H= 2.68;6H= 3.83;24H= 6.57
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.36; LAG(HR) = 0.29; Fm(INCH/HR) = 0.23; Ybar = 0.40
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.96; 30M = 0.96; 1HR = 0.96;
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =    923.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1037.00 = 12185.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0336; Lca/L=0.4,n=.0301; Lca/L=0.5,n=.0277;Lca/L=0.6,n=.0258
  TIME OF PEAK FLOW(HR) = 16.25  RUNOFF VOLUME(AF) =     334.25
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1846.26
  TOTAL AREA(ACRES) =    923.70       PEAK FLOW RATE(CFS) =    1846.26

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.53; 30M = 1.10; 1HR = 1.46; 3HR = 2.46; 6HR = 3.42; 24HR = 5.75

****************************************************************************
  FLOW PROCESS FROM NODE   1036.00 TO NODE   1037.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  21.42
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.881
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       84.70      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       10.60      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   95.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.56;30M= 1.13;1H= 1.52;3H= 2.66;6H= 3.79;24H= 6.49
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.36; LAG(HR) = 0.29; Fm(INCH/HR) = 0.23; Ybar = 0.39
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.95; 30M = 0.95; 1HR = 0.95;
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1019.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1037.00 = 12185.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0336; Lca/L=0.4,n=.0301; Lca/L=0.5,n=.0277;Lca/L=0.6,n=.0258
  TIME OF PEAK FLOW(HR) = 16.25  RUNOFF VOLUME(AF) =     367.13
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2020.61
  TOTAL AREA(ACRES) =   1019.00       PEAK FLOW RATE(CFS) =    2020.61

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.53; 30M = 1.10; 1HR = 1.46; 3HR = 2.46; 6HR = 3.42; 24HR = 5.75
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   1019.00  TC(MIN.) =     21.42
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.39
  PEAK FLOW RATE(CFS)   =   2020.61
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU38100H.DAT
  TIME/DATE OF STUDY: 10:54 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.030
   2)  10.000;  4.570
   3)  15.000;  3.560
   4)  20.000;  2.970
   5)  30.000;  2.340
   6)  60.000;  1.590
   7) 120.000;  1.120
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1037.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU37100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2020.61    Tc(MIN.) =  21.42
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.39
  TOTAL AREA(ACRES) =    1019.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1037.00 = 12185.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1037.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2020.61    Tc(MIN.) =  21.42
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.39
  TOTAL AREA(ACRES) =    1019.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1037.00 = 12185.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1037.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1038.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1010.00  DOWNSTREAM(FEET) =    925.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2069.00   CHANNEL SLOPE =  0.0411
  CHANNEL BASE(FEET) =    8.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   8.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2020.61
  FLOW VELOCITY(FEET/SEC.) =  18.50   FLOW DEPTH(FEET) =   7.19
  TRAVEL TIME(MIN.) =   1.86   Tc(MIN.) =  23.28
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1038.00 = 14254.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1038.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  23.28
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.563
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       10.20      0.40      1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        0.40      0.40      1.00    46
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       31.20      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       17.50      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        4.70      0.25      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.20      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   65.20
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.56;30M= 1.13;1H= 1.52;3H= 2.65;6H= 3.77;24H= 6.44
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.39; LAG(HR) = 0.31; Fm(INCH/HR) = 0.23; Ybar = 0.40
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.95; 30M = 0.95; 1HR = 0.95;
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1084.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1038.00 = 14254.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0245
  TIME OF PEAK FLOW(HR) = 16.25  RUNOFF VOLUME(AF) =     383.63
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2043.32
  TOTAL AREA(ACRES) =   1084.20       PEAK FLOW RATE(CFS) =    2043.32

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1037.00 TO NODE   1038.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  23.28
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.763
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       17.00      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        1.90      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   18.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.56;30M= 1.13;1H= 1.52;3H= 2.65;6H= 3.76;24H= 6.43
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.39; LAG(HR) = 0.31; Fm(INCH/HR) = 0.23; Ybar = 0.40
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.95; 30M = 0.95; 1HR = 0.95;
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1103.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1038.00 = 14254.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0245
  TIME OF PEAK FLOW(HR) = 16.25  RUNOFF VOLUME(AF) =     389.97
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2075.63
  TOTAL AREA(ACRES) =   1103.10       PEAK FLOW RATE(CFS) =    2075.63

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   1103.10  TC(MIN.) =     23.28
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.40
  PEAK FLOW RATE(CFS)   =   2075.63
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: MU39100H.DAT
  TIME/DATE OF STUDY: 10:54 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.030
   2)  10.000;  4.570
   3)  15.000;  3.560
   4)  20.000;  2.970
   5)  30.000;  2.340
   6)  60.000;  1.590
   7) 120.000;  1.120
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1038.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU38100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2075.63    Tc(MIN.) =  23.28
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.40
  TOTAL AREA(ACRES) =    1103.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1038.00 = 14254.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1038.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2075.63    Tc(MIN.) =  23.28
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.40
  TOTAL AREA(ACRES) =    1103.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1038.00 = 14254.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1038.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1039.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    925.00  DOWNSTREAM(FEET) =    873.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1383.00   CHANNEL SLOPE =  0.0376
  CHANNEL BASE(FEET) =    8.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   8.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2075.63
  FLOW VELOCITY(FEET/SEC.) =  18.03   FLOW DEPTH(FEET) =   7.45
  TRAVEL TIME(MIN.) =   1.28   Tc(MIN.) =  24.56
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1039.00 = 15637.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1039.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  24.56
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.485
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       55.80      0.40      1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        2.30      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A        0.20      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      106.00      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      112.00      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        1.90      0.25      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  278.20
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.56;30M= 1.13;1H= 1.52;3H= 2.65;6H= 3.77;24H= 6.45
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.41; LAG(HR) = 0.33; Fm(INCH/HR) = 0.24; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.94; 30M = 0.94; 1HR = 0.94;
  3HR = 0.99; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1381.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1039.00 = 15637.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0309; Lca/L=0.4,n=.0277; Lca/L=0.5,n=.0255;Lca/L=0.6,n=.0238
  TIME OF PEAK FLOW(HR) = 16.25  RUNOFF VOLUME(AF) =     474.95
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2465.20
  TOTAL AREA(ACRES) =   1381.30       PEAK FLOW RATE(CFS) =    2465.20

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.56; 30M = 1.13; 1HR = 1.53; 3HR = 2.67; 6HR = 3.81; 24HR = 6.53

****************************************************************************
  FLOW PROCESS FROM NODE   1038.00 TO NODE   1039.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  24.56
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.683
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.70      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       28.50      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                    D       25.50      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       92.90      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        0.80      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  148.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.56;30M= 1.13;1H= 1.52;3H= 2.65;6H= 3.77;24H= 6.46
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.41; LAG(HR) = 0.33; Fm(INCH/HR) = 0.24; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.93; 30M = 0.93; 1HR = 0.93;
  3HR = 0.99; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1529.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1039.00 = 15637.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0309; Lca/L=0.4,n=.0277; Lca/L=0.5,n=.0255;Lca/L=0.6,n=.0238
  TIME OF PEAK FLOW(HR) = 16.25  RUNOFF VOLUME(AF) =     533.43
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2718.09
  TOTAL AREA(ACRES) =   1529.70       PEAK FLOW RATE(CFS) =    2718.09

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.56; 30M = 1.13; 1HR = 1.53; 3HR = 2.67; 6HR = 3.81; 24HR = 6.53
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   1529.70  TC(MIN.) =     24.56
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.41
  PEAK FLOW RATE(CFS)   =   2718.09
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: MU40100H.DAT
  TIME/DATE OF STUDY: 10:54 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.030
   2)  10.000;  4.570
   3)  15.000;  3.560
   4)  20.000;  2.970
   5)  30.000;  2.340
   6)  60.000;  1.590
   7) 120.000;  1.120
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1039.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU39100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2718.09    Tc(MIN.) =  24.56
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.41
  TOTAL AREA(ACRES) =    1529.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1039.00 = 15637.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1039.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2718.09    Tc(MIN.) =  24.56
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.41
  TOTAL AREA(ACRES) =    1529.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1039.00 = 15637.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1039.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1040.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    873.00  DOWNSTREAM(FEET) =    780.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2714.00   CHANNEL SLOPE =  0.0343
  CHANNEL BASE(FEET) =    9.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   9.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2718.09
  FLOW VELOCITY(FEET/SEC.) =  18.63   FLOW DEPTH(FEET) =   8.39
  TRAVEL TIME(MIN.) =   2.43   Tc(MIN.) =  26.99
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1040.00 = 18351.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1040.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  26.99
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.355
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       31.10      0.40      1.00    40
  NATURAL FAIR COVER
  "GRASS"                    A        2.20      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A       12.10      0.40      1.00    46
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A        0.10      0.40      1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A        8.70      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      122.30      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  176.50
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.56;30M= 1.13;1H= 1.52;3H= 2.65;6H= 3.76;24H= 6.44
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.45; LAG(HR) = 0.36; Fm(INCH/HR) = 0.24; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.92; 30M = 0.92; 1HR = 0.92;
  3HR = 0.99; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1706.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1040.00 = 18351.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0295; Lca/L=0.4,n=.0265; Lca/L=0.5,n=.0243;Lca/L=0.6,n=.0227
  TIME OF PEAK FLOW(HR) = 16.25  RUNOFF VOLUME(AF) =     579.64
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2766.81
  TOTAL AREA(ACRES) =   1706.20       PEAK FLOW RATE(CFS) =    2766.81

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.55; 30M = 1.12; 1HR = 1.50; 3HR = 2.60; 6HR = 3.67; 24HR = 6.25

****************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1040.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  26.99
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.530
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        1.60      0.25      1.00    79
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 C        1.30      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      137.40      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.90      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      129.90      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                    D       12.70      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  283.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.56;30M= 1.13;1H= 1.52;3H= 2.64;6H= 3.75;24H= 6.41
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.45; LAG(HR) = 0.36; Fm(INCH/HR) = 0.24; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.91; 30M = 0.91; 1HR = 0.91;
  3HR = 0.99; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   1990.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1040.00 = 18351.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0295; Lca/L=0.4,n=.0265; Lca/L=0.5,n=.0243;Lca/L=0.6,n=.0227
  TIME OF PEAK FLOW(HR) = 16.25  RUNOFF VOLUME(AF) =     678.15
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3182.52
  TOTAL AREA(ACRES) =   1990.00       PEAK FLOW RATE(CFS) =    3182.52

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.55; 30M = 1.12; 1HR = 1.50; 3HR = 2.60; 6HR = 3.67; 24HR = 6.25

****************************************************************************
  FLOW PROCESS FROM NODE   1039.00 TO NODE   1040.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  26.99
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.530
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      116.40      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        4.40      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D        2.90      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  123.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.56;30M= 1.13;1H= 1.52;3H= 2.64;6H= 3.75;24H= 6.40
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.45; LAG(HR) = 0.36; Fm(INCH/HR) = 0.24; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.91; 30M = 0.91; 1HR = 0.91;
  3HR = 0.99; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   2113.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1040.00 = 18351.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0295; Lca/L=0.4,n=.0265; Lca/L=0.5,n=.0243;Lca/L=0.6,n=.0227
  TIME OF PEAK FLOW(HR) = 16.25  RUNOFF VOLUME(AF) =     724.31
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3362.92
  TOTAL AREA(ACRES) =   2113.70       PEAK FLOW RATE(CFS) =    3362.92

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.55; 30M = 1.12; 1HR = 1.50; 3HR = 2.60; 6HR = 3.67; 24HR = 6.25
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   2113.70  TC(MIN.) =     26.99
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.41
  PEAK FLOW RATE(CFS)   =   3362.92
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU41100H.DAT
  TIME/DATE OF STUDY: 10:54 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.030
   2)  10.000;  4.570
   3)  15.000;  3.560
   4)  20.000;  2.970
   5)  30.000;  2.340
   6)  60.000;  1.590
   7) 120.000;  1.120
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1040.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU40100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3362.92    Tc(MIN.) =  26.99
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.41
  TOTAL AREA(ACRES) =    2113.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1040.00 = 18351.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1040.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3362.92    Tc(MIN.) =  26.99
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.41
  TOTAL AREA(ACRES) =    2113.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1040.00 = 18351.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1040.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1041.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    780.00  DOWNSTREAM(FEET) =    695.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2758.00   CHANNEL SLOPE =  0.0308
  CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3362.92
  FLOW VELOCITY(FEET/SEC.) =  18.88   FLOW DEPTH(FEET) =   9.25
  TRAVEL TIME(MIN.) =   2.43   Tc(MIN.) =  29.42
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1041.00 = 21109.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1041.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  29.42
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.241
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       30.00      0.40      1.00    40
  NATURAL FAIR COVER
  "GRASS"                    A        1.20      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A       28.60      0.40      1.00    46
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A        1.60      0.40      1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A       14.70      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       87.40      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.32
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  163.50
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.55;30M= 1.12;1H= 1.51;3H= 2.62;6H= 3.72;24H= 6.35
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.49; LAG(HR) = 0.39; Fm(INCH/HR) = 0.24; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.90; 30M = 0.90; 1HR = 0.90;
  3HR = 0.98; 6HR = 0.99; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   2277.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1041.00 = 21109.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0285; Lca/L=0.4,n=.0255; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0219
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     755.33
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3368.20
  TOTAL AREA(ACRES) =   2277.20       PEAK FLOW RATE(CFS) =    3368.20

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.37; 24HR = 5.64

****************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1041.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  29.42
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.376
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C       10.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      138.60      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        2.90      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       36.10      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                    D       56.80      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      220.70      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  465.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.55;30M= 1.12;1H= 1.50;3H= 2.59;6H= 3.66;24H= 6.23
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.49; LAG(HR) = 0.39; Fm(INCH/HR) = 0.24; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.88; 30M = 0.88; 1HR = 0.88;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   2742.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1041.00 = 21109.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0285; Lca/L=0.4,n=.0255; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0219
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     901.51
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3938.10
  TOTAL AREA(ACRES) =   2742.70       PEAK FLOW RATE(CFS) =    3938.10

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.37; 24HR = 5.64

****************************************************************************
  FLOW PROCESS FROM NODE   1040.00 TO NODE   1041.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  29.42
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.376
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 D        0.90      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.55;30M= 1.12;1H= 1.50;3H= 2.59;6H= 3.66;24H= 6.23
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.49; LAG(HR) = 0.39; Fm(INCH/HR) = 0.24; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.88; 30M = 0.88; 1HR = 0.88;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   2743.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1041.00 = 21109.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0285; Lca/L=0.4,n=.0255; Lca/L=0.5,n=.0234;Lca/L=0.6,n=.0219
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     901.79
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3939.18
  TOTAL AREA(ACRES) =   2743.60       PEAK FLOW RATE(CFS) =    3939.18

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.37; 24HR = 5.64
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   2743.60  TC(MIN.) =     29.42
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.42
  PEAK FLOW RATE(CFS)   =   3939.18
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU42100H.DAT
  TIME/DATE OF STUDY: 10:54 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.030
   2)  10.000;  4.570
   3)  15.000;  3.560
   4)  20.000;  2.970
   5)  30.000;  2.340
   6)  60.000;  1.590
   7) 120.000;  1.120
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1041.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU41100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3939.18    Tc(MIN.) =  29.42
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.42
  TOTAL AREA(ACRES) =    2743.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1041.00 = 21109.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1041.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3939.18    Tc(MIN.) =  29.42
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.42
  TOTAL AREA(ACRES) =    2743.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1041.00 = 21109.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1041.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1042.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    695.00  DOWNSTREAM(FEET) =    650.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1846.00   CHANNEL SLOPE =  0.0244
  CHANNEL BASE(FEET) =   15.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3939.18
  FLOW VELOCITY(FEET/SEC.) =  17.86   FLOW DEPTH(FEET) =   9.14
  TRAVEL TIME(MIN.) =   1.72   Tc(MIN.) =  31.15
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1042.00 = 22955.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1042.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  31.15
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.169
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        1.30      0.40      1.00    40
  NATURAL FAIR COVER
  "GRASS"                    A        0.20      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        2.20      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A        5.30      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       25.10      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                    C        3.20      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   37.30
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.55;30M= 1.12;1H= 1.50;3H= 2.59;6H= 3.66;24H= 6.22
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.52; LAG(HR) = 0.42; Fm(INCH/HR) = 0.24; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.88; 30M = 0.88; 1HR = 0.88;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   2780.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1042.00 = 22955.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0280; Lca/L=0.4,n=.0251; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0215
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     910.32
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3965.85
  TOTAL AREA(ACRES) =   2780.90       PEAK FLOW RATE(CFS) =    3965.85

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1041.00 TO NODE   1042.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  31.15
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.311
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       28.60      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.90      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       18.00      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                    D        2.20      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       44.10      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D        4.60      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   98.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.55;30M= 1.12;1H= 1.50;3H= 2.58;6H= 3.64;24H= 6.20
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.52; LAG(HR) = 0.42; Fm(INCH/HR) = 0.24; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.87; 30M = 0.87; 1HR = 0.87;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   2879.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1042.00 = 22955.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0280; Lca/L=0.4,n=.0251; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0215
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     940.80
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4081.52
  TOTAL AREA(ACRES) =   2879.30       PEAK FLOW RATE(CFS) =    4081.52

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   2879.30  TC(MIN.) =     31.15
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.42
  PEAK FLOW RATE(CFS)   =   4081.52
============================================================================
============================================================================
```

```
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: MU43100H.DAT
  TIME/DATE OF STUDY: 10:54 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.030
   2)  10.000;  4.570
   3)  15.000;  3.560
   4)  20.000;  2.970
   5)  30.000;  2.340
   6)  60.000;  1.590
   7) 120.000;  1.120
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1042.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU42100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     4081.52    Tc(MIN.) =  31.15
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.42
  TOTAL AREA(ACRES) =    2879.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1042.00 = 22955.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1042.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     4081.52    Tc(MIN.) =  31.15
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.42
  TOTAL AREA(ACRES) =    2879.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1042.00 = 22955.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1042.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1043.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    650.00  DOWNSTREAM(FEET) =    600.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2257.00   CHANNEL SLOPE =  0.0222
  CHANNEL BASE(FEET) =   15.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   4081.52
  FLOW VELOCITY(FEET/SEC.) =  17.40   FLOW DEPTH(FEET) =   9.55
  TRAVEL TIME(MIN.) =   2.16   Tc(MIN.) =  33.31
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1043.00 = 25212.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1043.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  33.31
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.087
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        5.50      0.40      1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        8.00      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A        1.10      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        6.40      0.30      1.00    63
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        2.60      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        9.60      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.34
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   33.20
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.55;30M= 1.12;1H= 1.50;3H= 2.58;6H= 3.64;24H= 6.19
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.56; LAG(HR) = 0.44; Fm(INCH/HR) = 0.24; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.87; 30M = 0.87; 1HR = 0.87;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   2912.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1043.00 = 25212.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0275; Lca/L=0.4,n=.0247; Lca/L=0.5,n=.0227;Lca/L=0.6,n=.0211
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     945.85
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4024.69
  TOTAL AREA(ACRES) =   2912.50       PEAK FLOW RATE(CFS) =    4081.52
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1043.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  33.31
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.257
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       52.90      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       57.90      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       13.50      0.25      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       95.60      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                    D        0.60      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      213.70      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  434.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.54;30M= 1.11;1H= 1.49;3H= 2.56;6H= 3.61;24H= 6.12
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.56; LAG(HR) = 0.44; Fm(INCH/HR) = 0.24; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.85; 30M = 0.85; 1HR = 0.85;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   3346.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1043.00 = 25212.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0275; Lca/L=0.4,n=.0247; Lca/L=0.5,n=.0227;Lca/L=0.6,n=.0211
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =    1080.16
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4507.42
  TOTAL AREA(ACRES) =   3346.70       PEAK FLOW RATE(CFS) =    4507.42

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1042.00 TO NODE   1043.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  33.31
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.257
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 D        8.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    8.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.54;30M= 1.11;1H= 1.49;3H= 2.56;6H= 3.60;24H= 6.12
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.56; LAG(HR) = 0.44; Fm(INCH/HR) = 0.24; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.85; 30M = 0.85; 1HR = 0.85;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   3355.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1043.00 = 25212.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0275; Lca/L=0.4,n=.0247; Lca/L=0.5,n=.0227;Lca/L=0.6,n=.0211
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =    1082.69
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4516.58
  TOTAL AREA(ACRES) =   3355.10       PEAK FLOW RATE(CFS) =    4516.58

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   3355.10  TC(MIN.) =     33.31
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.42
  PEAK FLOW RATE(CFS)   =   4516.58
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: MU44100H.DAT
  TIME/DATE OF STUDY: 10:54 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.030
   2)  10.000;  4.570
   3)  15.000;  3.560
   4)  20.000;  2.970
   5)  30.000;  2.340
   6)  60.000;  1.590
   7) 120.000;  1.120
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1043.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU43100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     4516.58    Tc(MIN.) =  33.31
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.42
  TOTAL AREA(ACRES) =    3355.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1043.00 = 25212.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1043.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     4516.58    Tc(MIN.) =  33.31
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.42
  TOTAL AREA(ACRES) =    3355.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1043.00 = 25212.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1043.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1044.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    600.00  DOWNSTREAM(FEET) =    580.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1011.00   CHANNEL SLOPE =  0.0198
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   4516.58
  FLOW VELOCITY(FEET/SEC.) =  16.91   FLOW DEPTH(FEET) =   9.16
  TRAVEL TIME(MIN.) =   1.00   Tc(MIN.) =  34.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1044.00 = 26223.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1044.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  34.30
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.052
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        1.30      0.40      1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        1.30      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A        0.90      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.40      0.30      1.00    63
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.60      0.30      1.00    66
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        0.70      0.30      1.00    72
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.36
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    6.20
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.54;30M= 1.11;1H= 1.49;3H= 2.56;6H= 3.60;24H= 6.12
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.57; LAG(HR) = 0.46; Fm(INCH/HR) = 0.24; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.85; 30M = 0.85; 1HR = 0.85;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   3361.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1044.00 = 26223.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0273; Lca/L=0.4,n=.0245; Lca/L=0.5,n=.0225;Lca/L=0.6,n=.0210
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =    1083.61
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4442.10
  TOTAL AREA(ACRES) =   3361.30       PEAK FLOW RATE(CFS) =    4516.58
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1044.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  34.30
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.232
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 B        2.80      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       27.50      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       32.50      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        7.60      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.90      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       33.20      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  104.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.54;30M= 1.11;1H= 1.49;3H= 2.56;6H= 3.60;24H= 6.10
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.57; LAG(HR) = 0.46; Fm(INCH/HR) = 0.24; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.85; 30M = 0.85; 1HR = 0.85;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   3465.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1044.00 = 26223.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0273; Lca/L=0.4,n=.0245; Lca/L=0.5,n=.0225;Lca/L=0.6,n=.0210
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =    1113.56
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4550.12
  TOTAL AREA(ACRES) =   3465.80       PEAK FLOW RATE(CFS) =    4550.12

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1043.00 TO NODE   1044.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  34.30
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.232
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       50.70      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D        3.70      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   54.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.54;30M= 1.11;1H= 1.49;3H= 2.55;6H= 3.59;24H= 6.09
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.57; LAG(HR) = 0.46; Fm(INCH/HR) = 0.24; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.84; 30M = 0.84; 1HR = 0.84;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   3520.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1044.00 = 26223.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0273; Lca/L=0.4,n=.0245; Lca/L=0.5,n=.0225;Lca/L=0.6,n=.0210
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =    1131.06
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4607.73
  TOTAL AREA(ACRES) =   3520.20       PEAK FLOW RATE(CFS) =    4607.73

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   3520.20  TC(MIN.) =     34.30
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.42
  PEAK FLOW RATE(CFS)   =   4607.73
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU45100H.DAT
  TIME/DATE OF STUDY: 10:54 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.030
   2)  10.000;  4.570
   3)  15.000;  3.560
   4)  20.000;  2.970
   5)  30.000;  2.340
   6)  60.000;  1.590
   7) 120.000;  1.120
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1044.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU44100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     4607.73    Tc(MIN.) =  34.30
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.42
  TOTAL AREA(ACRES) =    3520.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1044.00 = 26223.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1044.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     4607.73    Tc(MIN.) =  34.30
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.42
  TOTAL AREA(ACRES) =    3520.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1044.00 = 26223.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1044.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1045.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    580.00  DOWNSTREAM(FEET) =    540.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1918.00   CHANNEL SLOPE =  0.0209
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   4607.73
  FLOW VELOCITY(FEET/SEC.) =  17.33   FLOW DEPTH(FEET) =   9.13
  TRAVEL TIME(MIN.) =   1.84   Tc(MIN.) =  36.15
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1045.00 = 28141.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1045.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  36.15
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.992
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        6.20      0.40      1.00    40
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        2.00      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A        6.00      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        4.50      0.30      1.00    63
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        2.40      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.20      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.37
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   21.30
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.54;30M= 1.11;1H= 1.49;3H= 2.55;6H= 3.59;24H= 6.09
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.60; LAG(HR) = 0.48; Fm(INCH/HR) = 0.24; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.84; 30M = 0.84; 1HR = 0.84;
  3HR = 0.98; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   3541.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1045.00 = 28141.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0271; Lca/L=0.4,n=.0243; Lca/L=0.5,n=.0223;Lca/L=0.6,n=.0208
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =    1133.74
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4465.58
  TOTAL AREA(ACRES) =   3541.50       PEAK FLOW RATE(CFS) =    4607.73
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1045.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  36.15
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.186
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       90.40      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       49.60      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        2.20      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C        6.70      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       75.70      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       85.10      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  309.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.54;30M= 1.11;1H= 1.49;3H= 2.54;6H= 3.57;24H= 6.05
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.60; LAG(HR) = 0.48; Fm(INCH/HR) = 0.24; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.83; 30M = 0.83; 1HR = 0.83;
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   3851.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1045.00 = 28141.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0271; Lca/L=0.4,n=.0243; Lca/L=0.5,n=.0223;Lca/L=0.6,n=.0208
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =    1225.35
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4767.46
  TOTAL AREA(ACRES) =   3851.20       PEAK FLOW RATE(CFS) =    4767.46

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1044.00 TO NODE   1045.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  36.15
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.186
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 D        8.30      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    8.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.54;30M= 1.11;1H= 1.49;3H= 2.54;6H= 3.57;24H= 6.05
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.60; LAG(HR) = 0.48; Fm(INCH/HR) = 0.24; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.83; 30M = 0.83; 1HR = 0.83;
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   3859.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1045.00 = 28141.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0271; Lca/L=0.4,n=.0243; Lca/L=0.5,n=.0223;Lca/L=0.6,n=.0208
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =    1227.84
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4775.56
  TOTAL AREA(ACRES) =   3859.50       PEAK FLOW RATE(CFS) =    4775.56

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   3859.50  TC(MIN.) =     36.15
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.42
  PEAK FLOW RATE(CFS)   =   4775.56
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MU46100H.DAT
  TIME/DATE OF STUDY: 10:54 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.030
   2)  10.000;  4.570
   3)  15.000;  3.560
   4)  20.000;  2.970
   5)  30.000;  2.340
   6)  60.000;  1.590
   7) 120.000;  1.120
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1045.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU45100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     4775.56    Tc(MIN.) =  36.15
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.42
  TOTAL AREA(ACRES) =    3859.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1045.00 = 28141.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1045.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     4775.56    Tc(MIN.) =  36.15
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.42
  TOTAL AREA(ACRES) =    3859.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1045.00 = 28141.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1045.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1046.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    540.00  DOWNSTREAM(FEET) =    515.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1273.00   CHANNEL SLOPE =  0.0196
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   4775.56
  FLOW VELOCITY(FEET/SEC.) =  17.12   FLOW DEPTH(FEET) =   9.47
  TRAVEL TIME(MIN.) =   1.24   Tc(MIN.) =  37.39
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1046.00 = 29414.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1046.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  37.39
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.954
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        0.10      0.40      1.00    40
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        6.70      0.30      1.00    63
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.10      0.30      1.00    66
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        0.20      0.30      1.00    72
  NATURAL FAIR COVER
  "WOODLAND"                 B        1.00      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       90.00      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   99.10
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.54;30M= 1.11;1H= 1.49;3H= 2.54;6H= 3.57;24H= 6.04
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.62; LAG(HR) = 0.50; Fm(INCH/HR) = 0.24; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.82; 30M = 0.82; 1HR = 0.82;
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   3958.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1046.00 = 29414.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0269; Lca/L=0.4,n=.0241; Lca/L=0.5,n=.0222;Lca/L=0.6,n=.0207
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =    1253.84
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4745.01
  TOTAL AREA(ACRES) =   3958.60       PEAK FLOW RATE(CFS) =    4775.56
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1045.00 TO NODE   1046.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  37.39
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.155
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       42.90      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        3.80      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.80      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.60      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        1.70      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D        5.70      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   56.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.54;30M= 1.11;1H= 1.48;3H= 2.54;6H= 3.56;24H= 6.04
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.62; LAG(HR) = 0.50; Fm(INCH/HR) = 0.24; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.82; 30M = 0.82; 1HR = 0.82;
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4015.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1046.00 = 29414.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0269; Lca/L=0.4,n=.0241; Lca/L=0.5,n=.0222;Lca/L=0.6,n=.0207
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =    1269.92
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4795.90
  TOTAL AREA(ACRES) =   4015.10       PEAK FLOW RATE(CFS) =    4795.90

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   4015.10  TC(MIN.) =     37.39
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.42
  PEAK FLOW RATE(CFS)   =   4795.90
============================================================================
```

```
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
         (c) Copyright 1983-2003 Advanced Engineering Software (aes)
             Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: MU47100H.DAT
  TIME/DATE OF STUDY: 10:54 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.030
   2)  10.000;  4.570
   3)  15.000;  3.560
   4)  20.000;  2.970
   5)  30.000;  2.340
   6)  60.000;  1.590
   7) 120.000;  1.120
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1046.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU46100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     4795.90    Tc(MIN.) =  37.39
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.42
  TOTAL AREA(ACRES) =    4015.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1046.00 = 29414.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1046.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     4795.90    Tc(MIN.) =  37.39
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.42
  TOTAL AREA(ACRES) =    4015.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1046.00 = 29414.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1046.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1047.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    515.00  DOWNSTREAM(FEET) =    485.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1705.00   CHANNEL SLOPE =  0.0176
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   4795.90
  FLOW VELOCITY(FEET/SEC.) =  16.47   FLOW DEPTH(FEET) =   9.78
  TRAVEL TIME(MIN.) =   1.73   Tc(MIN.) =  39.11
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1047.00 = 31119.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1047.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  39.11
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.904
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        7.40      0.30      1.00    63
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        4.70      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        2.70      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       88.50      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                    C        0.70      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       48.30      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  152.30
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.54;30M= 1.11;1H= 1.48;3H= 2.54;6H= 3.56;24H= 6.02
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.65; LAG(HR) = 0.52; Fm(INCH/HR) = 0.24; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.81; 30M = 0.81; 1HR = 0.81;
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4167.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1047.00 = 31119.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0268; Lca/L=0.4,n=.0240; Lca/L=0.5,n=.0220;Lca/L=0.6,n=.0206
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =    1310.33
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4736.10
  TOTAL AREA(ACRES) =   4167.40       PEAK FLOW RATE(CFS) =    4795.90
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1047.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  39.11
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.112
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       12.70      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C        5.70      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        2.60      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                    D        1.10      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        7.10      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        0.70      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   29.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.54;30M= 1.11;1H= 1.48;3H= 2.53;6H= 3.56;24H= 6.02
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.65; LAG(HR) = 0.52; Fm(INCH/HR) = 0.24; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.81; 30M = 0.81; 1HR = 0.81;
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4197.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1047.00 = 31119.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0268; Lca/L=0.4,n=.0240; Lca/L=0.5,n=.0220;Lca/L=0.6,n=.0206
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =    1319.30
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4761.71
  TOTAL AREA(ACRES) =   4197.30       PEAK FLOW RATE(CFS) =    4795.90
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1046.00 TO NODE   1047.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
```

```
============================================================================
  MAINLINE Tc(MIN) =  39.11
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.112
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 D        8.70      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    8.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.54;30M= 1.11;1H= 1.48;3H= 2.53;6H= 3.56;24H= 6.02
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.65; LAG(HR) = 0.52; Fm(INCH/HR) = 0.24; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.81; 30M = 0.81; 1HR = 0.81;
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4206.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1047.00 = 31119.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0268; Lca/L=0.4,n=.0240; Lca/L=0.5,n=.0220;Lca/L=0.6,n=.0206
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =    1321.90
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4769.33
  TOTAL AREA(ACRES) =   4206.00       PEAK FLOW RATE(CFS) =    4795.90
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   4206.00  TC(MIN.) =     39.11
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.42
  PEAK FLOW RATE(CFS)   =   4795.90
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: MU48100H.DAT
  TIME/DATE OF STUDY: 10:54 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.030
   2)  10.000;  4.570
   3)  15.000;  3.560
   4)  20.000;  2.970
   5)  30.000;  2.340
   6)  60.000;  1.590
   7) 120.000;  1.120
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1047.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU47100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     4795.90    Tc(MIN.) =  39.11
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.42
  TOTAL AREA(ACRES) =    4206.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1047.00 = 31119.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1047.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     4795.90    Tc(MIN.) =  39.11
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.42
  TOTAL AREA(ACRES) =    4206.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1047.00 = 31119.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1047.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1048.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    485.00  DOWNSTREAM(FEET) =    445.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2398.00   CHANNEL SLOPE =  0.0167
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   4795.90
  FLOW VELOCITY(FEET/SEC.) =  16.15   FLOW DEPTH(FEET) =   9.92
  TRAVEL TIME(MIN.) =   2.47   Tc(MIN.) =  41.59
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 33517.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1048.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  41.59
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.838
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        1.80      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                    B        3.00      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B        8.10      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       86.10      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                    C        4.70      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       47.30      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  151.00
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.54;30M= 1.11;1H= 1.48;3H= 2.53;6H= 3.55;24H= 6.00
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.69; LAG(HR) = 0.55; Fm(INCH/HR) = 0.24; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.81; 30M = 0.81; 1HR = 0.81;
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4357.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 33517.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0266; Lca/L=0.4,n=.0239; Lca/L=0.5,n=.0219;Lca/L=0.6,n=.0205
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    1362.08
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4781.23
  TOTAL AREA(ACRES) =   4357.00       PEAK FLOW RATE(CFS) =    4795.90
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1047.00 TO NODE   1048.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  41.59
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.050
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C       22.40      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        6.80      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                    D        6.30      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        2.80      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D       11.70      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   50.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.54;30M= 1.11;1H= 1.48;3H= 2.53;6H= 3.55;24H= 6.00
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.69; LAG(HR) = 0.55; Fm(INCH/HR) = 0.24; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.80; 30M = 0.80; 1HR = 0.80;
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4407.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 33517.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0266; Lca/L=0.4,n=.0239; Lca/L=0.5,n=.0219;Lca/L=0.6,n=.0205
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    1376.42
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4822.07
  TOTAL AREA(ACRES) =   4407.00       PEAK FLOW RATE(CFS) =    4822.07

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   4407.00  TC(MIN.) =     41.59
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.43
  PEAK FLOW RATE(CFS)   =   4822.07
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

TECHNICAL APPENDIX II-B
HYDROLOGIC ANALYSIS
EXISTING CONDITION
2-YEAR EXPECTED VALUE

Rainfall Depths
2-Year - Expected Value - Existing Condition

	Area	< 2000	> 2000	Rainfall Depth							Area	< 2000	> 2000	Rainfall Depth					
Subarea	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr	Node	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr
		X		0.13	0.28	0.37	0.62	0.85	1.44			X		0.13	0.28	0.37	0.62	0.85	1.44
			X	0.18	0.32	0.46	0.94	1.46	2.67				X	0.18	0.32	0.46	0.94	1.46	2.67
1000	0.3	0.0	0.3	0.18	0.32	0.46	0.94	1.46	2.67	1001	0.3	0.0	0.3	0.18	0.32	0.46	0.94	1.46	2.67
1001	0.3	0.0	0.3	0.18	0.32	0.46	0.94	1.46	2.67	1002	0.6	0.0	0.6	0.18	0.32	0.46	0.94	1.46	2.67
1002	0.3	0.0	0.3	0.18	0.32	0.46	0.94	1.46	2.67	1003	0.9	0.0	0.9	0.18	0.32	0.46	0.94	1.46	2.67
1003	0.4	0.0	0.4	0.18	0.32	0.46	0.94	1.46	2.67	1004	1.3	0.0	1.3	0.18	0.32	0.46	0.94	1.46	2.67
1004	0.6	0.0	0.6	0.18	0.32	0.46	0.94	1.46	2.67	1005	1.9	0.0	1.9	0.18	0.32	0.46	0.94	1.46	2.67
1005	0.6	0.0	0.6	0.18	0.32	0.46	0.94	1.46	2.67										
1010	0.6	0.0	0.6	0.18	0.32	0.46	0.94	1.46	2.67	1011	0.6	0.0	0.6	0.18	0.32	0.46	0.94	1.46	2.67
1011	0.4	0.0	0.4	0.18	0.32	0.46	0.94	1.46	2.67	1012	1.0	0.0	1.0	0.18	0.32	0.46	0.94	1.46	2.67
1012	0.9	0.0	0.9	0.18	0.32	0.46	0.94	1.46	2.67	1013	1.9	0.0	1.9	0.18	0.32	0.46	0.94	1.46	2.67
1013	1.1	0.0	1.1	0.18	0.32	0.46	0.94	1.46	2.67	1014	5.5	0.0	5.5	0.18	0.32	0.46	0.94	1.46	2.67
1014	3.8	0.0	3.8	0.18	0.32	0.46	0.94	1.46	2.67	1015	9.3	0.0	9.3	0.18	0.32	0.46	0.94	1.46	2.67
1015	3.4	1.0	2.4	0.17	0.31	0.43	0.85	1.28	2.31	1016	12.7	1.0	11.7	0.18	0.32	0.45	0.91	1.41	2.57
1016	16.2	4.1	12.1	0.17	0.31	0.44	0.86	1.31	2.36	1017	28.9	5.1	23.8	0.17	0.31	0.44	0.88	1.35	2.45
1017	4.6	2.8	1.8	0.15	0.30	0.41	0.75	1.09	1.92										
1020	0.7	0.0	0.7	0.18	0.32	0.46	0.94	1.46	2.67	1021	0.7	0.0	0.7	0.18	0.32	0.46	0.94	1.46	2.67
1021	0.5	0.0	0.5	0.18	0.32	0.46	0.94	1.46	2.67	1022	1.2	0.0	1.2	0.18	0.32	0.46	0.94	1.46	2.67
1022	1.7	0.0	1.7	0.18	0.32	0.46	0.94	1.46	2.67	1023	2.9	0.0	2.9	0.18	0.32	0.46	0.94	1.46	2.67
1023	0.3	0.0	0.3	0.18	0.32	0.46	0.94	1.46	2.67	1024	3.2	0.0	3.2	0.18	0.32	0.46	0.94	1.46	2.67
1024	1.8	0.0	1.8	0.18	0.32	0.46	0.94	1.46	2.67	1025	5.0	0.0	5.0	0.18	0.32	0.46	0.94	1.46	2.67
1025	3.4	0.0	3.4	0.18	0.32	0.46	0.94	1.46	2.67	1026	8.4	0.0	8.4	0.18	0.32	0.46	0.94	1.46	2.67
1026	6.2	0.0	6.2	0.18	0.32	0.46	0.94	1.46	2.67	1027	14.6	0.0	14.6	0.18	0.32	0.46	0.94	1.46	2.67
1027	9.9	0.0	9.9	0.18	0.32	0.46	0.94	1.46	2.67	1028	24.5	0.0	24.5	0.18	0.32	0.46	0.94	1.46	2.67
1028	4.0	2.0	2.0	0.16	0.30	0.42	0.78	1.16	2.06	1029	62.0	9.9	52.1	0.17	0.31	0.45	0.89	1.36	2.47
1029	33.7	26.3	7.4	0.14	0.29	0.39	0.69	0.98	1.71	1030	95.7	36.2	59.5	0.16	0.30	0.43	0.82	1.23	2.20
1030	83.9	54.2	29.7	0.15	0.29	0.40	0.73	1.07	1.88	1031	179.6	90.4	89.2	0.15	0.30	0.41	0.78	1.15	2.05
1031	176.1	116.9	59.2	0.15	0.29	0.40	0.73	1.06	1.85	1032	355.7	207.3	148.4	0.15	0.30	0.41	0.75	1.10	1.95
1032	75.8	75.5	0.3	0.13	0.28	0.37	0.62	0.85	1.44	1033	431.5	282.8	148.7	0.15	0.29	0.40	0.73	1.06	1.86
1033	133.0	133.0	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1034	564.5	415.8	148.7	0.14	0.29	0.39	0.70	1.01	1.76
1034	46.5	46.5	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1035	611.0	462.3	148.7	0.14	0.29	0.39	0.70	1.00	1.74
1035	59.0	59.0	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1036	670.0	521.3	148.7	0.14	0.29	0.39	0.69	0.99	1.71
1036	348.9	341.2	7.7	0.13	0.28	0.37	0.63	0.86	1.47	1037	1,018.9	862.5	156.4	0.14	0.29	0.38	0.67	0.94	1.63
1037	84.2	84.2	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1038	1,103.1	946.7	156.4	0.14	0.29	0.38	0.67	0.94	1.61

Rainfall Depths
2-Year - Expected Value - Existing Condition

	Area	< 2000	> 2000	Rainfall Depth							Area	< 2000	> 2000	Rainfall Depth					
Subarea	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr	Node	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr
		X		0.13	0.28	0.37	0.62	0.85	1.44			X		0.13	0.28	0.37	0.62	0.85	1.44
			X	0.18	0.32	0.46	0.94	1.46	2.67				X	0.18	0.32	0.46	0.94	1.46	2.67
1038	426.5	358.5	68.0	0.14	0.29	0.38	0.67	0.95	1.64	1039	1,529.6	1,305.2	224.4	0.14	0.29	0.38	0.67	0.94	1.62
1039	584.2	520.2	64.0	0.14	0.28	0.38	0.66	0.92	1.57	1040	2,113.8	1,825.4	288.4	0.14	0.29	0.38	0.66	0.93	1.61
1040	629.8	628.6	1.2	0.13	0.28	0.37	0.62	0.85	1.44	1041	2,743.6	2,454.0	289.6	0.14	0.28	0.38	0.65	0.91	1.57
1041	135.8	135.8	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1042	2,879.4	2,589.8	289.6	0.14	0.28	0.38	0.65	0.91	1.56
1042	475.9	475.9	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1043	3,355.3	3,065.7	289.6	0.13	0.28	0.38	0.65	0.90	1.55
1043	165.2	165.2	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1044	3,520.5	3,230.9	289.6	0.13	0.28	0.38	0.65	0.90	1.54
1044	339.3	339.3	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1045	3,859.8	3,570.2	289.6	0.13	0.28	0.38	0.64	0.90	1.53
1045	155.5	155.5	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1046	4,015.3	3,725.7	289.6	0.13	0.28	0.38	0.64	0.89	1.53
1046	190.7	190.7	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1047	4,206.0	3,916.4	289.6	0.13	0.28	0.38	0.64	0.89	1.52
1047	200.9	200.9	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1048	4,406.9	4,117.3	289.6	0.13	0.28	0.38	0.64	0.89	1.52
1048	3,383.3	3,383.3	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1049	7,790.2	7,500.6	289.6	0.13	0.28	0.37	0.63	0.87	1.49
1049	497.6	497.6	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1050	8,287.8	7,998.2	289.6	0.13	0.28	0.37	0.63	0.87	1.48
1050	454.4	454.4	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1051	8,742.2	8,452.6	289.6	0.13	0.28	0.37	0.63	0.87	1.48
1051	290.9	290.9	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1052	9,033.1	8,743.5	289.6	0.13	0.28	0.37	0.63	0.87	1.48
1052	848.4	848.4	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1053	9,881.5	9,591.9	289.6	0.13	0.28	0.37	0.63	0.87	1.48
1053	2,422.6	2,422.6	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1054	12,304.1	12,014.5	289.6	0.13	0.28	0.37	0.63	0.86	1.47
1054	324.5	324.5	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1055	12,628.6	12,339.0	289.6	0.13	0.28	0.37	0.63	0.86	1.47
1055	392.6	392.6	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1056	13,021.2	12,731.6	289.6	0.13	0.28	0.37	0.63	0.86	1.47
1056	5,559.2	4,931.8	627.4	0.14	0.28	0.38	0.66	0.92	1.58	1057	18,580.4	17,663.4	917.0	0.13	0.28	0.37	0.64	0.88	1.50

Channel Hydraulics, Travel Times, Times of Concentration, and Lag Estimates
2-Year - Expected Value - Existing Condition

U/S Node	D/S Node	U/S Elevation	D/S Elevation	Length (ft)	Manning (n)	Base (ft)	Sideslope (z)	Height (ft)	Q(2) (cfs)	Dn (ft)	V (fps)	Tt (min)	Tc (min)	Lag (hr)
	1036		1100		Data from Rational Method Analysis:				56				31.03	0.41
1036	1037	1100	1010	1517	0.040	7	1	7	139	1.59	10.16	2.49	33.52	0.45
1037	1038	1010	925	2069	0.040	8	1	8	193	1.99	9.69	3.56	37.08	0.49
1038	1039	925	873	1383	0.040	8	1	8	193	2.04	9.39	2.45	39.53	0.53
1039	1040	873	780	2714	0.040	9	1	9	235	2.21	9.49	4.76	44.30	0.59
1040	1041	780	695	2758	0.040	10	1	10	304	2.50	9.75	4.71	49.01	0.65
1041	1042	695	650	1846	0.040	15	1	10	335	2.25	8.63	3.56	52.58	0.70
1042	1043	650	600	2257	0.040	15	1	10	337	2.32	8.38	4.49	57.07	0.76
1043	1044	600	580	1011	0.040	20	1	10	337	2.03	7.55	2.23	59.30	0.79
1044	1045	580	540	1918	0.040	20	1	10	337	2.00	7.68	4.16	63.46	0.85
1045	1046	540	515	1273	0.040	20	1	10	342	2.05	7.57	2.80	66.27	0.88
1046	1047	515	485	1705	0.040	20	1	10	347	2.14	7.33	3.88	70.14	0.94
1047	1048	485	445	2398	0.040	20	1	10	347	2.17	7.21	5.55	75.69	1.01
1048	1049	445	400	2427	0.040	20	1	10	347	2.10	7.46	5.42	81.11	1.08
1049	1050	400	390	616	0.040	20	1	15	444	2.54	7.77	1.32	82.43	1.10
1050	1051	390	330	4501	0.040	20	1	15	457	2.74	7.35	10.21	92.64	1.24
1051	1052	330	300	2333	0.040	20	1	15	457	2.76	7.26	5.36	98.00	1.31
1052	1053	300	265	3322	0.040	20	1	15	457	2.93	6.79	8.15	106.15	1.42
1053	1054	265	245	1390	0.040	20	1	15	460	2.68	7.55	3.07	109.22	1.46
1054	1055	245	215	2724	0.040	25	1	15	508	2.71	6.78	6.69	115.91	1.55
1055	1056	215	185	2880	0.040	25	1	15	508	2.75	6.66	7.21	123.12	1.64
1056	1057	185	165	2367	0.040	30	1	15	508	2.63	5.93	6.65	129.77	1.73

Rainfall Depths
2-Year - Expected Value - Proposed Condition

	Area	< 2000	> 2000	Rainfall Depth							Area	< 2000	> 2000	Rainfall Depth					
Subarea	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr	Node	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr
		X		0.13	0.28	0.37	0.62	0.85	1.44			X		0.13	0.28	0.37	0.62	0.85	1.44
			X	0.18	0.32	0.46	0.94	1.46	2.67				X	0.18	0.32	0.46	0.94	1.46	2.67
1000	0.3	0.0	0.3	0.18	0.32	0.46	0.94	1.46	2.67	1001	0.3	0.0	0.3	0.18	0.32	0.46	0.94	1.46	2.67
1001	0.3	0.0	0.3	0.18	0.32	0.46	0.94	1.46	2.67	1002	0.6	0.0	0.6	0.18	0.32	0.46	0.94	1.46	2.67
1002	0.3	0.0	0.3	0.18	0.32	0.46	0.94	1.46	2.67	1003	0.9	0.0	0.9	0.18	0.32	0.46	0.94	1.46	2.67
1003	0.4	0.0	0.4	0.18	0.32	0.46	0.94	1.46	2.67	1004	1.3	0.0	1.3	0.18	0.32	0.46	0.94	1.46	2.67
1004	0.6	0.0	0.6	0.18	0.32	0.46	0.94	1.46	2.67	1005	1.9	0.0	1.9	0.18	0.32	0.46	0.94	1.46	2.67
1005	0.6	0.0	0.6	0.18	0.32	0.46	0.94	1.46	2.67										
1010	0.6	0.0	0.6	0.18	0.32	0.46	0.94	1.46	2.67	1011	0.6	0.0	0.6	0.18	0.32	0.46	0.94	1.46	2.67
1011	0.4	0.0	0.4	0.18	0.32	0.46	0.94	1.46	2.67	1012	1.0	0.0	1.0	0.18	0.32	0.46	0.94	1.46	2.67
1012	0.9	0.0	0.9	0.18	0.32	0.46	0.94	1.46	2.67	1013	1.9	0.0	1.9	0.18	0.32	0.46	0.94	1.46	2.67
1013	1.1	0.0	1.1	0.18	0.32	0.46	0.94	1.46	2.67	1014	5.5	0.0	5.5	0.18	0.32	0.46	0.94	1.46	2.67
1014	3.8	0.0	3.8	0.18	0.32	0.46	0.94	1.46	2.67	1015	9.3	0.0	9.3	0.18	0.32	0.46	0.94	1.46	2.67
1015	3.4	1.0	2.4	0.17	0.31	0.43	0.85	1.28	2.31	1016	12.7	1.0	11.7	0.18	0.32	0.45	0.91	1.41	2.57
1016	16.2	4.1	12.1	0.17	0.31	0.44	0.86	1.31	2.36	1017	28.9	5.1	23.8	0.17	0.31	0.44	0.88	1.35	2.45
1017	4.6	2.8	1.8	0.15	0.30	0.41	0.75	1.09	1.92										
1020	0.7	0.0	0.7	0.18	0.32	0.46	0.94	1.46	2.67	1021	0.7	0.0	0.7	0.18	0.32	0.46	0.94	1.46	2.67
1021	0.5	0.0	0.5	0.18	0.32	0.46	0.94	1.46	2.67	1022	1.2	0.0	1.2	0.18	0.32	0.46	0.94	1.46	2.67
1022	1.7	0.0	1.7	0.18	0.32	0.46	0.94	1.46	2.67	1023	2.9	0.0	2.9	0.18	0.32	0.46	0.94	1.46	2.67
1023	0.3	0.0	0.3	0.18	0.32	0.46	0.94	1.46	2.67	1024	3.2	0.0	3.2	0.18	0.32	0.46	0.94	1.46	2.67
1024	1.8	0.0	1.8	0.18	0.32	0.46	0.94	1.46	2.67	1025	5.0	0.0	5.0	0.18	0.32	0.46	0.94	1.46	2.67
1025	3.4	0.0	3.4	0.18	0.32	0.46	0.94	1.46	2.67	1026	8.4	0.0	8.4	0.18	0.32	0.46	0.94	1.46	2.67
1026	6.2	0.0	6.2	0.18	0.32	0.46	0.94	1.46	2.67	1027	14.6	0.0	14.6	0.18	0.32	0.46	0.94	1.46	2.67
1027	9.9	0.0	9.9	0.18	0.32	0.46	0.94	1.46	2.67	1028	24.5	0.0	24.5	0.18	0.32	0.46	0.94	1.46	2.67
1028	4.0	2.0	2.0	0.16	0.30	0.42	0.78	1.16	2.06	1029	62.0	9.9	52.1	0.17	0.31	0.45	0.89	1.36	2.47
1029	33.7	26.3	7.4	0.14	0.29	0.39	0.69	0.98	1.71	1030	95.7	36.2	59.5	0.16	0.30	0.43	0.82	1.23	2.20
1030	83.9	54.2	29.7	0.15	0.29	0.40	0.73	1.07	1.88	1031	179.6	90.4	89.2	0.15	0.30	0.41	0.78	1.15	2.05
1031	176.1	116.9	59.2	0.15	0.29	0.40	0.73	1.06	1.85	1032	355.7	207.3	148.4	0.15	0.30	0.41	0.75	1.10	1.95
1032	75.8	75.5	0.3	0.13	0.28	0.37	0.62	0.85	1.44	1033	431.5	282.8	148.7	0.15	0.29	0.40	0.73	1.06	1.86
1033	133.0	133.0	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1034	564.5	415.8	148.7	0.14	0.29	0.39	0.70	1.01	1.76
1034	46.5	46.5	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1035	611.0	462.3	148.7	0.14	0.29	0.39	0.70	1.00	1.74
1035	59.0	59.0	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1036	670.0	521.3	148.7	0.14	0.29	0.39	0.69	0.99	1.71
1036	348.9	341.2	7.7	0.13	0.28	0.37	0.63	0.86	1.47	1037	1,018.9	862.5	156.4	0.14	0.29	0.38	0.67	0.94	1.63
1037	84.2	84.2	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1038	1,103.1	946.7	156.4	0.14	0.29	0.38	0.67	0.94	1.61

Rainfall Depths
2-Year - Expected Value - Proposed Condition

	Area	< 2000	> 2000	Rainfall Depth							Area	< 2000	> 2000	Rainfall Depth					
Subarea	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr	Node	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr
		X		0.13	0.28	0.37	0.62	0.85	1.44			X		0.13	0.28	0.37	0.62	0.85	1.44
			X	0.18	0.32	0.46	0.94	1.46	2.67				X	0.18	0.32	0.46	0.94	1.46	2.67
1038	426.5	358.5	68.0	0.14	0.29	0.38	0.67	0.95	1.64	1039	1,529.6	1,305.2	224.4	0.14	0.29	0.38	0.67	0.94	1.62
1039	584.2	520.2	64.0	0.14	0.28	0.38	0.66	0.92	1.57	1040	2,113.8	1,825.4	288.4	0.14	0.29	0.38	0.66	0.93	1.61
1040	629.8	628.6	1.2	0.13	0.28	0.37	0.62	0.85	1.44	1041	2,743.6	2,454.0	289.6	0.14	0.28	0.38	0.65	0.91	1.57
1041	135.8	135.8	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1042	2,879.4	2,589.8	289.6	0.14	0.28	0.38	0.65	0.91	1.56
1042	475.9	475.9	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1043	3,355.3	3,065.7	289.6	0.13	0.28	0.38	0.65	0.90	1.55
1043	165.2	165.2	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1044	3,520.5	3,230.9	289.6	0.13	0.28	0.38	0.65	0.90	1.54
1044	339.3	339.3	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1045	3,859.8	3,570.2	289.6	0.13	0.28	0.38	0.64	0.90	1.53
1045	155.5	155.5	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1046	4,015.3	3,725.7	289.6	0.13	0.28	0.38	0.64	0.89	1.53
1046	190.7	190.7	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1047	4,206.0	3,916.4	289.6	0.13	0.28	0.38	0.64	0.89	1.52
1047	200.9	200.9	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1048	4,406.9	4,117.3	289.6	0.13	0.28	0.38	0.64	0.89	1.52
1048	3,383.3	3,383.3	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1049	7,790.2	7,500.6	289.6	0.13	0.28	0.37	0.63	0.87	1.49
1049	496.3	496.3	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1050	8,286.5	7,996.9	289.6	0.13	0.28	0.37	0.63	0.87	1.48
1050	300.9	300.9	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1051	8,587.4	8,297.8	289.6	0.13	0.28	0.37	0.63	0.87	1.48
1051	365.0	365.0	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1052	8,952.4	8,662.8	289.6	0.13	0.28	0.37	0.63	0.87	1.48
1052	679.9	679.9	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1053	9,632.3	9,342.7	289.6	0.13	0.28	0.37	0.63	0.87	1.48
1053	2,538.8	2,538.8	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1054	12,171.1	11,881.5	289.6	0.13	0.28	0.37	0.63	0.86	1.47
1054	351.6	351.6	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1055	12,522.7	12,233.1	289.6	0.13	0.28	0.37	0.63	0.86	1.47
1055	367.9	367.9	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1056	12,890.6	12,601.0	289.6	0.13	0.28	0.37	0.63	0.86	1.47
1056	5,665.4	5,037.9	627.5	0.14	0.28	0.38	0.66	0.92	1.58	1057	18,556.0	17,638.9	917.1	0.13	0.28	0.37	0.64	0.88	1.50

Channel Hydraulics, Travel Times, Times of Concentration, and Lag Estimates
2-Year - Expected Value - Proposed Condition

U/S Node	D/S Node	U/S Elevation	D/S Elevation	Length (ft)	Manning (n)	Base (ft)	Sideslope (z)	Height (ft)	Q(2) (cfs)	Dn (ft)	V (fps)	Tt (min)	Tc (min)	Lag (hr)
	1036		1100		Data from Rational Method Analysis:				56.21				31.03	0.41
1036	1037	1100	1010	1517	0.040	7	1	7	138.92	1.59	10.16	2.49	33.52	0.45
1037	1038	1010	925	2069	0.040	8	1	8	192.54	1.99	9.69	3.56	37.08	0.49
1038	1039	925	873	1383	0.040	8	1	8	192.58	2.04	9.39	2.45	39.53	0.53
1039	1040	873	780	2714	0.040	9	1	9	234.70	2.21	9.49	4.76	44.30	0.59
1040	1041	780	695	2758	0.040	10	1	10	303.94	2.50	9.75	4.71	49.01	0.65
1041	1042	695	650	1846	0.040	15	1	10	334.68	2.25	8.63	3.56	52.58	0.70
1042	1043	650	600	2257	0.040	15	1	10	336.96	2.32	8.38	4.49	57.07	0.76
1043	1044	600	580	1011	0.040	20	1	10	337.14	2.03	7.55	2.23	59.30	0.79
1044	1045	580	540	1918	0.040	20	1	10	337.08	2.00	7.68	4.16	63.46	0.85
1045	1046	540	515	1273	0.040	20	1	10	342.30	2.05	7.57	2.80	66.27	0.88
1046	1047	515	485	1705	0.040	20	1	10	346.50	2.14	7.33	3.88	70.14	0.94
1047	1048	485	445	2398	0.040	20	1	10	346.68	2.17	7.21	5.55	75.69	1.01
1048	1049	445	400	2427	0.040	20	1	10	346.55	2.10	7.46	5.42	81.11	1.08
1049	1050	400	390	616	0.040	20	1	15	444.07	2.54	7.77	1.32	82.43	1.10
1050	1051	390	330	4501	0.040	20	1	15	456.57	2.73	7.35	10.21	92.65	1.24
1051	1052	330	300	2333	0.040	20	1	15	456.73	2.76	7.26	5.36	98.00	1.31
1052	1053	300	265	3322	0.040	20	1	15	456.58	2.93	6.79	8.15	106.16	1.42
1053	1054	265	245	1390	0.040	20	1	15	456.69	2.67	7.54	3.07	109.23	1.46
1054	1055	245	215	2724	0.040	25	1	15	503.05	2.69	6.76	6.72	115.95	1.55
1055	1056	215	185	2880	0.040	25	1	15	503.33	2.73	6.64	7.23	123.18	1.64
1056	1057	185	165	2367	0.040	30	1	15	503.34	2.61	5.91	6.67	129.85	1.73

Losses

Node	U1036
Total Area (ac)	670.1
24-Hour Rainfall Depth (in)	1.71
Fm (in/hr)	0.60
Y-Bar	0.78

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	25.9	0.0	83.0	421.9	25.9	0.0	83.0	421.9
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.1	9.1	0.0	0.0	0.1	9.1
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	11.7	0.0	47.1	69.4	11.7	0.0	47.1	69.4
Woodland (Fair)	100	36	60	73	79	0.0	0.0	0.1	0.8	0.0	0.0	0.1	0.8
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.07	0.15
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.07	0.15
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.07	0.15
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.07	0.15
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.07	0.15
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.19	0.37	0.53	0.62
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.03	0.15	0.25
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.11	0.25	0.37
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.07	0.21	0.32
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.08	0.23	0.32
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.01	0.09	0.19
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.05	0.18	0.30
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.01	0.12	0.21
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.18	0.37	0.53	0.66
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.04	0.18	0.27
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.07	0.21	0.32
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.04	0.18	0.27

Losses

Node	U1037
Total Area (ac)	1,019.0
24-Hour Rainfall Depth (in)	1.63
Fm (in/hr)	0.60
Y-Bar	0.80

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	23.7	0.0	82.5	2.5	49.6	0.0	165.5	424.4
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	24.2	10.6	0.0	0.0	24.3	19.7
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	6.7	0.0	114.0	84.7	18.4	0.0	161.1	154.1
Woodland (Fair)	100	36	60	73	79	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.18	0.36	0.52	0.60
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.02	0.13	0.24
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.09	0.24	0.36
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.06	0.20	0.30
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.07	0.22	0.30
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.08	0.18
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.04	0.16	0.28
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.01	0.11	0.20
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.16	0.36	0.52	0.65
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.16	0.26
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.06	0.20	0.30
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.16	0.26

Losses

Node	U1038
Total Area (ac)	1,103.1
24-Hour Rainfall Depth (in)	1.61
Fm (in/hr)	0.60
Y-Bar	0.81

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	10.2	0.0	31.2	1.2	59.8	0.0	196.7	425.6
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	4.7	1.9	0.0	0.0	29.0	21.6
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.4	0.0	17.5	17.0	18.8	0.0	178.6	171.1
Woodland (Fair)	100	36	60	73	79	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.18	0.35	0.52	0.60
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.02	0.13	0.23
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.09	0.23	0.35
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.06	0.19	0.30
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.07	0.21	0.30
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.08	0.18
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.04	0.16	0.28
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.01	0.10	0.19
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.16	0.35	0.52	0.64
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.16	0.25
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.06	0.19	0.30
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.16	0.25

Losses

Node	U1039
Total Area (ac)	1,529.7
24-Hour Rainfall Depth (in)	1.62
Fm (in/hr)	0.60
Y-Bar	0.81

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	55.8	0.0	106.0	28.5	115.6	0.0	302.7	454.1
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	1.9	0.8	0.0	0.0	30.9	22.4
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	25.5	0.0	0.0	0.0	26.5
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	2.3	0.0	112.0	92.9	21.1	0.0	290.6	264.0
Woodland (Fair)	100	36	60	73	79	0.2	0.0	0.7	0.0	0.2	0.0	0.8	0.8
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.18	0.35	0.52	0.60
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.02	0.13	0.23
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.09	0.23	0.35
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.06	0.20	0.30
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.07	0.21	0.30
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.08	0.18
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.04	0.16	0.28
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.01	0.10	0.20
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.16	0.35	0.52	0.65
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.16	0.26
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.06	0.20	0.30
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.16	0.26

Losses

Node	U1040
Total Area (ac)	2,113.7
24-Hour Rainfall Depth (in)	1.61
Fm (in/hr)	0.60
Y-Bar	0.81

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	31.1	0.0	122.3	129.9	146.7	0.0	425.0	584.0
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	4.4	0.0	0.0	30.9	26.8
Grass (Fair)	100	50	69	79	84	2.2	0.0	1.6	12.7	2.2	0.0	1.6	39.2
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	12.1	0.0	137.4	116.4	33.2	0.0	428.0	380.4
Woodland (Fair)	100	36	60	73	79	8.7	0.0	0.9	2.9	8.9	0.0	1.7	3.7
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	1.3	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.18	0.35	0.52	0.60
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.02	0.13	0.23
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.09	0.23	0.35
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.06	0.19	0.30
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.07	0.21	0.30
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.08	0.18
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.04	0.16	0.28
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.01	0.10	0.19
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.16	0.35	0.52	0.64
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.16	0.25
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.06	0.19	0.30
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.16	0.25

Losses

Node	U1041
Total Area (ac)	2,743.6
24-Hour Rainfall Depth (in)	1.57
Fm (in/hr)	0.60
Y-Bar	0.82

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	30.0	0.0	87.4	36.1	176.7	0.0	512.4	620.1
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	0.0	30.9	26.8
Grass (Fair)	100	50	69	79	84	1.2	0.0	10.4	56.8	3.4	0.0	12.0	96.0
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	28.6	0.0	138.6	220.7	61.8	0.0	566.6	601.1
Woodland (Fair)	100	36	60	73	79	14.7	0.0	2.9	0.9	23.6	0.0	4.6	4.6
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	1.6	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.12
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.12
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.12
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.12
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.12
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.17	0.34	0.51	0.59
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.02	0.12	0.22
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.09	0.22	0.34
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.06	0.19	0.29
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.06	0.20	0.29
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.07	0.17
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.15	0.27
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.01	0.10	0.19
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.15	0.34	0.51	0.64
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.15	0.24
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.06	0.19	0.29
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.15	0.24

Losses

Node	U1042
Total Area (ac)	2,879.3
24-Hour Rainfall Depth (in)	1.56
Fm (in/hr)	0.60
Y-Bar	0.82

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	1.3	0.0	25.1	18.0	178.0	0.0	537.5	638.1
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	0.0	30.9	26.8
Grass (Fair)	100	50	69	79	84	0.2	0.0	3.2	2.2	3.6	0.0	15.2	98.2
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	2.2	0.0	28.6	44.1	64.0	0.0	595.2	645.2
Woodland (Fair)	100	36	60	73	79	5.3	0.0	0.9	4.6	28.9	0.0	5.5	9.2
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.17	0.34	0.51	0.59
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.02	0.12	0.22
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.08	0.22	0.34
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.18	0.29
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.06	0.20	0.29
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.07	0.17
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.15	0.27
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.10	0.18
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.15	0.34	0.51	0.64
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.15	0.24
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.18	0.29
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.15	0.24

Losses

Node	U1043
Total Area (ac)	3,355.1
24-Hour Rainfall Depth (in)	1.55
Fm (in/hr)	0.60
Y-Bar	0.82

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	5.5	6.4	52.9	95.6	183.5	6.4	590.4	733.7
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	13.5	0.0	0.0	0.0	44.4	26.8
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.6	3.6	0.0	15.2	98.8
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	8.0	2.6	57.9	213.7	72.0	2.6	653.1	858.9
Woodland (Fair)	100	36	60	73	79	1.1	9.6	0.0	8.4	30.0	9.6	5.5	17.6
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.16	0.34	0.50	0.59
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.12	0.22
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.08	0.22	0.34
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.18	0.29
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.06	0.20	0.29
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.07	0.16
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.15	0.26
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.09	0.18
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.15	0.34	0.50	0.63
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.15	0.24
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.18	0.29
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.15	0.24

Losses

Node	U1044
Total Area (ac)	3,520.2
24-Hour Rainfall Depth (in)	1.54
Fm (in/hr)	0.60
Y-Bar	0.82

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	1.3	0.4	27.5	33.2	184.8	6.8	617.9	766.9
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.7	7.6	0.0	0.0	0.7	52.0	26.8
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	3.6	0.0	15.2	98.8
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	1.3	1.6	32.5	50.7	73.3	4.2	685.6	909.6
Woodland (Fair)	100	36	60	73	79	0.9	2.8	0.9	3.7	30.9	12.4	6.4	21.3
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.16	0.34	0.50	0.59
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.12	0.22
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.08	0.22	0.34
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.18	0.28
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.06	0.20	0.28
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.07	0.16
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.15	0.26
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.09	0.18
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.15	0.34	0.50	0.63
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.15	0.24
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.18	0.28
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.15	0.24

Losses

Node	U1045
Total Area (ac)	3,859.5
24-Hour Rainfall Depth (in)	1.53
Fm (in/hr)	0.60
Y-Bar	0.82

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	6.2	4.5	90.4	75.7	191.0	11.3	708.3	842.6
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	2.2	0.0	0.0	0.7	54.2	26.8
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	3.6	0.0	15.2	98.8
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	2.0	2.4	49.6	85.1	75.3	6.6	735.2	994.7
Woodland (Fair)	100	36	60	73	79	6.0	0.2	6.7	8.3	36.9	12.6	13.1	29.6
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.16	0.33	0.50	0.58
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.12	0.22
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.08	0.22	0.33
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.18	0.28
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.06	0.20	0.28
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.07	0.16
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.15	0.26
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.09	0.18
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.15	0.33	0.50	0.63
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.15	0.24
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.18	0.28
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.15	0.24

Losses

Node	U1046
Total Area (ac)	4,015.1
24-Hour Rainfall Depth (in)	1.53
Fm (in/hr)	0.60
Y-Bar	0.82

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.1	6.7	90.0	1.6	191.1	18.0	798.3	844.2
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.2	3.8	0.0	0.0	0.9	58.0	26.8
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	3.6	0.0	15.2	98.8
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	1.1	42.9	1.7	75.3	7.7	778.1	996.4
Woodland (Fair)	100	36	60	73	79	0.0	1.0	0.8	5.7	36.9	13.6	13.9	35.3
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.16	0.33	0.50	0.58
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.12	0.22
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.08	0.22	0.33
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.18	0.28
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.06	0.20	0.28
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.07	0.16
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.15	0.26
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.09	0.18
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.15	0.33	0.50	0.63
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.15	0.24
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.18	0.28
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.15	0.24

Losses

Node	U1047
Total Area (ac)	4,206.0
24-Hour Rainfall Depth (in)	1.52
Fm (in/hr)	0.60
Y-Bar	0.83

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	7.4	88.5	2.6	191.1	25.4	886.8	846.8
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	12.7	0.7	0.0	0.9	70.7	27.5
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.7	1.1	3.6	0.0	15.9	99.9
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	4.7	48.3	7.1	75.3	12.4	826.4	1,003.5
Woodland (Fair)	100	36	60	73	79	0.0	2.7	5.7	8.7	36.9	16.3	19.6	44.0
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.16	0.33	0.50	0.58
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.08	0.21	0.33
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.18	0.28
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.06	0.19	0.28
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.07	0.16
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.14	0.26
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.09	0.18
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.33	0.50	0.63
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.18	0.28
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	U1048
Total Area (ac)	4,407.0
24-Hour Rainfall Depth (in)	1.52
Fm (in/hr)	0.60
Y-Bar	0.83

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	1.8	86.1	6.8	191.1	27.2	972.9	853.6
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	0.9	70.7	27.5
Grass (Fair)	100	50	69	79	84	0.0	3.0	4.7	6.3	3.6	3.0	20.6	106.2
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	0.0	47.3	2.8	75.3	12.4	873.7	1,006.3
Woodland (Fair)	100	36	60	73	79	0.0	8.1	22.4	11.7	36.9	24.4	42.0	55.7
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.16	0.33	0.50	0.58
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.08	0.21	0.33
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.18	0.28
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.06	0.19	0.28
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.07	0.16
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.14	0.26
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.09	0.18
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.33	0.50	0.63
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.18	0.28
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	E1049
Total Area (ac)	7,790.2
24-Hour Rainfall Depth (in)	1.49
Fm (in/hr)	0.60
Y-Bar	0.84

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	2.2	1.0	0.0	0.0	2.2	1.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	39.1	70.7	709.7	141.9	230.2	97.9	1,682.6	995.5
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	2.0	78.3	21.6	0.0	2.9	149.0	49.1
Grass (Fair)	100	50	69	79	84	26.9	65.1	92.3	481.5	30.5	68.1	112.9	587.7
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.4
Open Brush (Fair)	100	46	66	77	83	43.6	39.6	838.8	419.6	118.9	52.0	1,712.5	1,425.9
Woodland (Fair)	100	36	60	73	79	72.7	81.7	84.4	70.1	109.6	106.1	126.4	125.8
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.33	0.49	0.58
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.21	0.33
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.19	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.33	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	E1050
Total Area (ac)	8,287.9
24-Hour Rainfall Depth (in)	1.48
Fm (in/hr)	0.60
Y-Bar	0.84

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.9	6.9	0.0	0.0	0.9	6.9
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	1.1	0.2	0.0	0.0	3.3	1.2
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.0	88.3	2.5	230.2	97.9	1,770.9	998.0
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	2.9	149.0	49.1
Grass (Fair)	100	50	69	79	84	0.3	2.2	36.5	62.6	30.8	70.3	149.4	650.3
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Open Brush (Fair)	100	46	66	77	83	0.2	0.2	245.3	9.2	119.1	52.2	1,957.8	1,435.1
Woodland (Fair)	100	36	60	73	79	1.1	0.4	38.0	1.8	110.7	106.5	164.4	127.6
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.21	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.19	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	E1051
Total Area (ac)	8,742.1
24-Hour Rainfall Depth (in)	1.48
Fm (in/hr)	0.60
Y-Bar	0.84

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.7	0.0	0.0	23.1	0.7	0.0	0.9	30.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	1.3	7.1	0.0	0.0	4.6	8.3
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.0	9.1	40.7	230.2	97.9	1,780.0	1,038.7
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	2.9	149.0	49.1
Grass (Fair)	100	50	69	79	84	1.8	3.2	5.8	178.6	32.6	73.5	155.2	828.9
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Open Brush (Fair)	100	46	66	77	83	0.0	2.2	29.6	93.4	119.1	54.4	1,987.4	1,528.5
Woodland (Fair)	100	36	60	73	79	6.5	10.9	8.8	31.4	117.2	117.4	173.2	159.0
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.21	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.19	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	E1052
Total Area (ac)	9,032.9
24-Hour Rainfall Depth (in)	1.48
Fm (in/hr)	0.60
Y-Bar	0.84

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.7	0.0	0.9	30.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	1.1	0.0	0.0	1.1	1.1	0.0	0.0	1.1
Barren (Poor)	100	78	86	91	93	7.2	0.0	4.3	36.1	7.2	0.0	8.9	44.4
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.0	14.1	14.6	230.2	97.9	1,794.1	1,053.3
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	2.9	149.0	49.1
Grass (Fair)	100	50	69	79	84	1.4	0.0	14.5	104.4	34.0	73.5	169.7	933.3
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Open Brush (Fair)	100	46	66	77	83	4.7	0.0	12.1	28.8	123.8	54.4	1,999.5	1,557.3
Woodland (Fair)	100	36	60	73	79	12.1	0.0	0.2	34.1	129.3	117.4	173.4	193.1
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.21	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.19	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	E1053
Total Area (ac)	9,881.3
24-Hour Rainfall Depth (in)	1.48
Fm (in/hr)	0.60
Y-Bar	0.83

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	16.9	12.9	0.7	0.0	17.8	42.9
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.1
Barren (Poor)	100	78	86	91	93	0.9	0.0	8.7	4.9	8.1	0.0	17.6	49.3
Chaparral, Broadleaf (Fair)	100	40	63	75	81	1.6	0.0	66.6	12.5	231.8	97.9	1,860.7	1,065.8
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	2.9	149.0	49.1
Grass (Fair)	100	50	69	79	84	13.1	21.8	24.9	325.9	47.1	95.3	194.6	1,259.2
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Open Brush (Fair)	100	46	66	77	83	3.2	4.2	63.5	125.0	127.0	58.6	2,063.0	1,682.3
Woodland (Fair)	100	36	60	73	79	16.9	4.4	47.0	73.5	146.2	121.8	220.4	266.6
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.21	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.19	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	E1054
Total Area (ac)	12,304.1
24-Hour Rainfall Depth (in)	1.47
Fm (in/hr)	0.60
Y-Bar	0.83

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.7	0.7	0.0	17.8	43.6
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.7	1.1	0.0	0.0	1.8
Barren (Poor)	100	78	86	91	93	12.0	12.5	12.3	30.7	20.1	12.5	29.9	80.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	21.7	265.4	53.4	231.8	119.6	2,126.1	1,119.2
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.9	0.7	0.0	2.9	149.9	49.8
Grass (Fair)	100	50	69	79	84	5.0	143.5	255.0	594.1	52.1	238.8	449.6	1,853.3
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Open Brush (Fair)	100	46	66	77	83	0.0	25.8	361.1	275.5	127.0	84.4	2,424.1	1,957.8
Woodland (Fair)	100	36	60	73	79	1.3	97.0	166.1	87.4	147.5	218.8	386.5	354.0
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.20
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.20	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.18	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.13	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.13	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22

Losses

Node	E1055
Total Area (ac)	12,628.7
24-Hour Rainfall Depth (in)	1.47
Fm (in/hr)	0.60
Y-Bar	0.83

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	2.2	0.7	0.0	17.8	45.8
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.8
Barren (Poor)	100	78	86	91	93	0.0	6.9	0.4	0.2	20.1	19.4	30.3	80.2
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	5.8	71.9	4.6	231.8	125.4	2,198.0	1,123.8
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.2	0.2	0.0	2.9	150.1	50.0
Grass (Fair)	100	50	69	79	84	7.2	22.6	14.6	45.5	59.3	261.4	464.2	1,898.8
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Open Brush (Fair)	100	46	66	77	83	1.8	7.9	66.5	16.9	128.8	92.3	2,490.6	1,974.7
Woodland (Fair)	100	36	60	73	79	5.5	9.5	23.3	10.9	153.0	228.3	409.8	364.9
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.20
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.20	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.18	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.13	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.13	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22

Losses

Node	E1056
Total Area (ac)	13,021.5
24-Hour Rainfall Depth (in)	1.47
Fm (in/hr)	0.59
Y-Bar	0.83

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	2.7	0.0	0.0	0.0	2.7
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	8.6	142.3	0.7	0.0	26.4	188.1
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.8
Barren (Poor)	100	78	86	91	93	0.0	1.8	2.4	32.6	20.1	21.2	32.7	112.8
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.0	0.0	4.7	231.8	125.4	2,198.0	1,128.5
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.7	0.0	2.9	150.1	50.7
Grass (Fair)	100	50	69	79	84	1.8	14.8	1.3	110.4	61.1	276.2	465.5	2,009.2
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Open Brush (Fair)	100	46	66	77	83	1.1	1.2	0.2	36.4	129.9	93.5	2,490.8	2,011.1
Woodland (Fair)	100	36	60	73	79	9.3	5.1	0.0	14.6	162.3	233.4	409.8	379.5
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.8

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.20
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.20	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.18	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.13	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.13	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22

Losses

Node	E1057
Total Area (ac)	18,580.6
24-Hour Rainfall Depth (in)	1.50
Fm (in/hr)	0.59
Y-Bar	0.82

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	12.8	87.5	0.7	0.0	39.2	275.6
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.8
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	20.1	21.2	32.7	112.8
Chaparral, Broadleaf (Fair)	100	40	63	75	81	38.9	18.5	554.0	1,538.1	270.7	143.9	2,752.0	2,666.6
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	22.0	0.0	2.9	150.1	72.7
Grass (Fair)	100	50	69	79	84	2.0	18.9	54.6	411.3	63.1	295.1	520.1	2,420.5
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Open Brush (Fair)	100	46	66	77	83	40.3	25.4	369.0	1,877.2	170.2	118.9	2,859.8	3,888.3
Woodland (Fair)	100	36	60	73	79	74.7	105.0	37.1	270.1	237.0	338.4	446.9	649.6
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	1.7	0.0	0.0	0.0	2.5

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.16	0.33	0.49	0.58
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.08	0.21	0.33
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.28
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.06	0.19	0.28
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.07	0.16
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.09	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.33	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.28
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	P1049
Total Area (ac)	7,790.2
24-Hour Rainfall Depth (in)	1.49
Fm (in/hr)	0.60
Y-Bar	0.84

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	1.1	13.1	26.5	0.0	1.1	13.1	26.5
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	2.2	1.0	0.0	0.0	2.2	1.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	38.0	70.0	710.2	145.3	229.1	97.2	1,683.1	998.9
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	2.0	75.6	21.6	0.0	2.9	146.3	49.1
Grass (Fair)	100	50	69	79	84	10.9	38.4	89.7	367.2	14.5	41.4	110.3	473.4
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	37.8	37.4	819.4	373.6	113.1	49.8	1,693.1	1,379.9
Woodland (Fair)	100	36	60	73	79	53.6	77.2	82.2	58.4	90.5	101.6	124.2	114.1
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	42.0	32.9	13.1	142.8	42.0	32.9	13.1	142.8

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.33	0.49	0.58
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.21	0.33
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.19	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.33	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	P1050
Total Area (ac)	8,286.4
24-Hour Rainfall Depth (in)	1.48
Fm (in/hr)	0.60
Y-Bar	0.84

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	1.1	13.1	26.5
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	2.2	1.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.0	53.0	41.6	229.1	97.2	1,736.1	1,040.5
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	2.9	146.3	49.1
Grass (Fair)	100	50	69	79	84	0.3	2.2	318.8	29.9	14.8	43.6	429.1	503.3
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.2	0.2	33.3	8.6	113.3	50.0	1,726.4	1,388.5
Woodland (Fair)	100	36	60	73	79	1.1	0.4	4.8	1.8	91.6	102.0	129.0	115.9
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	42.0	32.9	13.1	142.8

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.21	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.19	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	P1051
Total Area (ac)	8,587.1
24-Hour Rainfall Depth (in)	1.48
Fm (in/hr)	0.60
Y-Bar	0.84

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.7	0.0	0.0	5.1	0.7	0.0	0.0	5.1
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	7.8	0.0	1.1	13.1	34.3
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.6	0.0	0.0	2.2	1.6
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.0	5.6	57.5	229.1	97.2	1,741.7	1,098.0
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	2.9	146.3	49.1
Grass (Fair)	100	50	69	79	84	1.8	3.2	38.2	92.5	16.6	46.8	467.3	595.8
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	2.2	3.8	14.6	113.3	52.2	1,730.2	1,403.1
Woodland (Fair)	100	36	60	73	79	6.5	10.9	7.0	31.4	98.1	112.9	136.0	147.3
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	11.3	42.0	32.9	13.1	154.1

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.21	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.19	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	P1052
Total Area (ac)	8,952.0
24-Hour Rainfall Depth (in)	1.48
Fm (in/hr)	0.60
Y-Bar	0.84

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.7	0.0	0.0	5.1
3-4 Dwellings / Acre	60	32	56	69	75	7.6	0.0	27.3	85.5	7.6	1.1	40.4	119.8
Public Park	85	32	56	69	75	1.1	0.0	0.0	0.0	1.1	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	3.8	0.0	3.3	7.3	3.8	0.0	5.5	8.9
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.4	0.7	49.5	229.1	97.6	1,742.4	1,147.5
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	2.9	146.3	49.1
Grass (Fair)	100	50	69	79	84	0.6	0.0	0.0	13.5	17.2	46.8	467.3	609.3
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.4	0.0	0.3	0.8	113.7	52.2	1,730.5	1,403.9
Woodland (Fair)	100	36	60	73	79	10.1	0.0	0.2	15.0	108.2	112.9	136.2	162.3
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	2.9	3.8	0.0	130.8	44.9	36.7	13.1	284.9

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.21	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.19	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	P1053
Total Area (ac)	9,632.2
24-Hour Rainfall Depth (in)	1.48
Fm (in/hr)	0.59
Y-Bar	0.84

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	7.7	3.3	0.7	0.0	7.7	8.4
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	17.9	12.7	7.6	1.1	58.3	132.5
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.9	0.0	8.5	4.9	4.7	0.0	14.0	13.8
Chaparral, Broadleaf (Fair)	100	40	63	75	81	1.6	0.0	47.2	79.8	230.7	97.6	1,789.6	1,227.3
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	2.9	146.3	49.1
Grass (Fair)	100	50	69	79	84	12.5	11.4	17.2	105.1	29.7	58.2	484.5	714.4
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	2.9	1.3	49.1	67.8	116.6	53.5	1,779.6	1,471.7
Woodland (Fair)	100	36	60	73	79	16.9	4.2	43.1	49.4	125.1	117.1	179.3	211.7
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.9	9.3	0.0	104.6	45.8	46.0	13.1	389.5

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.21	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.19	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	P1054
Total Area (ac)	12,171.0
24-Hour Rainfall Depth (in)	1.47
Fm (in/hr)	0.58
Y-Bar	0.84

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.7	0.0	7.7	8.4
3-4 Dwellings / Acre	60	32	56	69	75	14.7	24.7	56.8	499.3	22.3	25.8	115.1	631.8
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	12.5	0.0	15.4	4.7	12.5	14.0	29.2
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	36.3	295.4	38.1	230.7	133.9	2,085.0	1,265.4
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.9	0.7	0.0	2.9	147.2	49.8
Grass (Fair)	100	50	69	79	84	2.3	99.2	140.4	282.8	32.0	157.4	624.9	997.2
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	22.9	312.4	171.9	116.6	76.4	2,092.0	1,643.6
Woodland (Fair)	100	36	60	73	79	1.3	92.6	153.3	72.0	126.4	209.7	332.6	283.7
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	9.8	102.4	80.7	45.8	55.8	115.5	470.2

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.20
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.20	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.18	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.13	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.13	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22

Losses

Node	P1055
Total Area (ac)	12,522.5
24-Hour Rainfall Depth (in)	1.47
Fm (in/hr)	0.58
Y-Bar	0.85

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	1.2	0.7	0.0	7.7	9.6
3-4 Dwellings / Acre	60	32	56	69	75	0.4	0.0	0.3	50.1	22.7	25.8	115.4	681.9
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	6.9	0.4	0.2	4.7	19.4	14.4	29.4
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	5.8	71.9	3.5	230.7	139.7	2,156.9	1,268.9
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.2	0.2	0.0	2.9	147.4	50.0
Grass (Fair)	100	50	69	79	84	6.8	22.6	14.6	33.5	38.8	180.0	639.5	1,030.7
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	1.8	7.9	66.5	9.5	118.4	84.3	2,158.5	1,653.1
Woodland (Fair)	100	36	60	73	79	5.5	9.5	23.3	8.9	131.9	219.2	355.9	292.6
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	45.8	55.8	115.5	470.2

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.20
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.20	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.18	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.13	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.13	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22

Losses

Node	P1056
Total Area (ac)	12,890.6
24-Hour Rainfall Depth (in)	1.47
Fm (in/hr)	0.58
Y-Bar	0.84

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	2.7	0.0	0.0	0.0	2.7
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	8.5	128.0	0.7	0.0	16.2	137.6
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	42.8	22.7	25.8	115.4	724.7
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	1.8	2.4	32.6	4.7	21.2	16.8	62.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.0	0.0	3.1	230.7	139.7	2,156.9	1,272.0
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.7	0.0	2.9	147.4	50.7
Grass (Fair)	100	50	69	79	84	1.8	14.8	1.3	74.3	40.6	194.8	640.8	1,105.0
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	1.1	1.2	0.2	21.8	119.5	85.5	2,158.7	1,674.9
Woodland (Fair)	100	36	60	73	79	9.3	5.1	0.0	13.8	141.2	224.3	355.9	306.4
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.8	45.8	55.8	115.5	471.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.20
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.20	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.18	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.13	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.13	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22

Losses

Node	P1057
Total Area (ac)	18,555.7
24-Hour Rainfall Depth (in)	1.50
Fm (in/hr)	0.58
Y-Bar	0.83

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	1.4	48.3	0.7	0.0	17.6	185.9
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	145.9	398.0	22.7	25.8	261.3	1,122.7
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	4.7	21.2	16.8	62.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	38.9	18.5	540.8	1,590.5	269.6	158.2	2,697.7	2,862.5
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	22.0	0.0	2.9	147.4	72.7
Grass (Fair)	100	50	69	79	84	2.0	18.9	106.1	198.3	42.6	213.7	746.9	1,303.3
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	40.3	25.4	236.6	1,749.2	159.8	110.9	2,395.3	3,424.1
Woodland (Fair)	100	36	60	73	79	74.7	105.0	35.4	267.2	215.9	329.3	391.3	573.6
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	1.7	0.0	45.8	55.8	117.2	471.0

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.16	0.33	0.49	0.58
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.08	0.21	0.33
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.28
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.06	0.19	0.28
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.07	0.16
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.09	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.33	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.28
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

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             F L O O D    R O U T I N G    A N A L Y S I S
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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
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                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: ME49002E.FLD
  TIME/DATE OF STUDY: 08:46 03/26/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1049.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    7790.200 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.080 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  1.000
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.840
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.13
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.28
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.37
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.63
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  0.87
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.49

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.714
          30-MINUTE FACTOR = 0.714
           1-HOUR FACTOR = 0.714
           3-HOUR FACTOR = 0.953
           6-HOUR FACTOR = 0.975
          24-HOUR FACTOR = 0.984

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   7.716


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.857	807.722
2	2.559	1602.933
3	4.761	2074.571
4	7.386	2473.194
5	10.752	3171.369
6	15.002	4003.586
7	20.525	5203.927
8	26.880	5987.055
9	33.122	5881.171
10	38.092	4682.432
11	42.009	3690.111
12	45.580	3363.764
13	48.591	2837.149
14	51.376	2623.979
15	53.598	2092.717
16	55.531	1821.361
17	57.208	1580.140
18	58.806	1505.709
19	60.349	1453.899
20	61.869	1431.509
21	63.196	1250.806
22	64.433	1165.192
23	65.603	1102.481
24	66.761	1090.607
25	67.854	1029.381
26	68.845	933.933
27	69.809	908.596
28	70.774	908.826
29	71.733	903.823
30	72.562	781.011
31	73.334	726.995
32	74.091	713.517
33	74.797	665.229
34	75.499	660.816
35	76.182	643.766
36	76.827	607.403
37	77.470	605.728
38	78.092	586.055
39	78.648	523.808
40	79.199	519.165
41	79.750	519.280
42	80.281	500.325
43	80.796	484.821
44	81.310	484.584
45	81.823	483.391
46	82.275	425.442
47	82.692	393.003
48	83.109	393.011
49	83.526	392.773
50	83.938	388.475
51	84.296	337.204
52	84.639	323.137
53	84.982	322.893
54	85.325	323.375
55	85.668	322.893
56	86.005	317.653
57	86.312	289.513
58	86.615	284.977
59	86.917	284.977
60	87.220	285.214
61	87.523	284.984
62	87.825	285.214

63	88.114	272.104
64	88.385	255.406
65	88.656	255.169
66	88.926	254.695
67	89.197	255.169
68	89.468	255.169
69	89.739	255.169
70	90.005	250.878
71	90.248	228.459
72	90.487	225.117
73	90.726	225.598
74	90.966	225.598
75	91.205	225.598
76	91.444	225.124
77	91.683	225.598
78	91.922	224.642
79	92.134	200.326
80	92.334	187.919
81	92.533	187.438
82	92.732	187.445
83	92.931	187.919
84	93.130	187.438
85	93.329	187.445
86	93.529	187.919
87	93.728	187.438
88	93.926	186.971
89	94.097	160.728
90	94.250	144.045
91	94.402	144.038
92	94.555	143.563
93	94.708	144.038
94	94.861	144.038
95	95.014	144.045
96	95.166	143.563
97	95.319	144.512
98	95.472	143.563
99	95.625	144.038
100	95.777	144.045
101	95.930	144.038
102	96.060	122.575
103	96.172	105.410
104	96.282	103.498
105	96.394	104.928
106	96.504	104.454
107	96.615	104.447
108	96.727	104.936
109	96.838	104.447
110	96.948	104.454
111	97.060	104.928
112	97.171	104.454
113	97.281	103.980
114	97.392	104.928
115	97.504	104.928
116	97.615	104.928
117	97.725	103.972
118	97.837	104.936
119	97.947	103.972
120	98.016	64.863
121	98.046	28.622
122	98.077	28.615
123	98.107	28.615
124	98.138	28.622
125	98.168	28.615
126	98.197	27.659
127	98.229	29.571
128	98.258	27.666
129	98.289	29.571
130	98.319	27.666
131	98.349	28.615
132	98.381	29.571
133	98.409	26.710
134	98.440	29.571
135	98.471	28.615
136	98.501	28.622
137	98.531	28.615
138	98.561	27.659
139	98.591	28.622
140	98.622	28.615
141	98.652	28.615
142	98.683	29.571
143	98.713	27.666
144	98.743	28.615
145	98.774	29.571
146	98.805	28.622
147	98.833	26.710
148	98.864	28.615
149	98.894	28.615
150	98.925	29.571

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 781.4597

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 168.5287

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                    2 4 - H O U R    S T O R M
                  R U N O F F    H Y D R O G R A P H

================================================================================
             HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
       (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      125.0     250.0     375.0     500.0
--------------------------------------------------------------------------------
  14.000     44.7983     87.71  .      Q  V         .         .         .
  14.083     45.4160     89.69  .      Q  V         .         .         .
  14.167     46.0512     92.22  .      Q  V         .         .         .
  14.250     46.7062     95.12  .      Q  .V        .         .         .
  14.333     47.3834     98.32  .      Q  .V        .         .         .
  14.417     48.0862    102.04  .       Q .V        .         .         .
  14.500     48.8186    106.34  .       Q .V        .         .         .
  14.583     49.5863    111.48  .       Q .V        .         .         .
  14.667     50.3933    117.17  .        Q.V        .         .         .
  14.750     51.2392    122.83  .        Q. V       .         .         .
  14.833     52.1190    127.75  .         Q V       .         .         .
  14.917     53.0286    132.07  .         Q V       .         .         .
  15.000     53.9669    136.24  .         Q V       .         .         .
  15.083     54.9321    140.16  .         .Q V      .         .         .
  15.167     55.9241    144.03  .         .Q V      .         .         .
  15.250     56.9411    147.67  .         .Q V      .         .         .
  15.333     57.9828    151.26  .         . QV      .         .         .
  15.417     59.0427    153.90  .         . Q V     .         .         .
  15.500     60.1153    155.74  .         . Q V     .         .         .
  15.583     61.1986    157.29  .         . Q V     .         .         .
  15.667     62.2917    158.72  .         . Q V     .         .         .
  15.750     63.3929    159.89  .         . Q  V    .         .         .
  15.833     64.5008    160.86  .         . Q  V    .         .         .
  15.917     65.6157    161.89  .         . Q  V    .         .         .
  16.000     66.7486    164.49  .         .  Q V    .         .         .
  16.083     68.1247    199.81  .         .   QV    .         .         .
  16.167     69.7510    236.14  .         .    V Q  .         .         .
  16.250     71.5478    260.90  .         .    V   Q .         .         .
  16.333     73.4987    283.27  .         .     V  . Q        .         .
  16.417     75.6939    318.75  .         .     V  .   Q      .         .
  16.500     78.1700    359.53  .         .      V .      Q .         .
  16.583     81.0091    412.23  .         .       V.         . Q       .
  16.667     84.0665    443.94  .         .       V.         .   Q     .
  16.750     87.0718    436.36  .         .        V         .  Q      .
  16.833     89.7230    384.96  .         .        .V       Q          .
  16.917     92.0846    342.90  .         .        .V    Q  .          .
  17.000     94.3451    328.23  .         .        . V  Q    .         .
  17.083     96.4538    306.18  .         .        . V Q     .         .
  17.167     98.4825    294.56  .         .        .  Q      .         .
  17.250    100.3412    269.89  .         .        .Q V      .         .
  17.333    102.1001    255.39  .         .       Q   V      .         .
  17.417    103.7667    241.99  .         .      Q.   V      .         .
  17.500    105.3850    234.98  .         .      Q .    V    .         .
  17.583    106.9535    227.74  .         .      Q .    V    .         .
  17.667    108.4738    220.74  .         .     Q  .    V    .         .
  17.750    109.9032    207.56  .         .    Q   .     V   .         .
  17.833    111.2743    199.07  .         .   Q    .     V   .         .
  17.917    112.5993    192.40  .         .   Q    .     V   .         .
  18.000    113.8940    187.98  .         .   Q    .      V  .         .
  18.083    115.1458    181.77  .         .  Q     .      V  .         .
  18.167    116.3461    174.29  .         . Q      .      V  .         .
  18.250    117.5162    169.89  .         . Q      .      V  .         .
  18.333    118.6639    166.65  .         . Q      .       V .         .
  18.417    119.7868    163.05  .         . Q      .       V .         .
  18.500    120.8529    154.80  .         .Q       .       V .         .
  18.583    121.8805    149.21  .         .Q       .       V .         .
  18.667    122.8805    145.21  .         .Q       .       V.          .
  18.750    123.8457    140.15  .         .Q       .       V.          .
  18.833    124.7894    137.03  .          Q       .       V.          .
  18.917    125.7100    133.66  .          Q       .       V.          .
  19.000    126.6031    129.69  .          Q       .        V          .
  19.083    127.4789    127.16  .          Q       .        V          .
  19.167    128.3336    124.11  .         Q.       .        V          .
  19.250    129.1578    119.67  .         Q.       .        V          .
  19.333    129.9673    117.54  .         Q.       .        V          .
  19.417    130.7642    115.71  .         Q.       .        .V         .
  19.500    131.5440    113.24  .         Q.       .        .V         .
  19.583    132.3084    110.98  .        Q .       .        .V         .
  19.667    133.0613    109.33  .        Q .       .        .V         .
  19.750    133.8027    107.65  .        Q .       .        .V         .
  19.833    134.5177    103.81  .        Q .       .        .V         .
  19.917    135.2136    101.04  .        Q .       .        . V        .
  20.000    135.8999     99.65  .       Q  .       .        . V        .
================================================================================

  END OF FLOODSCx ROUTING ANALYSIS
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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: ME50002E.FLD
  TIME/DATE OF STUDY: 08:46 03/26/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1050.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    8287.900 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.100 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.980
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.840
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.13
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.28
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.37
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.63
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  0.87
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.48

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.701
          30-MINUTE FACTOR = 0.701
           1-HOUR FACTOR = 0.701
           3-HOUR FACTOR = 0.950
           6-HOUR FACTOR = 0.973
          24-HOUR FACTOR = 0.983

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   7.576


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.836	838.092
2	2.495	1662.972
3	4.612	2121.490
4	7.156	2550.244
5	10.370	3220.804
6	14.428	4068.181
7	19.692	5275.959
8	25.705	6027.298
9	32.084	6393.303
10	37.043	4970.116
11	41.063	4030.206
12	44.723	3668.136
13	47.843	3127.223
14	50.761	2924.950
15	53.151	2395.543
16	55.046	1898.831
17	56.861	1819.099
18	58.448	1590.917
19	59.988	1544.026
20	61.515	1529.764
21	62.895	1383.888
22	64.154	1261.971
23	65.318	1166.508
24	66.485	1169.093
25	67.580	1097.876
26	68.609	1031.683
27	69.563	955.854
28	70.512	951.480
29	71.460	950.509
30	72.363	904.260
31	73.132	771.376
32	73.891	760.854
33	74.611	721.555
34	75.301	691.854
35	75.990	689.919
36	76.642	653.489
37	77.273	632.995
38	77.904	632.467
39	78.491	588.343
40	79.033	542.629
41	79.573	541.612
42	80.111	539.379
43	80.623	513.532
44	81.127	504.921
45	81.630	504.417
46	82.129	499.362
47	82.558	430.164
48	82.965	408.392
49	83.372	407.865
50	83.780	408.637
51	84.180	400.791
52	84.526	347.460
53	84.862	335.997
54	85.197	336.250
55	85.531	334.950
56	85.865	334.200
57	86.193	328.626
58	86.492	300.003
59	86.786	294.695
60	87.080	294.611
61	87.373	294.367
62	87.667	294.351

63	87.961	294.611
64	88.246	285.251
65	88.510	264.467
66	88.773	263.992
67	89.035	263.190
68	89.299	263.908
69	89.561	262.700
70	89.823	263.220
71	90.085	261.683
72	90.325	241.441
73	90.558	232.815
74	90.789	232.326
75	91.021	232.318
76	91.254	233.320
77	91.485	231.814
78	91.718	233.320
79	91.950	232.334
80	92.172	222.186
81	92.366	194.786
82	92.559	193.601
83	92.752	193.395
84	92.944	192.905
85	93.136	192.385
86	93.329	193.395
87	93.521	192.393
88	93.714	193.410
89	93.907	192.890
90	94.094	187.323
91	94.247	153.897
92	94.395	148.323
93	94.543	148.315
94	94.691	147.826
95	94.839	148.835
96	94.987	147.818
97	95.135	148.820
98	95.283	147.826
99	95.430	148.323
100	95.579	148.835
101	95.726	147.810
102	95.874	148.330
103	96.022	148.323
104	96.143	120.977
105	96.251	108.306
106	96.359	107.656
107	96.466	107.923
108	96.573	107.411
109	96.681	107.916
110	96.788	107.411
111	96.895	107.411
112	97.003	107.916
113	97.110	107.411
114	97.218	107.916
115	97.325	106.914
116	97.432	107.908
117	97.540	107.916
118	97.648	107.923
119	97.754	106.371
120	97.861	107.365
121	97.968	107.380
122	98.048	80.027
123	98.079	31.407
124	98.108	29.372
125	98.137	28.355
126	98.165	28.371
127	98.195	30.389
128	98.225	29.372
129	98.253	28.371
130	98.282	29.365
131	98.313	30.397
132	98.341	28.355
133	98.370	29.380
134	98.399	29.380
135	98.429	29.372
136	98.458	29.380
137	98.487	29.372
138	98.516	28.363
139	98.546	30.389
140	98.574	28.363
141	98.605	30.389
142	98.633	28.363
143	98.662	29.380
144	98.692	29.372
145	98.721	29.372
146	98.749	28.363
147	98.779	30.389
148	98.808	28.363
149	98.837	29.380
150	98.866	29.380

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 825.7628

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 176.9808

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 125.0 250.0 375.0 500.0
14.000	46.8440	92.80	. Q V . . .
14.083	47.4977	94.91	. Q V . . .
14.167	48.1701	97.63	. Q V . . .
14.250	48.8637	100.72	. Q .V . . .
14.333	49.5810	104.14	. Q .V . . .
14.417	50.3254	108.09	. Q .V . . .
14.500	51.1012	112.66	. Q.V . . .
14.583	51.9146	118.09	. Q.V . . .
14.667	52.7692	124.09	. Q.V . . .
14.750	53.6671	130.38	. Q V . . .
14.833	54.6017	135.71	. Q V . . .
14.917	55.5690	140.46	. .QV . . .
15.000	56.5677	145.01	. .QV . . .
15.083	57.5958	149.28	. .Q V . . .
15.167	58.6530	153.50	. . QV . . .
15.250	59.7375	157.48	. . QV . . .
15.333	60.8479	161.22	. . QV . . .
15.417	61.9778	164.07	. . QV . . .
15.500	63.1206	165.93	. . QV . . .
15.583	64.2743	167.52	. . QV . . .
15.667	65.4378	168.94	. . QV . . .
15.750	66.6098	170.16	. . Q V . . .
15.833	67.7882	171.12	. . Q V . . .
15.917	68.9735	172.10	. . Q V . . .
16.000	70.1766	174.69	. . Q V . . .
16.083	71.6177	209.25	. . Q . . .
16.167	73.3058	245.11	. . V Q. . .
16.250	75.1537	268.31	. . V .Q . .
16.333	77.1565	290.81	. . V . Q . .
16.417	79.3886	324.11	. . V . Q . .
16.500	81.8966	364.16	. . V . Q. .
16.583	84.7594	415.68	. . V. . Q .
16.667	87.8327	446.24	. . V. . Q .
16.750	90.9787	456.81	. . V . Q .
16.833	93.7303	399.53	. . .V .Q .
16.917	96.2180	361.21	. . .V Q . .
17.000	98.5996	345.81	. . . V Q . .
17.083	100.8353	324.62	. . . V Q . .
17.167	102.9961	313.74	. . . V Q . .
17.250	104.9924	289.87	. . . Q . .
17.333	106.8343	267.44	. . .Q V . .
17.417	108.6262	260.19	. . Q V . .
17.500	110.3311	247.54	. . Q. V . .
17.583	111.9877	240.55	. . Q. V . .
17.667	113.5973	233.71	. . Q . V . .
17.750	115.1240	221.68	. . Q . V . .
17.833	116.5805	211.48	. . Q . V . .
17.917	117.9805	203.28	. . Q . V . .
18.000	119.3516	199.08	. . Q . V . .
18.083	120.6760	192.31	. . Q . V . .
18.167	121.9549	185.69	. . Q . V . .
18.250	123.1882	179.07	. . Q . V . .
18.333	124.3970	175.52	. . Q . V . .
18.417	125.5808	171.89	. . Q . V . .
18.500	126.7270	166.43	. . Q . V . .
18.583	127.8130	157.69	. . Q . V . .
18.667	128.8703	153.53	. . Q . V . .
18.750	129.8931	148.51	. .Q . V . .
18.833	130.8868	144.28	. .Q . V . .
18.917	131.8597	141.26	. .Q . V . .
19.000	132.8040	137.11	. Q . V . .
19.083	133.7250	133.73	. Q . V . .
19.167	134.6281	131.14	. Q . V . .
19.250	135.5044	127.23	. Q . V . .
19.333	136.3547	123.46	. Q. . V . .
19.417	137.1909	121.42	. Q. . .V . .
19.500	138.0136	119.45	. Q. . .V . .
19.583	138.8173	116.70	. Q. . .V . .
19.667	139.6068	114.64	. Q. . .V . .
19.750	140.3846	112.94	. Q. . .V . .
19.833	141.1494	111.04	. Q . . .V . .
19.917	141.8851	106.83	. Q . . . V . .
20.000	142.6045	104.47	. Q . . . V . .

END OF FLOODSCx ROUTING ANALYSIS

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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: ME51002E.FLD
  TIME/DATE OF STUDY: 08:47 03/26/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1051.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    8742.100 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.240 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.030
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.930
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.040
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.840
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.13
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.28
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.37
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.63
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  0.87
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.48

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.693
          30-MINUTE FACTOR = 0.694
           1-HOUR FACTOR = 0.695
           3-HOUR FACTOR = 0.948
           6-HOUR FACTOR = 0.972
          24-HOUR FACTOR = 0.983

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   6.720


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.730	771.739
2	2.182	1535.680
3	3.856	1769.325
4	6.045	2314.317
5	8.485	2579.674
6	11.583	3275.177
7	15.423	4060.213
8	20.214	5065.563
9	25.493	5581.139
10	31.163	5994.022
11	35.544	4631.889
12	39.444	4123.005
13	42.833	3583.391
14	45.960	3306.186
15	48.884	3091.622
16	51.468	2731.746
17	53.587	2240.408
18	55.317	1828.800
19	57.013	1792.591
20	58.457	1527.021
21	59.878	1501.919
22	61.259	1460.378
23	62.611	1429.674
24	63.776	1231.545
25	64.902	1190.013
26	65.941	1099.055
27	66.990	1108.557
28	67.966	1032.057
29	68.905	992.888
30	69.767	911.339
31	70.619	900.869
32	71.463	892.609
33	72.305	890.173
34	73.071	809.213
35	73.753	721.808
36	74.429	713.920
37	75.072	680.066
38	75.687	650.132
39	76.301	649.019
40	76.898	631.112
41	77.460	595.033
42	78.020	591.790
43	78.577	588.773
44	79.085	536.843
45	79.565	507.708
46	80.042	504.433
47	80.518	503.159
48	80.977	485.050
49	81.420	468.854
50	81.864	468.894
51	82.307	468.579
52	82.739	456.270
53	83.106	388.160
54	83.463	377.278
55	83.820	377.569
56	84.176	377.020
57	84.533	377.278
58	84.859	344.570
59	85.154	311.418
60	85.448	310.870
61	85.742	311.144
62	86.034	308.321

63	86.322	305.385
64	86.609	303.401
65	86.873	279.097
66	87.129	270.192
67	87.384	269.184
68	87.637	268.353
69	87.892	268.635
70	88.145	268.353
71	88.400	268.942
72	88.647	261.513
73	88.877	242.582
74	89.104	240.936
75	89.333	241.243
76	89.561	241.227
77	89.786	238.581
78	90.013	239.291
79	90.238	238.040
80	90.463	238.105
81	90.670	219.222
82	90.870	211.212
83	91.071	211.785
84	91.271	211.809
85	91.470	210.648
86	91.671	212.374
87	91.871	211.196
88	92.071	211.229
89	92.271	211.785
90	92.464	204.388
91	92.634	179.182
92	92.800	175.495
93	92.964	173.479
94	93.128	173.987
95	93.292	172.906
96	93.457	174.052
97	93.621	174.003
98	93.785	172.882
99	93.949	174.060
100	94.114	173.971
101	94.277	172.914
102	94.419	150.047
103	94.545	133.414
104	94.672	134.027
105	94.800	134.592
106	94.926	134.027
107	95.053	133.447
108	95.180	134.592
109	95.306	133.455
110	95.433	134.019
111	95.560	134.019
112	95.687	134.600
113	95.813	133.422
114	95.940	134.003
115	96.067	133.987
116	96.193	133.430
117	96.300	113.418
118	96.393	98.560
119	96.485	97.359
120	96.578	98.028
121	96.670	96.883
122	96.761	96.891
123	96.853	96.891
124	96.945	97.447
125	97.037	96.891
126	97.129	97.447
127	97.221	96.891
128	97.313	97.455
129	97.403	95.753
130	97.496	98.028
131	97.589	98.028
132	97.679	95.737
133	97.772	98.028
134	97.861	93.979
135	97.952	96.011
136	98.042	94.874
137	98.127	90.293
138	98.163	37.725
139	98.186	25.142
140	98.212	27.433
141	98.236	25.150
142	98.262	27.433
143	98.286	25.142
144	98.310	25.142
145	98.333	25.150
146	98.358	26.288
147	98.383	26.288
148	98.408	26.296
149	98.433	26.288
150	98.457	25.150

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 871.1435

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 185.1861

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 125.0 250.0 375.0 500.0
14.000	48.0835	95.35	. Q V . . .
14.083	48.7545	97.43	. Q V . . .
14.167	49.4439	100.10	. Q V . . .
14.250	50.1530	102.97	. Q V . . .
14.333	50.8849	106.27	. Q V . . .
14.417	51.6409	109.78	. Q .V . . .
14.500	52.4249	113.83	. Q.V . . .
14.583	53.2408	118.47	. Q.V . . .
14.667	54.0940	123.88	. Q.V . . .
14.750	54.9871	129.68	. QV . . .
14.833	55.9224	135.81	. Q V . . .
14.917	56.8936	141.01	. .QV . . .
15.000	57.8985	145.92	. .QV . . .
15.083	58.9351	150.52	. . Q . . .
15.167	60.0027	155.01	. . Q . . .
15.250	61.1009	159.46	. . QV . . .
15.333	62.2289	163.78	. . Q . . .
15.417	63.3785	166.93	. . Q . . .
15.500	64.5428	169.05	. . Q . . .
15.583	65.7214	171.13	. . QV . . .
15.667	66.9108	172.71	. . QV . . .
15.750	68.1129	174.54	. . QV . . .
15.833	69.3272	176.32	. . Q . . .
15.917	70.5559	178.41	. . QV . . .
16.000	71.8059	181.49	. . QV . . .
16.083	73.2705	212.67	. . V Q . . .
16.167	74.9439	242.97	. . V Q. . . .
16.250	76.7046	255.64	. . V Q . . .
16.333	78.6323	279.91	. . V . Q . . .
16.417	80.6711	296.03	. . V . Q . . .
16.500	82.9368	328.99	. . V . Q . . .
16.583	85.4473	364.52	. . V . Q. . .
16.667	88.2462	406.41	. . V. . Q . .
16.750	91.1882	427.18	. . V. . Q . .
16.833	94.2188	440.05	. . V . Q . .
16.917	96.8895	387.78	. . V .Q . .
17.000	99.4174	367.04	. . .V Q. . .
17.083	101.8003	346.00	. . .V Q . . .
17.167	104.1053	334.69	. . . V Q . . .
17.250	106.3351	323.76	. . . V Q . . .
17.333	108.4462	306.53	. . . VQ . . .
17.417	110.4034	284.19	. . . QV . . .
17.500	112.2279	264.91	. . .Q V . . .
17.583	114.0115	258.99	. . Q V . . .
17.667	115.6949	244.43	. . Q. V . . .
17.750	117.3338	237.98	. . Q. V . . .
17.833	118.9204	230.37	. . Q . V . . .
17.917	120.4630	223.98	. . Q . V . . .
18.000	121.9213	211.76	. . Q . V . . .
18.083	123.3369	205.54	. . Q . V . . .
18.167	124.7000	197.92	. . Q . V . . .
18.250	126.0373	194.17	. . Q . V . . .
18.333	127.3274	187.32	. . Q . V . . .
18.417	128.5816	182.11	. . Q . V . . .
18.500	129.7912	175.64	. . Q . V . . .
18.583	130.9740	171.74	. . Q . V . . .
18.667	132.1303	167.89	. . Q . V . . .
18.750	133.2602	164.06	. . Q . V . . .
18.833	134.3430	157.23	. . Q . V. . .
18.917	135.3803	150.61	. . Q . V. . .
19.000	136.3947	147.29	. .Q . V. . .
19.083	137.3820	143.36	. .Q . V. . .
19.167	138.3442	139.71	. .Q . V. . .
19.250	139.2883	137.09	. Q . V . .
19.333	140.2114	134.03	. Q . V . .
19.417	141.1101	130.49	. Q . V . .
19.500	141.9934	128.26	. Q . V . .
19.583	142.8614	126.03	. Q . V . .
19.667	143.7026	122.15	. Q. . .V .
19.750	144.5238	119.23	. Q. . .V .
19.833	145.3324	117.41	. Q. . .V .
19.917	146.1296	115.76	. Q. . .V .
20.000	146.9114	113.51	. Q. . .V .

END OF FLOODSCx ROUTING ANALYSIS

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             F L O O D    R O U T I N G    A N A L Y S I S
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                          Analysis prepared by:

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                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: ME52002E.FLD
  TIME/DATE OF STUDY: 08:47 03/26/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1052.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    9032.900 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.310 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.040
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.900
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.060
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.840
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.13
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.28
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.37
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.63
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  0.87
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.48

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.688
          30-MINUTE FACTOR = 0.690
           1-HOUR FACTOR = 0.691
           3-HOUR FACTOR = 0.946
           6-HOUR FACTOR = 0.972
          24-HOUR FACTOR = 0.982

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   6.361


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


==========================================================================
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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.684	747.735
2	2.048	1489.611
3	3.553	1644.426
4	5.577	2210.846
5	7.744	2367.044
6	10.531	3044.612
7	13.857	3633.007
8	18.028	4556.493
9	22.680	5081.715
10	28.197	6026.959
11	32.799	5028.187
12	36.889	4467.337
13	40.240	3660.556
14	43.531	3595.397
15	46.486	3227.934
16	49.352	3130.708
17	51.783	2656.068
18	53.800	2203.240
19	55.473	1828.076
20	57.122	1800.926
21	58.509	1514.799
22	59.880	1498.735
23	61.215	1457.954
24	62.533	1439.977
25	63.675	1247.100
26	64.769	1195.714
27	65.796	1121.520
28	66.789	1084.990
29	67.749	1048.285
30	68.670	1006.096
31	69.525	934.045
32	70.344	895.381
33	71.150	879.454
34	71.951	875.003
35	72.745	868.144
36	73.452	772.372
37	74.102	710.239
38	74.742	698.821
39	75.353	667.291
40	75.936	636.862
41	76.519	637.346
42	77.090	623.385
43	77.627	586.114
44	78.157	579.621
45	78.685	576.529
46	79.191	552.742
47	79.649	500.002
48	80.102	494.801
49	80.551	490.526
50	80.996	486.933
51	81.420	463.088
52	81.838	456.721
53	82.256	456.129
54	82.674	457.013
55	83.075	438.110
56	83.418	374.293
57	83.753	366.442
58	84.089	366.475
59	84.424	366.125
60	84.760	366.742
61	85.078	347.264
62	85.356	304.525

63	85.633	302.416
64	85.910	302.450
65	86.185	300.983
66	86.456	295.974
67	86.726	294.582
68	86.988	286.448
69	87.230	263.503
70	87.469	261.202
71	87.706	258.860
72	87.943	258.827
73	88.180	259.077
74	88.417	259.152
75	88.654	258.785
76	88.885	252.485
77	89.099	234.390
78	89.313	233.457
79	89.526	232.840
80	89.740	233.140
81	89.951	230.765
82	90.161	229.373
83	90.370	228.031
84	90.580	229.331
85	90.783	222.022
86	90.970	204.511
87	91.156	203.370
88	91.342	203.311
89	91.529	203.370
90	91.715	203.270
91	91.901	203.386
92	92.087	203.903
93	92.274	203.345
94	92.460	203.911
95	92.640	196.760
96	92.800	174.274
97	92.954	168.415
98	93.106	165.539
99	93.257	165.648
100	93.409	166.123
101	93.561	165.614
102	93.713	166.223
103	93.865	165.531
104	94.016	165.598
105	94.168	165.581
106	94.320	166.214
107	94.469	162.547
108	94.592	134.185
109	94.709	128.776
110	94.827	128.143
111	94.944	128.168
112	95.061	128.151
113	95.179	128.734
114	95.296	127.534
115	95.413	128.184
116	95.531	128.734
117	95.648	127.542
118	95.766	128.776
119	95.883	128.184
120	96.000	128.176
121	96.118	128.184
122	96.236	128.776
123	96.348	122.742
124	96.438	97.997
125	96.524	94.371
126	96.611	94.971
127	96.696	93.271
128	96.782	93.579
129	96.867	92.371
130	96.952	93.571
131	97.037	92.379
132	97.122	93.579
133	97.207	92.371
134	97.293	93.571
135	97.378	93.579
136	97.463	92.371
137	97.547	92.379
138	97.633	93.571
139	97.718	92.371
140	97.803	93.579
141	97.887	91.046
142	97.968	89.346
143	98.051	90.562
144	98.133	89.354
145	98.202	74.860
146	98.226	26.562
147	98.248	24.153
148	98.271	25.353
149	98.293	24.153
150	98.317	25.353

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 900.2075

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 190.6168

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                    2 4 - H O U R    S T O R M
                  R U N O F F    H Y D R O G R A P H

================================================================================
             HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
       (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      125.0     250.0     375.0     500.0
--------------------------------------------------------------------------------
  14.000     49.0501     97.37  .      Q  V         .         .         .
  14.083     49.7351     99.45  .      Q  V         .         .         .
  14.167     50.4384    102.13  .       Q V         .         .         .
  14.250     51.1610    104.92  .       Q V         .         .         .
  14.333     51.9061    108.18  .       Q V         .         .         .
  14.417     52.6745    111.57  .       Q .V        .         .         .
  14.500     53.4700    115.51  .        Q.V        .         .         .
  14.583     54.2956    119.87  .        Q.V        .         .         .
  14.667     55.1562    124.96  .        Q.V        .         .         .
  14.750     56.0544    130.43  .         QV        .         .         .
  14.833     56.9955    136.65  .         QV        .         .         .
  14.917     57.9747    142.18  .         .QV       .         .         .
  15.000     58.9897    147.38  .         .QV       .         .         .
  15.083     60.0369    152.05  .         . Q       .         .         .
  15.167     61.1166    156.78  .         . Q       .         .         .
  15.250     62.2277    161.32  .         . QV      .         .         .
  15.333     63.3705    165.94  .         .  Q      .         .         .
  15.417     64.5372    169.40  .         .  Q      .         .         .
  15.500     65.7206    171.84  .         .  Q      .         .         .
  15.583     66.9193    174.05  .         .  QV     .         .         .
  15.667     68.1309    175.92  .         .   Q     .         .         .
  15.750     69.3564    177.94  .         .   Q     .         .         .
  15.833     70.5957    179.94  .         .   Q     .         .         .
  15.917     71.8517    182.37  .         .   QV    .         .         .
  16.000     73.1323    185.95  .         .   QV    .         .         .
  16.083     74.6200    216.01  .         .    V Q  .         .         .
  16.167     76.3046    244.60  .         .     V  Q.         .         .
  16.250     78.0492    253.32  .         .     V   Q         .         .
  16.333     79.9573    277.07  .         .     V   . Q       .         .
  16.417     81.9447    288.56  .         .      V  .  Q      .         .
  16.500     84.1466    319.72  .         .      V  .    Q    .         .
  16.583     86.5407    347.62  .         .       V .      Q  .         .
  16.667     89.2026    386.51  .         .       V .         Q         .
  16.750     92.0187    408.91  .         .        V.          . Q      .
  16.833     95.0646    442.27  .         .        V.          .    Q   .
  16.917     97.8517    404.68  .         .         V          . Q      .
  17.000    100.4831    382.07  .         .         .V         Q        .
  17.083    102.9057    351.77  .         .         .V       Q .        .
  17.167    105.3065    348.59  .         .         . V    Q  .        .
  17.250    107.6040    333.60  .         .         . V   Q   .        .
  17.333    109.8526    326.51  .         .         .  V  Q   .        .
  17.417    111.9529    304.96  .         .         .  VQ     .        .
  17.500    113.9098    284.14  .         .         . QV      .        .
  17.583    115.7429    266.17  .         .         .Q  V     .        .
  17.667    117.5360    260.36  .         .         Q   V     .        .
  17.750    119.2245    245.16  .         .        Q.    V    .        .
  17.833    120.8685    238.72  .         .        Q.    V    .        .
  17.917    122.4653    231.85  .         .       Q .    V    .        .
  18.000    124.0224    226.09  .         .       Q .     V   .        .
  18.083    125.4987    214.36  .         .      Q  .     V   .        .
  18.167    126.9291    207.69  .         .     Q   .     V   .        .
  18.250    128.3108    200.63  .         .     Q   .     V   .        .
  18.333    129.6544    195.09  .         .    Q    .      V  .        .
  18.417    130.9615    189.78  .         .    Q    .      V  .        .
  18.500    132.2319    184.46  .         .   Q     .      V  .        .
  18.583    133.4599    178.31  .         .   Q     .       V .        .
  18.667    134.6531    173.26  .         .  Q      .       V .        .
  18.750    135.8183    169.19  .         .  Q      .       V .        .
  18.833    136.9569    165.32  .         .  Q      .       V .        .
  18.917    138.0688    161.46  .         . Q       .       V .        .
  19.000    139.1335    154.59  .         . Q       .        V.        .
  19.083    140.1620    149.34  .         .Q        .        V.        .
  19.167    141.1680    146.07  .         .Q        .        V.        .
  19.250    142.1486    142.39  .         .Q        .        V.        .
  19.333    143.1046    138.80  .         .Q        .         V        .
  19.417    144.0441    136.41  .         Q         .         V        .
  19.500    144.9646    133.66  .         Q         .         V        .
  19.583    145.8616    130.26  .         Q         .         V        .
  19.667    146.7431    128.00  .         Q         .         V        .
  19.750    147.6103    125.91  .         Q         .         V        .
  19.833    148.4579    123.07  .        Q.         .         .V       .
  19.917    149.2795    119.29  .        Q.         .         .V       .
  20.000    150.0882    117.42  .        Q.         .         .V       .
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  END OF FLOODSCx ROUTING ANALYSIS
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             F L O O D    R O U T I N G    A N A L Y S I S
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                          Analysis prepared by:

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                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: ME53002E.FLD
  TIME/DATE OF STUDY: 08:48 03/26/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1053.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    9881.300 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.420 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.060
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.840
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.100
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.830
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.13
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.28
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.37
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.63
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  0.87
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.48

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.674
          30-MINUTE FACTOR = 0.679
           1-HOUR FACTOR = 0.681
           3-HOUR FACTOR = 0.942
           6-HOUR FACTOR = 0.970
          24-HOUR FACTOR = 0.981

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   5.869


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.620	740.342
2	1.856	1477.124
3	3.148	1544.762
4	4.920	2117.351
5	6.805	2252.248
6	9.097	2739.449
7	11.882	3327.497
8	15.181	3942.905
9	19.232	4840.709
10	23.501	5101.800
11	28.558	6043.435
12	32.603	4833.043
13	36.366	4497.366
14	39.507	3753.350
15	42.676	3787.599
16	45.582	3472.360
17	48.489	3473.655
18	51.034	3041.195
19	53.118	2491.282
20	54.823	2037.233
21	56.546	2058.667
22	57.923	1645.709
23	59.256	1593.454
24	60.565	1564.342
25	61.811	1488.915
26	63.065	1497.659
27	64.124	1266.198
28	65.156	1232.628
29	66.152	1190.352
30	67.071	1099.079
31	67.993	1100.875
32	68.851	1025.539
33	69.687	999.773
34	70.458	920.827
35	71.225	916.687
36	71.967	886.318
37	72.709	886.938
38	73.438	871.110
39	74.086	774.349
40	74.694	726.355
41	75.287	708.604
42	75.859	683.723
43	76.397	643.133
44	76.943	652.633
45	77.475	635.346
46	77.984	608.305
47	78.474	585.931
48	78.962	583.095
49	79.446	578.309
50	79.900	542.660
51	80.320	502.243
52	80.737	497.712
53	81.148	491.157
54	81.556	487.893
55	81.947	466.950
56	82.329	456.821
57	82.712	456.949
58	83.094	456.502
59	83.475	455.253
60	83.815	406.448
61	84.120	365.256
62	84.425	364.627

63	84.730	364.527
64	85.036	364.591
65	85.341	364.573
66	85.633	349.374
67	85.888	305.128
68	86.141	301.508
69	86.393	301.408
70	86.645	301.043
71	86.891	294.370
72	87.133	289.674
73	87.376	290.130
74	87.604	272.315
75	87.821	259.396
76	88.036	256.469
77	88.248	253.643
78	88.460	253.716
79	88.673	253.925
80	88.885	253.734
81	89.098	253.934
82	89.308	251.646
83	89.505	234.606
84	89.697	229.673
85	89.889	229.263
86	90.081	229.491
87	90.272	228.625
88	90.460	224.841
89	90.645	221.495
90	90.832	222.316
91	91.018	222.826
92	91.200	217.037
93	91.367	200.088
94	91.533	198.164
95	91.699	198.328
96	91.865	198.784
97	92.031	198.200
98	92.197	198.255
99	92.363	198.857
100	92.529	198.210
101	92.696	198.875
102	92.861	198.164
103	93.022	191.518
104	93.164	169.554
105	93.301	163.965
106	93.434	159.707
107	93.568	159.644
108	93.701	158.796
109	93.834	159.042
110	93.967	159.470
111	94.101	159.625
112	94.234	158.878
113	94.367	158.960
114	94.501	160.136
115	94.633	158.285
116	94.764	156.215
117	94.871	128.216
118	94.975	124.059
119	95.079	124.223
120	95.183	123.457
121	95.286	124.223
122	95.390	123.384
123	95.494	124.214
124	95.597	123.539
125	95.701	124.059
126	95.805	124.214
127	95.908	123.466
128	96.012	124.214
129	96.116	124.141
130	96.219	123.475
131	96.323	123.466
132	96.426	124.132
133	96.530	123.475
134	96.614	100.080
135	96.691	92.057
136	96.768	92.012
137	96.843	89.869
138	96.917	89.194
139	96.993	90.544
140	97.068	89.203
141	97.143	89.869
142	97.218	89.860
143	97.293	89.869
144	97.369	89.869
145	97.443	89.203
146	97.519	90.544
147	97.594	89.203
148	97.669	90.525
149	97.745	90.535
150	97.819	87.872

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 973.7947

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 216.9976

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 125.0 250.0 375.0 500.0
14.000	55.9507	111.26	. Q V . . .
14.083	56.7333	113.63	. QV . . .
14.167	57.5363	116.60	. QV . . .
14.250	58.3603	119.65	. QV . . .
14.333	59.2085	123.15	. QV . . .
14.417	60.0820	126.83	. QV . . .
14.500	60.9835	130.89	. QV . . .
14.583	61.9166	135.48	. QV . . .
14.667	62.8846	140.56	. .Q . . .
14.750	63.8928	146.40	. .Q . . .
14.833	64.9427	152.44	. .VQ . . .
14.917	66.0397	159.28	. . Q . . .
15.000	67.1776	165.23	. . VQ . . .
15.083	68.3554	171.01	. . VQ . . .
15.167	69.5695	176.29	. . V Q . . .
15.250	70.8209	181.70	. . VQ . . .
15.333	72.1084	186.95	. . VQ . . .
15.417	73.4265	191.39	. . V Q . . .
15.500	74.7672	194.67	. . V Q . . .
15.583	76.1291	197.74	. . VQ . . .
15.667	77.5066	200.02	. . V Q . . .
15.750	78.9032	202.78	. . V Q . . .
15.833	80.3173	205.34	. . V Q . . .
15.917	81.7524	208.37	. . VQ . . .
16.000	83.2181	212.82	. . V Q . . .
16.083	84.8816	241.55	. . V Q. . . .
16.167	86.7373	269.44	. . V .Q . . .
16.250	88.6211	273.53	. . V .Q . . .
16.333	90.6561	295.47	. . V . Q . . .
16.417	92.7556	304.86	. . V . Q . . .
16.500	95.0138	327.88	. . V . Q . . .
16.583	97.4562	354.63	. . V . Q . . .
16.667	100.0879	382.12	. . V . Q . . .
16.750	102.9611	417.20	. . V . . Q . . .
16.833	105.9159	429.04	. . V. . Q . . .
16.917	109.0831	459.88	. . V . Q . . .
17.000	111.9606	417.81	. . V . Q . . .
17.083	114.7439	404.14	. . .V . Q . . .
17.167	117.3469	377.96	. . .V Q . . .
17.250	119.9569	378.98	. . . V Q . . .
17.333	122.4802	366.37	. . . V Q. . . .
17.417	124.9795	362.90	. . . V Q. . . .
17.500	127.3405	342.82	. . . V Q . . . .
17.583	129.5370	318.93	. . . V Q . . . .
17.667	131.5917	298.35	. . . QV . . . .
17.750	133.6125	293.42	. . . QV . . . .
17.833	135.5013	274.26	. . .Q V . . . .
17.917	137.3341	266.12	. . .Q V . . . .
18.000	139.1218	259.58	. . Q V . . . .
18.083	140.8556	251.74	. . Q V . . . .
18.167	142.5528	246.44	. . Q. V . . . .
18.250	144.1594	233.27	. . Q . V . . . .
18.333	145.7224	226.95	. . Q . V . . . .
18.417	147.2405	220.43	. . Q . V . . . .
18.500	148.7054	212.70	. . Q . V . . . .
18.583	150.1397	208.25	. . Q . V . . . .
18.667	151.5279	201.57	. . Q . V . . . .
18.750	152.8802	196.35	. . Q . V . . . .
18.833	154.1869	189.73	. . Q . V . . . .
18.917	155.4651	185.59	. . Q . V . . . .
19.000	156.7106	180.85	. . Q . V . . . .
19.083	157.9311	177.21	. . Q . V. . . .
19.167	159.1228	173.04	. . Q . V. . . .
19.250	160.2690	166.42	. . Q . V. . . .
19.333	161.3823	161.65	. . Q . V. . . .
19.417	162.4708	158.05	. . Q . V. . . .
19.500	163.5350	154.52	. . Q . V . . . .
19.583	164.5722	150.61	. . Q . V . . . .
19.667	165.5952	148.53	. .Q . V . . . .
19.750	166.5978	145.58	. .Q . V . . . .
19.833	167.5791	142.48	. .Q . V . . . .
19.917	168.5404	139.59	. .Q . .V . . .
20.000	169.4869	137.43	. Q . .V . . .

END OF FLOODSCx ROUTING ANALYSIS

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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: ME54002E.FLD
  TIME/DATE OF STUDY: 08:48 03/26/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1054.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   12304.100 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.460 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.110
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.710
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.180
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.830
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.13
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.28
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.37
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.63
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  0.86
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.47

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.633
          30-MINUTE FACTOR = 0.646
           1-HOUR FACTOR = 0.651
           3-HOUR FACTOR = 0.929
           6-HOUR FACTOR = 0.965
          24-HOUR FACTOR = 0.978

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   5.708


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.577	858.154
2	1.728	1713.308
3	2.919	1771.600
4	4.538	2410.056
5	6.290	2606.822
6	8.368	3091.917
7	10.874	3728.680
8	13.808	4365.902
9	17.380	5315.049
10	21.235	5736.698
11	25.852	6869.600
12	29.941	6084.884
13	33.573	5404.188
14	37.023	5133.677
15	40.244	4792.958
16	43.440	4756.652
17	46.749	4923.163
18	49.877	4655.142
19	52.310	3619.562
20	54.389	3093.719
21	56.116	2570.409
22	57.875	2617.773
23	59.248	2042.223
24	60.611	2029.224
25	61.988	2048.228
26	63.218	1829.932
27	64.482	1881.916
28	65.508	1526.524
29	66.560	1565.566
30	67.569	1501.139
31	68.494	1375.692
32	69.388	1331.132
33	70.239	1266.001
34	71.063	1225.665
35	71.834	1148.228
36	72.606	1148.149
37	73.333	1082.598
38	74.062	1084.482
39	74.771	1055.135
40	75.415	958.263
41	76.024	906.153
42	76.609	870.358
43	77.172	837.322
44	77.699	783.896
45	78.240	805.852
46	78.760	774.144
47	79.263	747.544
48	79.742	712.680
49	80.218	708.184
50	80.687	698.512
51	81.141	675.000
52	81.555	616.375
53	81.963	606.747
54	82.359	588.969
55	82.751	583.894
56	83.133	567.773
57	83.498	544.160
58	83.863	542.900
59	84.227	542.116
60	84.592	542.343
61	84.948	529.322
62	85.251	451.431

63	85.538	427.045
64	85.825	427.544
65	86.112	426.682
66	86.399	427.658
67	86.686	427.045
68	86.957	402.750
69	87.198	357.952
70	87.436	355.034
71	87.674	354.206
72	87.913	354.682
73	88.140	338.085
74	88.361	329.763
75	88.583	329.264
76	88.793	313.427
77	88.994	297.953
78	89.190	292.901
79	89.383	286.396
80	89.575	286.157
81	89.768	286.350
82	89.960	286.259
83	90.152	286.418
84	90.345	285.908
85	90.528	272.250
86	90.703	261.579
87	90.879	261.034
88	91.054	261.397
89	91.230	261.874
90	91.400	252.315
91	91.566	247.388
92	91.731	245.344
93	91.897	246.661
94	92.062	246.479
95	92.218	230.881
96	92.367	221.787
97	92.515	221.242
98	92.664	221.696
99	92.813	221.787
100	92.962	221.061
101	93.111	221.776
102	93.260	221.061
103	93.409	222.502
104	93.557	220.448
105	93.706	221.662
106	93.849	212.603
107	93.977	189.750
108	94.099	181.860
109	94.214	171.222
110	94.329	171.040
111	94.444	171.040
112	94.559	171.404
113	94.674	170.700
114	94.789	171.392
115	94.904	171.767
116	95.019	170.507
117	95.134	171.585
118	95.249	171.040
119	95.364	170.325
120	95.462	145.747
121	95.553	135.438
122	95.643	135.064
123	95.734	134.712
124	95.825	134.893
125	95.916	135.620
126	96.006	134.178
127	96.097	135.609
128	96.188	134.882
129	96.278	134.723
130	96.369	134.893
131	96.460	135.064
132	96.550	134.723
133	96.641	135.438
134	96.732	134.712
135	96.822	134.700
136	96.913	134.712
137	97.000	130.375
138	97.071	105.796
139	97.140	102.163
140	97.209	102.901
141	97.277	101.459
142	97.346	101.335
143	97.411	97.588
144	97.476	96.862
145	97.542	98.303
146	97.608	98.292
147	97.673	96.862
148	97.739	97.588
149	97.805	97.588
150	97.870	97.565

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1205.1951

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 263.5227

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 150.0 300.0 450.0 600.0
14.000	69.4644	135.74	. QV . . .
14.083	70.4193	138.66	. QV . . .
14.167	71.3995	142.32	. QV . . .
14.250	72.4057	146.10	. QV . . .
14.333	73.4415	150.40	. QV . . .
14.417	74.5087	154.95	. QV . . .
14.500	75.6103	159.95	. QV . . .
14.583	76.7503	165.53	. .Q . . .
14.667	77.9327	171.69	. .Q . . .
14.750	79.1634	178.70	. .QV . . .
14.833	80.4452	186.11	. . Q . . .
14.917	81.7849	194.52	. . Q . . .
15.000	83.1783	202.32	. . VQ . . .
15.083	84.6218	209.60	. . VQ . . .
15.167	86.1144	216.73	. . VQ . . .
15.250	87.6548	223.67	. . VQ . . .
15.333	89.2434	230.67	. . V Q . . .
15.417	90.8742	236.78	. . V Q . . .
15.500	92.5388	241.71	. . V Q . . .
15.583	94.2328	245.96	. . V Q . . .
15.667	95.9495	249.27	. . V Q . . .
15.750	97.6889	252.56	. . V Q . . .
15.833	99.4526	256.09	. . V Q . . .
15.917	101.2410	259.67	. . V Q . . .
16.000	103.0652	264.88	. . V Q . . .
16.083	105.0893	293.90	. . V Q. . .
16.167	107.3046	321.66	. . V .Q . . .
16.250	109.5455	325.38	. . V .Q . . .
16.333	111.9261	345.66	. . V . Q . . .
16.417	114.3787	356.12	. . V . Q . . .
16.500	116.9704	376.30	. . V . Q . . .
16.583	119.7358	401.54	. . V . Q . . .
16.667	122.6755	426.85	. . V . Q . . .
16.750	125.8382	459.22	. . V. Q . . .
16.833	129.1113	475.26	. . V. .Q . . .
16.917	132.6120	508.29	. . V . Q . . .
17.000	135.9572	485.73	. . V . Q . . .
17.083	139.1655	465.85	. . .V .Q . . .
17.167	142.3143	457.21	. . .V Q . . .
17.250	145.4071	449.06	. . . V Q. . . .
17.333	148.4905	447.71	. . . V Q. . . .
17.417	151.5837	449.13	. . . V Q. . . .
17.500	154.5848	435.77	. . . V Q. . . .
17.583	157.3336	399.11	. . . V Q . . . .
17.667	159.9326	377.38	. . . VQ . . . .
17.750	162.3878	356.50	. . . QV . . . .
17.833	164.8081	351.42	. . . Q V . . . .
17.917	167.0656	327.80	. . .Q V . . . .
18.000	169.2725	320.44	. . .Q V . . . .
18.083	171.4357	314.09	. . Q V . . . .
18.167	173.5109	301.33	. . Q V . . . .
18.250	175.5464	295.55	. . Q. V . . . .
18.333	177.4652	278.61	. . Q . V . . . .
18.417	179.3441	272.82	. . Q . V . . . .
18.500	181.1631	264.12	. . Q . V . . . .
18.583	182.9171	254.68	. . Q . V . . . .
18.667	184.6227	247.65	. . Q . V . . . .
18.750	186.2794	240.55	. . Q . V . . . .
18.833	187.8919	234.14	. . Q . V . . . .
18.917	189.4551	226.99	. . Q . V . . . .
19.000	190.9860	222.29	. . Q . V . . . .
19.083	192.4729	215.90	. . Q . V. . . .
19.167	193.9299	211.55	. . Q . V. . . .
19.250	195.3502	206.23	. . Q . V. . . .
19.333	196.7237	199.43	. . Q . V. . . .
19.417	198.0590	193.89	. . Q . V . . . .
19.500	199.3612	189.08	. . Q . V . . . .
19.583	200.6339	184.79	. . Q . V . . . .
19.667	201.8749	180.19	. . Q . V . . . .
19.750	203.0996	177.84	. .Q . V . . . .
19.833	204.2981	174.01	. .Q . .V . . . .
19.917	205.4724	170.52	. .Q . .V . . . .
20.000	206.6214	166.83	. .Q . .V . . . .

END OF FLOODSCx ROUTING ANALYSIS

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**************************************************************************

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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: ME55002E.FLD
  TIME/DATE OF STUDY: 08:49 03/26/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1055.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   12628.700 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.550 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.120
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.690
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.190
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.830
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.13
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.28
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.37
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.63
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  0.86
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.47

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.627
          30-MINUTE FACTOR = 0.641
           1-HOUR FACTOR = 0.647
           3-HOUR FACTOR = 0.928
           6-HOUR FACTOR = 0.965
          24-HOUR FACTOR = 0.978

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   5.376


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.539	823.583
2	1.617	1645.495
3	2.702	1657.175
4	4.159	2226.013
5	5.781	2476.564
6	7.582	2750.461
7	9.807	3398.167
8	12.376	3924.243
9	15.387	4598.357
10	18.988	5499.701
11	22.713	5690.023
12	27.089	6683.514
13	30.707	5524.508
14	34.140	5242.952
15	37.256	4759.477
16	40.377	4766.323
17	43.415	4640.042
18	46.621	4897.463
19	49.666	4649.562
20	52.045	3634.458
21	54.083	3112.106
22	55.752	2549.605
23	57.516	2693.971
24	58.870	2066.777
25	60.174	1991.719
26	61.478	1991.643
27	62.728	1909.926
28	63.927	1830.498
29	65.010	1653.780
30	65.993	1502.441
31	66.995	1529.964
32	67.924	1418.556
33	68.803	1342.129
34	69.640	1278.287
35	70.444	1228.135
36	71.225	1192.736
37	71.955	1115.959
38	72.693	1125.957
39	73.382	1053.119
40	74.070	1050.007
41	74.747	1034.358
42	75.385	975.060
43	75.965	884.813
44	76.533	868.500
45	77.075	826.762
46	77.591	788.414
47	78.088	758.491
48	78.600	781.959
49	79.085	741.339
50	79.554	716.147
51	80.004	688.298
52	80.453	684.744
53	80.895	675.085
54	81.324	656.033
55	81.717	599.939
56	82.103	588.578
57	82.477	572.184
58	82.847	565.122
59	83.211	555.101
60	83.558	531.086
61	83.901	522.778
62	84.243	523.000

63	84.585	522.452
64	84.927	522.347
65	85.251	494.312
66	85.526	420.390
67	85.795	411.033
68	86.064	410.182
69	86.333	410.614
70	86.602	411.045
71	86.870	410.182
72	87.129	394.708
73	87.356	347.668
74	87.580	341.376
75	87.803	341.271
76	88.027	341.271
77	88.246	334.280
78	88.452	315.252
79	88.659	315.228
80	88.863	312.047
81	89.053	290.677
82	89.240	284.664
83	89.421	277.358
84	89.600	273.408
85	89.779	273.443
86	89.958	272.581
87	90.137	273.350
88	90.316	273.362
89	90.494	272.802
90	90.667	264.389
91	90.831	249.754
92	90.994	249.242
93	91.158	249.929
94	91.322	250.011
95	91.483	247.412
96	91.638	236.587
97	91.791	233.663
98	91.945	234.490
99	92.098	233.395
100	92.251	233.989
101	92.392	215.986
102	92.531	211.442
103	92.669	210.766
104	92.807	211.512
105	92.945	210.696
106	93.084	211.535
107	93.222	210.743
108	93.360	211.523
109	93.498	210.684
110	93.636	210.766
111	93.775	211.383
112	93.912	209.298
113	94.036	189.302
114	94.154	180.621
115	94.262	165.299
116	94.369	163.446
117	94.476	162.689
118	94.581	161.512
119	94.688	163.446
120	94.794	161.500
121	94.901	162.689
122	95.007	163.038
123	95.113	161.920
124	95.220	163.458
125	95.326	161.500
126	95.433	162.479
127	95.530	149.452
128	95.615	128.792
129	95.699	128.233
130	95.783	128.023
131	95.867	128.781
132	95.951	128.035
133	96.035	128.571
134	96.119	129.002
135	96.203	128.233
136	96.287	128.571
137	96.371	128.233
138	96.456	128.583
139	96.540	128.233
140	96.623	128.023
141	96.708	128.583
142	96.792	128.571
143	96.875	127.802
144	96.960	128.583
145	97.043	127.814
146	97.115	109.438
147	97.179	97.180
148	97.243	97.960
149	97.307	97.599
150	97.367	92.123

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1237.1260

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 268.3796

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 150.0 300.0 450.0 600.0
14.000	70.1379	137.06	. QV . . .
14.083	71.1016	139.93	. QV . . .
14.167	72.0904	143.57	. QV . . .
14.250	73.1045	147.25	. QV . . .
14.333	74.1477	151.47	. QV . . .
14.417	75.2215	155.91	. QV . . .
14.500	76.3278	160.63	. QV . . .
14.583	77.4707	165.96	. .Q . . .
14.667	78.6538	171.78	. .Q . . .
14.750	79.8811	178.21	. .Q . . .
14.833	81.1584	185.46	. . Q . . .
14.917	82.4868	192.90	. . Q . . .
15.000	83.8728	201.24	. . VQ . . .
15.083	85.3097	208.64	. . VQ . . .
15.167	86.7965	215.88	. . V Q . . .
15.250	88.3308	222.78	. . VQ . . .
15.333	89.9135	229.80	. . V Q . . .
15.417	91.5369	235.73	. . V Q . . .
15.500	93.1964	240.95	. . V Q . . .
15.583	94.8918	246.18	. . V Q . . .
15.667	96.6145	250.14	. . V Q . . .
15.750	98.3633	253.91	. . V Q . . .
15.833	100.1379	257.68	. . V Q . . .
15.917	101.9420	261.96	. . V Q . . .
16.000	103.7835	267.38	. . V Q . . .
16.083	105.8168	295.23	. . V Q. . .
16.167	108.0296	321.30	. . V .Q . .
16.250	110.2652	324.61	. . V .Q . .
16.333	112.6163	341.38	. . V . Q . .
16.417	115.0411	352.09	. . V . Q . .
16.500	117.5578	365.42	. . V . Q . .
16.583	120.2413	389.64	. . V . Q . .
16.667	123.0744	411.37	. . V . Q . .
16.750	126.0789	436.25	. . V . Q. .
16.833	129.2842	465.41	. . V. .Q .
16.917	132.5450	473.47	. . V. .Q .
17.000	135.9949	500.92	. . V . Q .
17.083	139.2183	468.04	. . V .Q .
17.167	142.3828	459.47	. . .V Q .
17.250	145.4539	445.93	. . .V Q. .
17.333	148.5359	447.51	. . . V Q. .
17.417	151.5915	443.67	. . . V Q. .
17.500	154.6746	447.67	. . . V Q. .
17.583	157.6674	434.55	. . . V Q . .
17.667	160.4171	399.25	. . . V Q . .
17.750	163.0178	377.62	. . . VQ . .
17.833	165.4700	356.06	. . . QV . .
17.917	167.9053	353.61	. . . Q V . .
18.000	170.1709	328.97	. . .Q V . .
18.083	172.3766	320.27	. . .Q V . .
18.167	174.5354	313.46	. . Q V . .
18.250	176.6368	305.12	. . Q V . .
18.333	178.6740	295.80	. . Q. V . .
18.417	180.6300	284.01	. . Q . V . .
18.500	182.5099	272.95	. . Q . V . .
18.583	184.3482	266.93	. . Q . V . .
18.667	186.1242	257.88	. . Q . V . .
18.750	187.8457	249.96	. . Q . V . .
18.833	189.5177	242.77	. . Q . V . .
18.917	191.1435	236.07	. . Q . V . .
19.000	192.7282	230.10	. . Q . V . .
19.083	194.2669	223.42	. . Q . V . .
19.167	195.7767	219.23	. . Q . V. .
19.250	197.2439	213.03	. . Q . V. .
19.333	198.6818	208.78	. . Q . V. .
19.417	200.0885	204.25	. . Q . V. .
19.500	201.4561	198.58	. . Q . V .
19.583	202.7794	192.15	. . Q . V .
19.667	204.0755	188.19	. . Q . V .
19.750	205.3414	183.82	. . Q . V .
19.833	206.5797	179.80	. .Q . V .
19.917	207.7928	176.13	. .Q . V .
20.000	208.9917	174.09	. .Q . .V .

END OF FLOODSCx ROUTING ANALYSIS

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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: ME56002E.FLD
  TIME/DATE OF STUDY: 08:50 03/26/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1056.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   13021.500 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.640 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.120
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.670
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.210
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.590
         LOW LOSS FRACTION = 0.830
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.13
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.28
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.37
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.63
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  0.86
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.47

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.620
          30-MINUTE FACTOR = 0.636
           1-HOUR FACTOR = 0.642
           3-HOUR FACTOR = 0.926
           6-HOUR FACTOR = 0.964
          24-HOUR FACTOR = 0.977

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   5.081


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.507	798.152
2	1.520	1595.525
3	2.528	1587.739
4	3.830	2050.160
5	5.343	2382.799
6	6.945	2521.894
7	8.923	3115.224
8	11.241	3650.655
9	13.843	4097.734
10	16.971	4925.706
11	20.338	5302.043
12	24.248	6158.287
13	28.161	6161.537
14	31.386	5078.672
15	34.689	5201.772
16	37.560	4520.462
17	40.579	4755.283
18	43.461	4537.715
19	46.539	4847.002
20	49.472	4619.649
21	51.798	3663.281
22	53.779	3119.010
23	55.442	2618.448
24	57.121	2644.154
25	58.522	2206.771
26	59.767	1961.198
27	61.002	1943.776
28	62.263	1986.218
29	63.356	1721.114
30	64.545	1872.307
31	65.471	1459.387
32	66.417	1489.339
33	67.373	1505.439
34	68.230	1348.731
35	69.066	1316.820
36	69.851	1237.235
37	70.613	1198.656
38	71.353	1166.517
39	72.047	1092.182
40	72.747	1102.262
41	73.406	1037.251
42	74.055	1022.869
43	74.702	1019.289
44	75.323	976.733
45	75.884	884.340
46	76.432	862.173
47	76.954	823.186
48	77.460	796.068
49	77.933	745.078
50	78.410	751.578
51	78.889	754.510
52	79.345	718.189
53	79.784	690.039
54	80.209	670.203
55	80.632	666.106
56	81.049	656.590
57	81.456	641.319
58	81.830	588.551
59	82.195	574.025
60	82.551	561.878
61	82.899	547.869
62	83.245	544.974

63	83.579	525.390
64	83.902	508.930
65	84.225	507.944
66	84.547	508.245
67	84.870	507.884
68	85.191	505.902
69	85.483	459.621
70	85.738	401.278
71	85.991	399.440
72	86.245	398.695
73	86.498	398.683
74	86.751	399.164
75	87.005	399.164
76	87.251	388.471
77	87.469	342.683
78	87.680	331.473
79	87.890	331.581
80	88.101	331.689
81	88.310	329.947
82	88.508	311.384
83	88.702	305.713
84	88.896	305.761
85	89.085	297.171
86	89.261	277.996
87	89.437	276.145
88	89.607	267.242
89	89.775	264.527
90	89.943	264.599
91	90.111	264.551
92	90.279	265.092
93	90.447	264.311
94	90.615	264.335
95	90.779	259.060
96	90.934	243.249
97	91.087	242.432
98	91.242	242.853
99	91.396	242.300
100	91.550	243.237
101	91.698	232.977
102	91.841	225.804
103	91.985	225.515
104	92.128	225.924
105	92.271	225.792
106	92.413	222.428
107	92.544	206.436
108	92.673	203.913
109	92.802	203.601
110	92.932	204.165
111	93.061	203.613
112	93.191	204.057
113	93.320	203.601
114	93.450	204.021
115	93.579	204.153
116	93.709	203.372
117	93.838	203.493
118	93.968	204.670
119	94.091	193.785
120	94.203	176.568
121	94.311	170.332
122	94.410	155.542
123	94.508	155.037
124	94.608	156.395
125	94.706	154.785
126	94.805	155.842
127	94.903	154.773
128	95.002	155.854
129	95.100	154.761
130	95.199	155.842
131	95.298	154.785
132	95.397	155.842
133	95.495	155.326
134	95.591	150.424
135	95.671	125.577
136	95.749	123.955
137	95.827	122.598
138	95.905	123.138
139	95.984	123.391
140	96.062	123.150
141	96.140	123.138
142	96.218	123.415
143	96.296	122.574
144	96.374	122.898
145	96.453	124.460
146	96.531	122.081
147	96.609	123.655
148	96.687	122.874
149	96.766	123.403
150	96.843	122.081

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1274.8693

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 275.2398

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 125.0 250.0 375.0 500.0
14.000	71.1596	139.08	. VQ . . .
14.083	72.1375	141.99	. VQ . . .
14.167	73.1401	145.59	. VQ . . .
14.250	74.1679	149.23	. VQ . . .
14.333	75.2240	153.34	. V Q . . .
14.417	76.3103	157.74	. VQ . . .
14.500	77.4284	162.35	. VQ . . .
14.583	78.5816	167.44	. V Q . . .
14.667	79.7735	173.06	. V Q . . .
14.750	81.0071	179.12	. V Q . . .
14.833	82.2875	185.92	. V Q . . .
14.917	83.6173	193.09	. V Q . . .
15.000	85.0018	201.03	. V Q . . .
15.083	86.4414	209.03	. V Q . . .
15.167	87.9300	216.15	. V Q . . .
15.250	89.4690	223.46	. V Q . . .
15.333	91.0550	230.28	. V Q . . .
15.417	92.6826	236.34	. V Q . . .
15.500	94.3446	241.31	. V Q. . . .
15.583	96.0444	246.82	. V Q. . . .
15.667	97.7787	251.82	. V Q . . .
15.750	99.5426	256.12	. V Q . . .
15.833	101.3369	260.53	. V Q . . .
15.917	103.1616	264.94	. V .Q . . .
16.000	105.0270	270.86	. V .Q . . .
16.083	107.0825	298.46	. V . Q . . .
16.167	109.3142	324.05	. V . Q . . .
16.250	111.5651	326.82	. V . Q . . .
16.333	113.9135	341.00	. V . Q . . .
16.417	116.3410	352.47	. V . Q . . .
16.500	118.8337	361.94	. V . Q . . .
16.583	121.4748	383.48	. V . Q . . .
16.667	124.2641	405.01	. V . . Q . . .
16.750	127.1831	423.83	. V . . Q . . .
16.833	130.2952	451.89	. V . . Q . . .
16.917	133.5075	466.42	. V. . Q . . .
17.000	136.8895	491.07	. V. . Q. . .
17.083	140.2646	490.07	. V . Q. . .
17.167	143.4265	459.10	. V . Q . . .
17.250	146.6063	461.71	. .V . Q . . .
17.333	149.6624	443.75	. .V . Q . . .
17.417	152.7675	450.86	. . V . Q . . .
17.500	155.8273	444.29	. . V . Q . . .
17.583	158.9252	449.80	. . V . Q . . .
17.667	161.9352	437.06	. . V . Q . . .
17.750	164.7154	403.68	. . V . Q . . .
17.833	167.3389	380.94	. . V Q . . .
17.917	169.8271	361.28	. . V Q . . .
18.000	172.2749	355.42	. . V Q . . .
18.083	174.5885	335.93	. . VQ . . .
18.167	176.8117	322.81	. . Q . . .
18.250	178.9856	315.65	. . QV . . .
18.333	181.1265	310.85	. . Q V . . .
18.417	183.1715	296.94	. . Q V . . .
18.500	185.1959	293.93	. . Q V . . .
18.583	187.0941	275.62	. . Q V . . .
18.667	188.9519	269.76	. . .Q V . . .
18.750	190.7705	264.06	. . .Q V . . .
18.833	192.5213	254.21	. . Q V . . .
18.917	194.2270	247.67	. . Q. V . . .
19.000	195.8794	239.93	. . Q. V . . .
19.083	197.4906	233.94	. . Q . V . . .
19.167	199.0645	228.53	. . Q . V . . .
19.250	200.5941	222.10	. . Q . V. . .
19.333	202.0960	218.08	. . Q . V. . .
19.417	203.5582	212.31	. . Q . V. . .
19.500	204.9897	207.86	. . Q . V. . .
19.583	206.3937	203.85	. . Q . V. . .
19.667	207.7630	198.84	. . Q . V . .
19.750	209.0898	192.65	. . Q . V . .
19.833	210.3896	188.72	. . Q . V . .
19.917	211.6608	184.58	. . Q . V . .
20.000	212.9064	180.87	. . Q . V . .

END OF FLOODSCx ROUTING ANALYSIS

```
**************************************************************************

             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: ME57002E.FLD
  TIME/DATE OF STUDY: 08:51 03/26/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1057.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   18580.600 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.730 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.120
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.650
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.230
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.590
         LOW LOSS FRACTION = 0.820
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.13
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.28
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.37
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.64
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  0.88
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.50

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.543
          30-MINUTE FACTOR = 0.568
           1-HOUR FACTOR = 0.581
           3-HOUR FACTOR = 0.897
           6-HOUR FACTOR = 0.953
          24-HOUR FACTOR = 0.971

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   4.817


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


==========================================================================
```

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.478	1073.634
2	1.433	2146.930
3	2.383	2133.661
4	3.538	2596.970
5	4.957	3187.222
6	6.430	3309.285
7	8.199	3976.993
8	10.237	4578.428
9	12.554	5205.796
10	15.245	6048.084
11	18.456	7214.502
12	21.627	7125.448
13	25.567	8853.532
14	28.997	7707.755
15	32.020	6794.463
16	35.145	7020.626
17	37.845	6067.234
18	40.754	6536.387
19	43.494	6157.711
20	46.459	6663.817
21	49.291	6362.324
22	51.569	5119.131
23	53.497	4332.412
24	55.169	3756.667
25	56.720	3485.741
26	58.212	3352.447
27	59.404	2677.910
28	60.588	2661.495
29	61.784	2686.928
30	62.933	2583.156
31	63.986	2364.836
32	65.055	2404.078
33	65.915	1930.906
34	66.813	2017.328
35	67.730	2062.314
36	68.521	1776.747
37	69.320	1795.023
38	70.059	1661.420
39	70.782	1623.720
40	71.486	1583.038
41	72.147	1483.774
42	72.812	1495.364
43	73.444	1421.010
44	74.060	1384.391
45	74.678	1388.625
46	75.274	1337.331
47	75.830	1249.622
48	76.350	1169.011
49	76.863	1153.839
50	77.347	1086.978
51	77.816	1054.233
52	78.258	992.292
53	78.721	1039.626
54	79.166	1000.264
55	79.596	967.570
56	80.008	924.333
57	80.411	905.938
58	80.811	900.109
59	81.205	885.725
60	81.592	868.324
61	81.949	802.834
62	82.295	776.432

63	82.636	766.369
64	82.965	738.818
65	83.293	737.738
66	83.614	720.560
67	83.921	691.552
68	84.226	685.501
69	84.532	686.049
70	84.837	685.604
71	85.142	685.621
72	85.442	674.786
73	85.704	589.152
74	85.944	539.451
75	86.184	537.857
76	86.423	537.668
77	86.662	538.063
78	86.902	538.577
79	87.141	537.171
80	87.377	530.279
81	87.587	470.447
82	87.785	446.977
83	87.984	446.788
84	88.183	446.788
85	88.382	446.754
86	88.575	433.125
87	88.758	411.900
88	88.941	410.992
89	89.124	411.678
90	89.297	387.779
91	89.464	375.658
92	89.629	371.098
93	89.787	356.028
94	89.946	356.097
95	90.104	355.788
96	90.263	355.891
97	90.421	355.891
98	90.579	356.097
99	90.738	355.514
100	90.894	350.937
101	91.041	330.450
102	91.186	326.044
103	91.332	327.089
104	91.477	327.689
105	91.622	325.083
106	91.767	324.861
107	91.902	303.105
108	92.037	303.722
109	92.170	300.362
110	92.305	302.111
111	92.440	303.174
112	92.570	292.819
113	92.693	275.280
114	92.814	272.383
115	92.936	273.669
116	93.057	273.343
117	93.179	273.686
118	93.300	272.126
119	93.422	274.526
120	93.544	272.726
121	93.665	272.897
122	93.786	272.709
123	93.908	273.326
124	94.030	274.337
125	94.151	270.754
126	94.259	243.855
127	94.364	235.969
128	94.461	217.042
129	94.553	206.636
130	94.644	205.384
131	94.736	206.996
132	94.828	205.384
133	94.919	205.796
134	95.011	205.402
135	95.103	206.979
136	95.194	205.796
137	95.286	205.796
138	95.378	206.585
139	95.469	205.796
140	95.561	205.384
141	95.652	205.796
142	95.731	176.205
143	95.803	161.547
144	95.876	165.113
145	95.949	163.588
146	96.021	162.747
147	96.095	164.359
148	96.167	163.930
149	96.241	164.753
150	96.313	162.319

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1835.3334

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 403.6920

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 175.0 350.0 525.0 700.0
14.000	108.1694	219.17	. V Q . . .
14.083	109.7113	223.88	. V Q . . .
14.167	111.2931	229.69	. .V Q . . .
14.250	112.9139	235.34	. .V Q . . .
14.333	114.5773	241.52	. .V Q . . .
14.417	116.2878	248.36	. .V Q . . .
14.500	118.0464	255.35	. .V Q . . .
14.583	119.8577	263.00	. .V Q . . .
14.667	121.7262	271.31	. . V Q . . .
14.750	123.6556	280.15	. . V Q . . .
14.833	125.6521	289.89	. . V Q . . .
14.917	127.7240	300.84	. . V Q . . .
15.000	129.8702	311.62	. . V Q . . .
15.083	132.1026	324.15	. . V Q . . .
15.167	134.4132	335.49	. . V Q. . . .
15.250	136.7957	345.94	. . V Q. . . .
15.333	139.2519	356.64	. . V Q . . .
15.417	141.7646	364.85	. . V Q . . .
15.500	144.3272	372.09	. . V .Q . . .
15.583	146.9389	379.22	. . V .Q . . .
15.667	149.6009	386.52	. . V . Q . . .
15.750	152.3095	393.29	. . V . Q . . .
15.833	155.0608	399.49	. . V . Q . . .
15.917	157.8529	405.42	. . V . Q . . .
16.000	160.6940	412.52	. . V . Q . . .
16.083	163.7122	438.24	. . V . Q . . .
16.167	166.8905	461.50	. . V . Q . . .
16.250	170.0788	462.94	. . V . Q . . .
16.333	173.3333	472.55	. . V . Q . . .
16.417	176.6624	483.39	. . V . Q . . .
16.500	180.0357	489.80	. . V . Q . . .
16.583	183.5307	507.48	. . V . Q . . .
16.667	187.1420	524.37	. . V . Q. . .
16.750	190.8881	543.92	. . V . .Q . .
16.833	194.7832	565.57	. . V. . Q . .
16.917	198.8622	592.27	. . V. . Q . .
17.000	202.9602	595.04	. . V . Q . .
17.083	207.2594	624.25	. . V . Q . .
17.167	211.4076	602.31	. . V . Q . .
17.250	215.4445	586.15	. . .V . Q . .
17.333	219.5080	590.02	. . .V . Q . .
17.417	223.4777	576.41	. . . V . Q . .
17.500	227.5122	585.81	. . . V . Q . .
17.583	231.5013	579.21	. . . V . Q . .
17.667	235.5323	585.31	. . . V . Q . .
17.750	239.4742	572.36	. . . V . Q . .
17.833	243.2055	541.78	. . . V Q . . .
17.917	246.7742	518.18	. . . V Q. . .
18.000	250.2209	500.46	. . . V Q . . .
18.083	253.5759	487.14	. . . V Q . . .
18.167	256.8492	475.28	. . . V Q . . .
18.250	259.9796	454.54	. . . Q . . .
18.333	263.0463	445.28	. . . QV . . .
18.417	266.0580	437.30	. . . Q V . . .
18.500	268.9954	426.51	. . . Q V . . .
18.583	271.8387	412.85	. . . Q V . . .
18.667	274.6120	402.69	. . . Q V . . .
18.750	277.2595	384.41	. . .Q V . . .
18.833	279.8552	376.90	. . .Q V . . .
18.917	282.3954	368.84	. . .Q V . . .
19.000	284.8462	355.86	. . Q V . . .
19.083	287.2378	347.26	. . Q. V . . .
19.167	289.5584	336.96	. . Q. V . . .
19.250	291.8285	329.61	. . Q . V . . .
19.333	294.0460	321.99	. . Q . V. . .
19.417	296.2076	313.86	. . Q . V. . .
19.500	298.3259	307.58	. . Q . V. . .
19.583	300.3936	300.22	. . Q . V. . .
19.667	302.4145	293.44	. . Q . V. . .
19.750	304.3959	287.71	. . Q . V . .
19.833	306.3335	281.33	. . Q . V . .
19.917	308.2241	274.52	. . Q . V . .
20.000	310.0729	268.45	. . Q . V . .

END OF FLOODSCx ROUTING ANALYSIS

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

TECHNICAL APPENDIX II-B
HYDROLOGIC ANALYSIS
EXISTING CONDITION
10-YEAR EXPECTED VALUE

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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             Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                         Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: ME49010E.DAT
  TIME/DATE OF STUDY: 09:50 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  3.610
   2)  10.000;  2.370
   3)  15.000;  1.890
   4)  20.000;  1.540
   5)  30.000;  1.210
   6)  60.000;  0.840
   7) 120.000;  0.590
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1048.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU48010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1980.81    Tc(MIN.) =  49.77
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.61
  TOTAL AREA(ACRES) =    4407.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 33517.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1048.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1980.81    Tc(MIN.) =  49.77
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.61
  TOTAL AREA(ACRES) =    4407.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 33517.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1048.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    445.00  DOWNSTREAM(FEET) =    400.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2427.00   CHANNEL SLOPE =  0.0185
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1980.81
  FLOW VELOCITY(FEET/SEC.) =  13.06   FLOW DEPTH(FEET) =   5.86
  TRAVEL TIME(MIN.) =   3.10   Tc(MIN.) =  52.86
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  52.86
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.051
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       39.10      0.40       1.00    40
  NATURAL FAIR COVER
  "GRASS"                    A       26.90      0.40       1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A       43.60      0.40       1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A       72.70      0.40       1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       70.70      0.30       1.00    63
  NATURAL FAIR COVER
  "GRASS"                    B       65.10      0.30       1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.36
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  318.10
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.27;30M= 0.59;1H= 0.79;3H= 1.35;6H= 1.89;24H= 3.19
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.88; LAG(HR) = 0.70; Fm(INCH/HR) = 0.25; Ybar = 0.63
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.79; 30M = 0.79; 1HR = 0.79;
  3HR = 0.97; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4725.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =     527.86
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1948.03
  TOTAL AREA(ACRES) =   4725.10       PEAK FLOW RATE(CFS) =    1980.81
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  52.86
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.928
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                B       39.60      0.30      1.00    66
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      B        2.00      0.30      1.00    72
  NATURAL FAIR COVER
  "WOODLAND"                  B       81.70      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C      709.70      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                    C        2.20      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                     C       92.30      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  927.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.27;30M= 0.59;1H= 0.79;3H= 1.35;6H= 1.88;24H= 3.17
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.88; LAG(HR) = 0.70; Fm(INCH/HR) = 0.25; Ybar = 0.64
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.77; 30M = 0.77; 1HR = 0.77;
  3HR = 0.96; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   5652.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =     607.79
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2231.00
  TOTAL AREA(ACRES) =   5652.60       PEAK FLOW RATE(CFS) =    2231.00

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  52.86
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.928
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C      838.80      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      C       78.30      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                  C       84.40      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D      141.90      0.20      1.00    81
  NATURAL POOR COVER
  "BARREN"                    D        1.00      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                     D      481.50      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1625.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.27;30M= 0.59;1H= 0.79;3H= 1.34;6H= 1.86;24H= 3.14
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.88; LAG(HR) = 0.70; Fm(INCH/HR) = 0.24; Ybar = 0.63
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.73; 30M = 0.73; 1HR = 0.73;
  3HR = 0.96; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   7278.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =     782.01
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2710.06
  TOTAL AREA(ACRES) =   7278.50       PEAK FLOW RATE(CFS) =    2710.06

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  52.86
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.928
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                D      419.60      0.20      1.00    83
  NATURAL GOOD COVER
  "MEADOWS"                   D        0.40      0.20      1.00    78
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      D       21.60      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                  D       70.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  511.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.27;30M= 0.59;1H= 0.79;3H= 1.34;6H= 1.86;24H= 3.13
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.88; LAG(HR) = 0.70; Fm(INCH/HR) = 0.24; Ybar = 0.63
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.71; 30M = 0.71; 1HR = 0.71;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
```

```
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   7790.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =     843.62
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2856.72
  TOTAL AREA(ACRES) =   7790.20       PEAK FLOW RATE(CFS) =    2856.72

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   7790.20  TC(MIN.) =     52.86
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.63
  PEAK FLOW RATE(CFS)   =   2856.72
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: ME50010E.DAT
  TIME/DATE OF STUDY: 09:50 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  3.610
   2)  10.000;  2.370
   3)  15.000;  1.890
   4)  20.000;  1.540
   5)  30.000;  1.210
   6)  60.000;  0.840
   7) 120.000;  0.590
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.100
        MOUNTAIN                           0.700
        VALLEY(UNDEVELOPED)/DESERT         0.200
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1049.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: ME49010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2856.72    Tc(MIN.) =  52.86
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.63
  TOTAL AREA(ACRES) =    7790.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1049.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2856.72    Tc(MIN.) =  52.86
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.63
  TOTAL AREA(ACRES) =    7790.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1049.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1050.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    400.00  DOWNSTREAM(FEET) =    390.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   616.00   CHANNEL SLOPE =  0.0162
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2856.72
  FLOW VELOCITY(FEET/SEC.) =  13.84   FLOW DEPTH(FEET) =   7.50
  TRAVEL TIME(MIN.) =   0.74   Tc(MIN.) =  53.61
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1050.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  53.61
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.043
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    A        0.30      0.40       1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        0.20      0.40       1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A        1.10      0.40       1.00    36
  NATURAL FAIR COVER
  "GRASS"                    B        2.20      0.30       1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        0.20      0.30       1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.40      0.30       1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.34
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    4.40
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.27;30M= 0.59;1H= 0.79;3H= 1.34;6H= 1.86;24H= 3.13
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.89; LAG(HR) = 0.71; Fm(INCH/HR) = 0.24; Ybar = 0.63
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.71; 30M = 0.71; 1HR = 0.71;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   7794.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =     843.65
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2850.23
  TOTAL AREA(ACRES) =   7794.60       PEAK FLOW RATE(CFS) =    2856.72
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1050.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  53.61
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.919
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       88.30      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        0.90      0.25      0.50    69
  NATURAL POOR COVER
  "BARREN"                   C        1.10      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C       36.50      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      245.30      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C       38.00      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  410.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.27;30M= 0.59;1H= 0.79;3H= 1.34;6H= 1.86;24H= 3.12
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  1.0%
           MOUNTAIN= 98.5%;FOOTHILL=  0.5%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.89; LAG(HR) = 0.71; Fm(INCH/HR) = 0.24; Ybar = 0.63
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8204.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =     880.52
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2940.57
  TOTAL AREA(ACRES) =   8204.70       PEAK FLOW RATE(CFS) =    2940.57

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1050.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  53.61
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.919
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        2.50      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        6.90      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        0.20      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D       62.60      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        9.20      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D        1.80      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.96
  SUBAREA AREA(ACRES) =  83.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.86;24H= 3.12
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  1.2%
           MOUNTAIN= 98.2%;FOOTHILL=  0.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.89; LAG(HR) = 0.71; Fm(INCH/HR) = 0.24; Ybar = 0.63
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8287.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =     891.06
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2962.33
  TOTAL AREA(ACRES) =   8287.90       PEAK FLOW RATE(CFS) =    2962.33

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   8287.90  TC(MIN.) =     53.61
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.63
  PEAK FLOW RATE(CFS)   =   2962.33
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: ME51010E.DAT
  TIME/DATE OF STUDY: 09:50 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  3.610
   2)  10.000;  2.370
   3)  15.000;  1.890
   4)  20.000;  1.540
   5)  30.000;  1.210
   6)  60.000;  0.840
   7) 120.000;  0.590
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.500
        MOUNTAIN                           0.000
        VALLEY(UNDEVELOPED)/DESERT         0.500
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1050.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: ME50010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2962.33    Tc(MIN.) =  53.61
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.63
  TOTAL AREA(ACRES) =    8287.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1050.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2962.33    Tc(MIN.) =  53.61
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.63
  TOTAL AREA(ACRES) =    8287.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1050.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1051.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    390.00  DOWNSTREAM(FEET) =    330.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  4501.00   CHANNEL SLOPE =  0.0133
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2962.33
  FLOW VELOCITY(FEET/SEC.) =  13.04   FLOW DEPTH(FEET) =   8.09
  TRAVEL TIME(MIN.) =   5.75   Tc(MIN.) =  59.36
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1051.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  59.36
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.983
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A        0.70      0.40       0.50    32
  NATURAL FAIR COVER
  "GRASS"                    A        1.80      0.40       1.00    50
  NATURAL FAIR COVER
  "WOODLAND"                 A        6.50      0.40       1.00    36
  NATURAL FAIR COVER
  "GRASS"                    B        3.20      0.30       1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        2.20      0.30       1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B       10.90      0.30       1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.33
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   25.30
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.86;24H= 3.12
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  1.3%
           MOUNTAIN= 97.9%;FOOTHILL=  0.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.99; LAG(HR) = 0.79; Fm(INCH/HR) = 0.24; Ybar = 0.63
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8313.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0317; Lca/L=0.4,n=.0284; Lca/L=0.5,n=.0261;Lca/L=0.6,n=.0243
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =     891.88
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2771.05
  TOTAL AREA(ACRES) =   8313.20       PEAK FLOW RATE(CFS) =    2962.33
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1051.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  59.36
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.848
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        9.10      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        1.30      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C        5.80      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       29.60      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        8.80      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       40.70      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   95.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.86;24H= 3.12
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  1.9%
           MOUNTAIN= 96.8%;FOOTHILL=  1.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.99; LAG(HR) = 0.79; Fm(INCH/HR) = 0.24; Ybar = 0.63
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8408.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0317; Lca/L=0.4,n=.0284; Lca/L=0.5,n=.0261;Lca/L=0.6,n=.0243
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =     901.65
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2790.62
  TOTAL AREA(ACRES) =   8408.50       PEAK FLOW RATE(CFS) =    2962.33
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1051.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
```

```
============================================================================
  MAINLINE Tc(MIN) =  59.36
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.848
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D       23.10      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        7.10      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      178.60      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       93.40      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D       31.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =  333.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.85;24H= 3.12
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  3.7%
           MOUNTAIN= 93.1%;FOOTHILL=  3.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.99; LAG(HR) = 0.79; Fm(INCH/HR) = 0.24; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.69; 30M = 0.69; 1HR = 0.69;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8742.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0317; Lca/L=0.4,n=.0284; Lca/L=0.5,n=.0261;Lca/L=0.6,n=.0243
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =     944.56
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2870.15
  TOTAL AREA(ACRES) =   8742.10       PEAK FLOW RATE(CFS) =    2962.33
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   8742.10  TC(MIN.) =     59.36
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.62
  PEAK FLOW RATE(CFS)   =   2962.33
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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             Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: ME52010E.DAT
  TIME/DATE OF STUDY: 09:50 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  3.610
   2)  10.000;  2.370
   3)  15.000;  1.890
   4)  20.000;  1.540
   5)  30.000;  1.210
   6)  60.000;  0.840
   7) 120.000;  0.590
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.300
        MOUNTAIN                           0.100
        VALLEY(UNDEVELOPED)/DESERT         0.600
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1051.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: ME51010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2962.33    Tc(MIN.) =  59.36
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.62
  TOTAL AREA(ACRES) =    8742.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1051.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2962.33    Tc(MIN.) =  59.36
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.62
  TOTAL AREA(ACRES) =    8742.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1051.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    330.00  DOWNSTREAM(FEET) =    300.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2333.00   CHANNEL SLOPE =  0.0129
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2962.33
  FLOW VELOCITY(FEET/SEC.) =  12.87   FLOW DEPTH(FEET) =   8.17
  TRAVEL TIME(MIN.) =   3.02   Tc(MIN.) =  62.38
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  62.38
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.956
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   A        7.20      0.40      1.00    78
  NATURAL FAIR COVER
  "GRASS"                    A        1.40      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        4.70      0.40      1.00    46
  PUBLIC PARK                A        1.10      0.40      0.85    32
  NATURAL FAIR COVER
  "WOODLAND"                 A       12.10      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       14.10      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.35
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   40.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.85;24H= 3.12
```

```
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  4.0%
           MOUNTAIN= 92.7%;FOOTHILL=  3.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.04; LAG(HR) = 0.83; Fm(INCH/HR) = 0.24; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.69; 30M = 0.69; 1HR = 0.69;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8782.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0317; Lca/L=0.4,n=.0284; Lca/L=0.5,n=.0261;Lca/L=0.6,n=.0243
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =     946.60
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2784.06
  TOTAL AREA(ACRES) =   8782.70       PEAK FLOW RATE(CFS) =    2962.33
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  62.38
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.830
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   C        4.30      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C       14.50      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       12.10      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.20      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       14.60      0.20      1.00    81
  NATURAL POOR COVER
  "BARREN"                   D       36.10      0.20      1.00    93
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   81.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.85;24H= 3.12
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  4.5%
           MOUNTAIN= 91.9%;FOOTHILL=  3.5%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.04; LAG(HR) = 0.83; Fm(INCH/HR) = 0.24; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.69; 30M = 0.69; 1HR = 0.69;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8864.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0317; Lca/L=0.4,n=.0284; Lca/L=0.5,n=.0261;Lca/L=0.6,n=.0243
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =     958.07
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2805.38
  TOTAL AREA(ACRES) =   8864.50       PEAK FLOW RATE(CFS) =    2962.33
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  62.38
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.830
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D      104.40      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       28.80      0.20      1.00    83
  PUBLIC PARK                D        1.10      0.20      0.85    75
  NATURAL FAIR COVER
  "WOODLAND"                 D       34.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  168.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.85;24H= 3.12
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  5.5%
           MOUNTAIN= 90.4%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.04; LAG(HR) = 0.83; Fm(INCH/HR) = 0.24; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.69; 30M = 0.69; 1HR = 0.69;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9032.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0317; Lca/L=0.4,n=.0284; Lca/L=0.5,n=.0261;Lca/L=0.6,n=.0243
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =     978.77
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2848.45
  TOTAL AREA(ACRES) =   9032.90       PEAK FLOW RATE(CFS) =    2962.33
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   9032.90  TC(MIN.) =     62.38
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.62
  PEAK FLOW RATE(CFS)   =   2962.33
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: ME53010E.DAT
  TIME/DATE OF STUDY: 09:50 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  3.610
   2)  10.000;  2.370
   3)  15.000;  1.890
   4)  20.000;  1.540
   5)  30.000;  1.210
   6)  60.000;  0.840
   7) 120.000;  0.590
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.300
        MOUNTAIN                           0.100
        VALLEY(UNDEVELOPED)/DESERT         0.600
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1052.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: ME52010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2962.33    Tc(MIN.) =  62.38
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.62
  TOTAL AREA(ACRES) =    9032.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1052.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2962.33    Tc(MIN.) =  62.38
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.62
  TOTAL AREA(ACRES) =    9032.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1052.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    300.00  DOWNSTREAM(FEET) =    265.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  3322.00   CHANNEL SLOPE =  0.0105
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2962.33
  FLOW VELOCITY(FEET/SEC.) =  11.98   FLOW DEPTH(FEET) =   8.63
  TRAVEL TIME(MIN.) =   4.62   Tc(MIN.) =  67.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  67.00
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.918
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        1.60      0.40      1.00    40
  NATURAL POOR COVER
  "BARREN"                   A        0.90      0.40      1.00    78
  NATURAL FAIR COVER
  "GRASS"                    A       13.10      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        3.20      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A       16.90      0.40      1.00    36
  NATURAL FAIR COVER
  "GRASS"                    B       21.80      0.30      1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.36
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   57.50
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.85;24H= 3.12
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  5.9%
           MOUNTAIN= 89.9%;FOOTHILL=  4.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.12; LAG(HR) = 0.89; Fm(INCH/HR) = 0.24; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.69; 30M = 0.69; 1HR = 0.69;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9090.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =     979.29
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2779.85
  TOTAL AREA(ACRES) =   9090.40       PEAK FLOW RATE(CFS) =    2962.33
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  67.00
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.811
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        4.20      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        4.40      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       66.60      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C       16.90      0.25      0.50    69
  NATURAL POOR COVER
  "BARREN"                   C        8.70      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C       24.90      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
  SUBAREA AREA(ACRES) =  125.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.85;24H= 3.11
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  6.6%
           MOUNTAIN= 88.8%;FOOTHILL=  4.5%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.12; LAG(HR) = 0.89; Fm(INCH/HR) = 0.24; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.68; 30M = 0.69; 1HR = 0.69;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9216.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =     991.85
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2805.44
  TOTAL AREA(ACRES) =   9216.10       PEAK FLOW RATE(CFS) =    2962.33
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  67.00
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.811
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       63.50      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C       47.00      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       12.50      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D       12.90      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        4.90      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      325.90      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  466.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.85;24H= 3.11
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  9.2%
           MOUNTAIN= 85.0%;FOOTHILL=  5.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.12; LAG(HR) = 0.89; Fm(INCH/HR) = 0.24; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.68; 30M = 0.68; 1HR = 0.68;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9682.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    1047.45
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2910.27
  TOTAL AREA(ACRES) =   9682.80       PEAK FLOW RATE(CFS) =    2962.33
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  67.00
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.811
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      125.00      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D       73.50      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  198.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.85;24H= 3.11
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 10.2%
           MOUNTAIN= 83.5%;FOOTHILL=  6.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.12; LAG(HR) = 0.89; Fm(INCH/HR) = 0.24; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.67; 30M = 0.68; 1HR = 0.68;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9881.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.
```

```
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    1070.49
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2954.55
  TOTAL AREA(ACRES) =   9881.30       PEAK FLOW RATE(CFS) =    2962.33
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   9881.30  TC(MIN.) =     67.00
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.62
  PEAK FLOW RATE(CFS)   =   2962.33
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

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                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: ME54010E.DAT
  TIME/DATE OF STUDY: 09:50 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  3.610
   2)  10.000;  2.370
   3)  15.000;  1.890
   4)  20.000;  1.540
   5)  30.000;  1.210
   6)  60.000;  0.840
   7) 120.000;  0.590
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.300
        MOUNTAIN                           0.200
        VALLEY(UNDEVELOPED)/DESERT         0.500
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1053.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: ME53010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2962.33    Tc(MIN.) =  67.00
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.62
  TOTAL AREA(ACRES) =    9881.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1053.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2962.33    Tc(MIN.) =  67.00
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.62
  TOTAL AREA(ACRES) =    9881.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1053.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    265.00  DOWNSTREAM(FEET) =    245.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1390.00   CHANNEL SLOPE =  0.0144
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2962.33
  FLOW VELOCITY(FEET/SEC.) =  13.40   FLOW DEPTH(FEET) =   7.92
  TRAVEL TIME(MIN.) =   1.73   Tc(MIN.) =  68.73
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  68.73
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.904
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   A       12.00      0.40      1.00    78
  NATURAL FAIR COVER
  "GRASS"                    A        5.00      0.40      1.00    50
  NATURAL FAIR COVER
  "WOODLAND"                 A        1.30      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       21.70      0.30      1.00    63
  NATURAL POOR COVER
  "BARREN"                   B       12.50      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B      143.50      0.30      1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.31
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  196.00
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.85;24H= 3.11
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 11.0%
           MOUNTAIN= 82.3%;FOOTHILL=  6.7%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.15; LAG(HR) = 0.92; Fm(INCH/HR) = 0.24; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.67; 30M = 0.68; 1HR = 0.68;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  10077.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    1081.81
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2914.57
  TOTAL AREA(ACRES) =  10077.30       PEAK FLOW RATE(CFS) =    2962.33
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  68.73
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.804
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       25.80      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B       97.00      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      265.40      0.25      1.00    75
  NATURAL FAIR COVER
  "WOODLAND"                 C      166.10      0.25      1.00    73
  NATURAL POOR COVER
  "BARREN"                   C       12.30      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C      255.00      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  821.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.85;24H= 3.10
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 13.9%
           MOUNTAIN= 77.6%;FOOTHILL=  8.5%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.15; LAG(HR) = 0.92; Fm(INCH/HR) = 0.24; Ybar = 0.63
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.66; 30M = 0.66; 1HR = 0.67;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  10898.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    1149.60
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3052.71
  TOTAL AREA(ACRES) =  10898.90       PEAK FLOW RATE(CFS) =    3052.71

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  68.73
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.804
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      361.10      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        0.90      0.25      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       53.40      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.70      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D       30.70      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      594.10      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1040.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.78;3H= 1.33;6H= 1.84;24H= 3.10
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 17.1%
           MOUNTAIN= 72.6%;FOOTHILL= 10.4%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.15; LAG(HR) = 0.92; Fm(INCH/HR) = 0.24; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.64; 30M = 0.65; 1HR = 0.66;
  3HR = 0.93; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  11939.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    1268.60
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3257.37
  TOTAL AREA(ACRES) =  11939.80       PEAK FLOW RATE(CFS) =    3257.37

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  68.73
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.804
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      275.50      0.20      1.00    83
  PUBLIC PARK                D        0.70      0.20      0.85    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        0.70      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       87.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  364.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.78;3H= 1.33;6H= 1.84;24H= 3.09
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 18.1%
           MOUNTAIN= 71.0%;FOOTHILL= 10.9%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.15; LAG(HR) = 0.92; Fm(INCH/HR) = 0.24; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.65; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12304.10
```

```
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    1310.64
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3328.95
  TOTAL AREA(ACRES) =  12304.10       PEAK FLOW RATE(CFS) =    3328.95

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  12304.10  TC(MIN.) =     68.73
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.62
  PEAK FLOW RATE(CFS)   =   3328.95
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
        (c) Copyright 1983-2003 Advanced Engineering Software (aes)
            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: ME55010E.DAT
  TIME/DATE OF STUDY: 09:50 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  3.610
   2)  10.000;  2.370
   3)  15.000;  1.890
   4)  20.000;  1.540
   5)  30.000;  1.210
   6)  60.000;  0.840
   7) 120.000;  0.590
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.400
        MOUNTAIN                           0.000
        VALLEY(UNDEVELOPED)/DESERT         0.600
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1054.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: ME54010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3328.95    Tc(MIN.) =  68.73
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.62
  TOTAL AREA(ACRES) =   12304.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1054.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3328.95    Tc(MIN.) =  68.73
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.62
  TOTAL AREA(ACRES) =   12304.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1054.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    245.00  DOWNSTREAM(FEET) =    215.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2724.00   CHANNEL SLOPE =  0.0110
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3328.95
  FLOW VELOCITY(FEET/SEC.) =  12.33   FLOW DEPTH(FEET) =   8.15
  TRAVEL TIME(MIN.) =   3.68   Tc(MIN.) =  72.41
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  72.41
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.878
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    A        7.20      0.40       1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        1.80      0.40       1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A        5.50      0.40       1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        5.80      0.30       1.00    63
  NATURAL POOR COVER
  "BARREN"                   B        6.90      0.30       1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B       22.60      0.30       1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.33
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   49.80
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.78;3H= 1.33;6H= 1.84;24H= 3.09
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 18.2%
           MOUNTAIN= 70.7%;FOOTHILL= 11.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.21; LAG(HR) = 0.97; Fm(INCH/HR) = 0.24; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.64; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12353.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0319; Lca/L=0.4,n=.0286; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0245
  TIME OF PEAK FLOW(HR) = 16.67  RUNOFF VOLUME(AF) =    1310.73
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3250.23
  TOTAL AREA(ACRES) =  12353.90       PEAK FLOW RATE(CFS) =    3328.95
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  72.41
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.788
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        7.90      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        9.50      0.30      1.00    60
  NATURAL FAIR COVER
  "WOODLAND"                 C       23.30      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       71.90      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        0.40      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C       14.60      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  127.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.78;3H= 1.33;6H= 1.84;24H= 3.09
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 18.7%
           MOUNTAIN= 70.0%;FOOTHILL= 11.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.21; LAG(HR) = 0.97; Fm(INCH/HR) = 0.24; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.64; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12481.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0319; Lca/L=0.4,n=.0286; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0245
  TIME OF PEAK FLOW(HR) = 16.67  RUNOFF VOLUME(AF) =    1320.61
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3268.87
  TOTAL AREA(ACRES) =  12481.50       PEAK FLOW RATE(CFS) =    3328.95
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  72.41
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.788
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       66.50      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        0.20      0.25      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        4.60      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        2.20      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        0.20      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D       45.50      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  119.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.78;3H= 1.33;6H= 1.84;24H= 3.09
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 19.0%
           MOUNTAIN= 69.3%;FOOTHILL= 11.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.21; LAG(HR) = 0.97; Fm(INCH/HR) = 0.24; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.64; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12600.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0319; Lca/L=0.4,n=.0286; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0245
  TIME OF PEAK FLOW(HR) = 16.67  RUNOFF VOLUME(AF) =    1333.13
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3289.89
  TOTAL AREA(ACRES) =  12600.70       PEAK FLOW RATE(CFS) =    3328.95
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  72.41
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.788
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       16.90      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        0.20      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       10.90      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   28.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.78;3H= 1.33;6H= 1.84;24H= 3.09
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 19.1%
           MOUNTAIN= 69.2%;FOOTHILL= 11.7%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.21; LAG(HR) = 0.97; Fm(INCH/HR) = 0.24; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.64; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
```

```
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12628.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0319; Lca/L=0.4,n=.0286; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0245
  TIME OF PEAK FLOW(HR) = 16.67  RUNOFF VOLUME(AF) =    1336.27
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3295.21
  TOTAL AREA(ACRES) =  12628.70       PEAK FLOW RATE(CFS) =    3328.95
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  12628.70  TC(MIN.) =     72.41
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.62
  PEAK FLOW RATE(CFS)   =   3328.95
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: ME56010E.DAT
  TIME/DATE OF STUDY: 09:50 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  3.610
   2)  10.000;  2.370
   3)  15.000;  1.890
   4)  20.000;  1.540
   5)  30.000;  1.210
   6)  60.000;  0.840
   7) 120.000;  0.590
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.300
        MOUNTAIN                           0.000
        VALLEY(UNDEVELOPED)/DESERT         0.700
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1055.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: ME55010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3328.95    Tc(MIN.) =  72.41
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.62
  TOTAL AREA(ACRES) =   12628.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1055.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3328.95    Tc(MIN.) =  72.41
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.62
  TOTAL AREA(ACRES) =   12628.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1055.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    215.00  DOWNSTREAM(FEET) =    185.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2880.00   CHANNEL SLOPE =  0.0104
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3328.95
  FLOW VELOCITY(FEET/SEC.) =  12.09   FLOW DEPTH(FEET) =   8.28
  TRAVEL TIME(MIN.) =   3.97   Tc(MIN.) =  76.38
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  76.38
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.851
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    A        1.80      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        1.10      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A        9.30      0.40      1.00    36
  NATURAL POOR COVER
  "BARREN"                   B        1.80      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B       14.80      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.20      0.30      1.00    66
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.34
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   30.00
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.78;3H= 1.33;6H= 1.84;24H= 3.09
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 19.3%
           MOUNTAIN= 69.0%;FOOTHILL= 11.7%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.27; LAG(HR) = 1.02; Fm(INCH/HR) = 0.24; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.64; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  12658.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0320; Lca/L=0.4,n=.0287; Lca/L=0.5,n=.0263;Lca/L=0.6,n=.0246
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1341.70
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3039.59
  TOTAL AREA(ACRES) =  12658.70       PEAK FLOW RATE(CFS) =    3328.95
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  76.38
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.772
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 B        5.10      0.30      1.00    60
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        8.60      0.25      0.50    69
  NATURAL POOR COVER
  "BARREN"                   C        2.40      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C        1.30      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.20      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        4.70      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.81
  SUBAREA AREA(ACRES) =   22.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.78;3H= 1.33;6H= 1.84;24H= 3.09
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 19.3%
           MOUNTAIN= 68.9%;FOOTHILL= 11.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.27; LAG(HR) = 1.02; Fm(INCH/HR) = 0.24; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.64; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  12681.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0320; Lca/L=0.4,n=.0287; Lca/L=0.5,n=.0263;Lca/L=0.6,n=.0246
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1344.14
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3044.07
  TOTAL AREA(ACRES) =  12681.00       PEAK FLOW RATE(CFS) =    3328.95
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
```

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============================================================================
  MAINLINE Tc(MIN) =  76.38
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.772
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D      142.30      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D       32.60      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      110.40      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                     D        0.80      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       36.40      0.20      1.00    83
  COMMERCIAL                 D        2.70      0.20      0.10    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.77
  SUBAREA AREA(ACRES) =  325.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.78;3H= 1.33;6H= 1.84;24H= 3.09
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 20.6%
           MOUNTAIN= 67.2%;FOOTHILL= 12.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.27; LAG(HR) = 1.02; Fm(INCH/HR) = 0.24; Ybar = 0.61
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.62; 30M = 0.64; 1HR = 0.64;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  13006.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0320; Lca/L=0.4,n=.0287; Lca/L=0.5,n=.0263;Lca/L=0.6,n=.0246
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1390.44
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3122.11
  TOTAL AREA(ACRES) =  13006.20       PEAK FLOW RATE(CFS) =    3328.95
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  76.38
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.772
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        0.70      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       14.60      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   15.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.78;3H= 1.33;6H= 1.84;24H= 3.09
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 20.7%
           MOUNTAIN= 67.1%;FOOTHILL= 12.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.27; LAG(HR) = 1.02; Fm(INCH/HR) = 0.24; Ybar = 0.61
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.62; 30M = 0.64; 1HR = 0.64;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  13021.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
```

```
 Lca/L=0.3,n=.0320; Lca/L=0.4,n=.0287; Lca/L=0.5,n=.0263;Lca/L=0.6,n=.0246
 TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1392.00
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3125.05
 TOTAL AREA(ACRES) =  13021.50       PEAK FLOW RATE(CFS) =    3328.95
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

 SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
 5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
================================================================================
 END OF STUDY SUMMARY:
 TOTAL AREA(ACRES)     =  13021.50  TC(MIN.) =     76.38
 AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.61
 PEAK FLOW RATE(CFS)   =   3328.95
================================================================================
================================================================================
 END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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             Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                         Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: ME57010E.DAT
  TIME/DATE OF STUDY: 09:50 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  3.610
   2)  10.000;  2.370
   3)  15.000;  1.890
   4)  20.000;  1.540
   5)  30.000;  1.210
   6)  60.000;  0.840
   7) 120.000;  0.590
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.100
        MOUNTAIN                           0.600
        VALLEY(UNDEVELOPED)/DESERT         0.300
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1056.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: ME56010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3328.95    Tc(MIN.) =  76.38
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.61
  TOTAL AREA(ACRES) =   13021.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1056.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3328.95    Tc(MIN.) =  76.38
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.61
  TOTAL AREA(ACRES) =   13021.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1056.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    185.00  DOWNSTREAM(FEET) =    165.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2367.00   CHANNEL SLOPE =  0.0084
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3328.95
  FLOW VELOCITY(FEET/SEC.) =  10.98   FLOW DEPTH(FEET) =   7.98
  TRAVEL TIME(MIN.) =   3.59   Tc(MIN.) =  79.98
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 56077.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  79.98
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.829
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       38.90      0.40      1.00    40
  NATURAL FAIR COVER
  "GRASS"                    A        2.00      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A       40.30      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A       74.70      0.40      1.00    36
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       25.40      0.30      1.00    66
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       18.50      0.30      1.00    63
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.38
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  199.80
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.78;3H= 1.33;6H= 1.84;24H= 3.09
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 20.8%
           MOUNTAIN= 67.0%;FOOTHILL= 12.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.33; LAG(HR) = 1.07; Fm(INCH/HR) = 0.24; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.62; 30M = 0.63; 1HR = 0.64;
  3HR = 0.92; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  13221.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 56077.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0322; Lca/L=0.4,n=.0289; Lca/L=0.5,n=.0265;Lca/L=0.6,n=.0247
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1397.85
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3098.90
  TOTAL AREA(ACRES) =  13221.30       PEAK FLOW RATE(CFS) =    3328.95
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.28; 30M = 0.60; 1HR = 0.80; 3HR = 1.39; 6HR = 1.96; 24HR = 3.33

****************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  79.98
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.757
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B       18.90      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B      105.00      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      554.00      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C       12.80      0.25      0.50    69
  NATURAL FAIR COVER
  "GRASS"                    C       54.60      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      369.00      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) = 1114.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.85;24H= 3.11
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 21.5%
           MOUNTAIN= 66.4%;FOOTHILL= 12.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.33; LAG(HR) = 1.07; Fm(INCH/HR) = 0.24; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.60; 30M = 0.62; 1HR = 0.63;
  3HR = 0.92; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  14335.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 56077.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0322; Lca/L=0.4,n=.0289; Lca/L=0.5,n=.0265;Lca/L=0.6,n=.0247
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1504.95
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3277.62
  TOTAL AREA(ACRES) =  14335.60       PEAK FLOW RATE(CFS) =    3328.95
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.28; 30M = 0.60; 1HR = 0.80; 3HR = 1.39; 6HR = 1.96; 24HR = 3.33

****************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
```

```
============================================================================
  MAINLINE Tc(MIN) =  79.98
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.757
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C       37.10      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D     1538.10      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D     1877.20      0.20      1.00    83
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D       87.50      0.20      0.50    75
  NATURAL FAIR COVER
  "GRASS"                    D      411.30      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                     D        1.70      0.20      1.00    82
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) = 3952.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.27;30M= 0.59;1H= 0.79;3H= 1.34;6H= 1.87;24H= 3.16
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 23.4%
           MOUNTAIN= 65.1%;FOOTHILL= 11.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.33; LAG(HR) = 1.07; Fm(INCH/HR) = 0.23; Ybar = 0.60
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.55; 30M = 0.57; 1HR = 0.58;
  3HR = 0.90; 6HR = 0.95; 24HR= 0.97
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  18288.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 56077.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0322; Lca/L=0.4,n=.0289; Lca/L=0.5,n=.0265;Lca/L=0.6,n=.0247
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    2020.56
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4044.96
  TOTAL AREA(ACRES) =  18288.50       PEAK FLOW RATE(CFS) =    4044.96

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.28; 30M = 0.60; 1HR = 0.80; 3HR = 1.39; 6HR = 1.96; 24HR = 3.33

****************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  79.98
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.757
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       22.00      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D      270.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  292.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.27;30M= 0.59;1H= 0.79;3H= 1.34;6H= 1.88;24H= 3.16
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 23.5%
           MOUNTAIN= 65.0%;FOOTHILL= 11.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.33; LAG(HR) = 1.07; Fm(INCH/HR) = 0.23; Ybar = 0.60
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.54; 30M = 0.57; 1HR = 0.58;
  3HR = 0.90; 6HR = 0.95; 24HR= 0.97
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  18580.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 56077.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
```

```
 Lca/L=0.3,n=.0322; Lca/L=0.4,n=.0289; Lca/L=0.5,n=.0265;Lca/L=0.6,n=.0247
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    2054.40
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4095.52
  TOTAL AREA(ACRES) =  18580.60       PEAK FLOW RATE(CFS) =    4095.52

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.28; 30M = 0.60; 1HR = 0.80; 3HR = 1.39; 6HR = 1.96; 24HR = 3.33
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  18580.60  TC(MIN.) =     79.98
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.60
  PEAK FLOW RATE(CFS)   =   4095.52
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

TECHNICAL APPENDIX II-B
HYDROLOGIC ANALYSIS
EXISTING CONDITION
100-YEAR EXPECTED VALUE

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: ME49100E.DAT
  TIME/DATE OF STUDY: 10:29 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.440
   2)  10.000;  3.530
   3)  15.000;  2.790
   4)  20.000;  2.320
   5)  30.000;  1.830
   6)  60.000;  1.260
   7) 120.000;  0.890
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1048.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU48100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3556.21    Tc(MIN.) =  44.28
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.49
  TOTAL AREA(ACRES) =    4407.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 33517.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1048.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3556.21    Tc(MIN.) =  44.28
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.49
  TOTAL AREA(ACRES) =    4407.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 33517.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1048.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    445.00  DOWNSTREAM(FEET) =    400.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2427.00   CHANNEL SLOPE =  0.0185
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3556.21
  FLOW VELOCITY(FEET/SEC.) =  15.46   FLOW DEPTH(FEET) =   8.17
  TRAVEL TIME(MIN.) =   2.62   Tc(MIN.) =  46.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  46.90
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.716
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       39.10      0.40       1.00    40
  NATURAL FAIR COVER
  "GRASS"                    A       26.90      0.40       1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A       43.60      0.40       1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A       72.70      0.40       1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       70.70      0.30       1.00    63
  NATURAL FAIR COVER
  "GRASS"                    B       65.10      0.30       1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.36
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  318.10
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.42;30M= 0.88;1H= 1.17;3H= 2.01;6H= 2.84;24H= 4.75
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.78; LAG(HR) = 0.63; Fm(INCH/HR) = 0.25; Ybar = 0.52
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.79; 30M = 0.79; 1HR = 0.79;
  3HR = 0.97; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4725.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0282; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0232;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    1008.72
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3586.23
  TOTAL AREA(ACRES) =   4725.10       PEAK FLOW RATE(CFS) =    3586.23

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  46.90
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.509
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       39.60      0.30      1.00    66
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        2.00      0.30      1.00    72
  NATURAL FAIR COVER
  "WOODLAND"                 B       81.70      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      709.70      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        2.20      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C       92.30      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  927.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.17;3H= 2.00;6H= 2.82;24H= 4.71
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.78; LAG(HR) = 0.63; Fm(INCH/HR) = 0.25; Ybar = 0.52
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.77; 30M = 0.77; 1HR = 0.77;
  3HR = 0.96; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   5652.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0282; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0232;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    1175.31
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4127.52
  TOTAL AREA(ACRES) =   5652.60       PEAK FLOW RATE(CFS) =    4127.52

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  46.90
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.509
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      838.80      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       78.30      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C       84.40      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      141.90      0.20      1.00    81
  NATURAL POOR COVER
  "BARREN"                   D        1.00      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      481.50      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1625.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.98;6H= 2.79;24H= 4.66
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.78; LAG(HR) = 0.63; Fm(INCH/HR) = 0.24; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.73; 30M = 0.73; 1HR = 0.73;
  3HR = 0.96; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   7278.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0282; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0232;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    1513.42
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5022.92
  TOTAL AREA(ACRES) =   7278.50       PEAK FLOW RATE(CFS) =    5022.92

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  46.90
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.509
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      419.60      0.20      1.00    83
  NATURAL GOOD COVER
  "MEADOWS"                  D        0.40      0.20      1.00    78
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       21.60      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       70.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  511.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.98;6H= 2.79;24H= 4.65
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.78; LAG(HR) = 0.63; Fm(INCH/HR) = 0.24; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.71; 30M = 0.71; 1HR = 0.71;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   7790.20
```

```
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0282; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0232;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    1629.67
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5292.65
  TOTAL AREA(ACRES) =   7790.20       PEAK FLOW RATE(CFS) =    5292.65

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   7790.20  TC(MIN.) =     46.90
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.51
  PEAK FLOW RATE(CFS)   =   5292.65
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: ME50100E.DAT
  TIME/DATE OF STUDY: 10:29 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.440
   2)  10.000;  3.530
   3)  15.000;  2.790
   4)  20.000;  2.320
   5)  30.000;  1.830
   6)  60.000;  1.260
   7) 120.000;  0.890
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.100
        MOUNTAIN                           0.700
        VALLEY(UNDEVELOPED)/DESERT         0.200
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1049.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: ME49100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5292.65    Tc(MIN.) =  46.90
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.51
  TOTAL AREA(ACRES) =    7790.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1049.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5292.65    Tc(MIN.) =  46.90
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.51
  TOTAL AREA(ACRES) =    7790.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1049.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1050.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    400.00  DOWNSTREAM(FEET) =    390.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   616.00   CHANNEL SLOPE =  0.0162
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   5292.65
  FLOW VELOCITY(FEET/SEC.) =  16.43   FLOW DEPTH(FEET) =  10.55
  TRAVEL TIME(MIN.) =   0.62   Tc(MIN.) =  47.52
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1050.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  47.52
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.703
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    A        0.30      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        0.20      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A        1.10      0.40      1.00    36
  NATURAL FAIR COVER
  "GRASS"                    B        2.20      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        0.20      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.40      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.34
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    4.40
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.98;6H= 2.79;24H= 4.65
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.79; LAG(HR) = 0.63; Fm(INCH/HR) = 0.24; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.71; 30M = 0.71; 1HR = 0.71;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   7794.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0282; Lca/L=0.4,n=.0252; Lca/L=0.5,n=.0232;Lca/L=0.6,n=.0216
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    1629.88
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5242.96
  TOTAL AREA(ACRES) =   7794.60       PEAK FLOW RATE(CFS) =    5292.65
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1050.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  47.52
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.497
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       88.30      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        0.90      0.25      0.50    69
  NATURAL POOR COVER
  "BARREN"                   C        1.10      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C       36.50      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      245.30      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C       38.00      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  410.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.98;6H= 2.78;24H= 4.64
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  1.0%
           MOUNTAIN= 98.5%;FOOTHILL=  0.5%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.79; LAG(HR) = 0.63; Fm(INCH/HR) = 0.24; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8204.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0282; Lca/L=0.4,n=.0252; Lca/L=0.5,n=.0232;Lca/L=0.6,n=.0216
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    1707.54
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5418.70
  TOTAL AREA(ACRES) =   8204.70       PEAK FLOW RATE(CFS) =    5418.70

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1050.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  47.52
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.497
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        2.50      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        6.90      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        0.20      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D       62.60      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        9.20      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D        1.80      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.96
  SUBAREA AREA(ACRES) =   83.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.98;6H= 2.78;24H= 4.64
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  1.2%
           MOUNTAIN= 98.2%;FOOTHILL=  0.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.79; LAG(HR) = 0.63; Fm(INCH/HR) = 0.24; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8287.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0282; Lca/L=0.4,n=.0252; Lca/L=0.5,n=.0232;Lca/L=0.6,n=.0216
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    1727.12
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5457.80
  TOTAL AREA(ACRES) =   8287.90       PEAK FLOW RATE(CFS) =    5457.80

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   8287.90  TC(MIN.) =     47.52
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.51
  PEAK FLOW RATE(CFS)   =   5457.80
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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             Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: ME51100E.DAT
  TIME/DATE OF STUDY: 10:29 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.440
   2)  10.000;  3.530
   3)  15.000;  2.790
   4)  20.000;  2.320
   5)  30.000;  1.830
   6)  60.000;  1.260
   7) 120.000;  0.890
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.500
        MOUNTAIN                           0.000
        VALLEY(UNDEVELOPED)/DESERT         0.500
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1050.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: ME50100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5457.80    Tc(MIN.) =  47.52
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.51
  TOTAL AREA(ACRES) =    8287.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1050.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5457.80    Tc(MIN.) =  47.52
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.51
  TOTAL AREA(ACRES) =    8287.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1050.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1051.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    390.00  DOWNSTREAM(FEET) =    330.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  4501.00   CHANNEL SLOPE =  0.0133
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   5457.80
  FLOW VELOCITY(FEET/SEC.) =  15.41   FLOW DEPTH(FEET) =  11.31
  TRAVEL TIME(MIN.) =   4.87   Tc(MIN.) =  52.39
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1051.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  52.39
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.610
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A        0.70      0.40       0.50    32
  NATURAL FAIR COVER
  "GRASS"                    A        1.80      0.40       1.00    50
  NATURAL FAIR COVER
  "WOODLAND"                 A        6.50      0.40       1.00    36
  NATURAL FAIR COVER
  "GRASS"                    B        3.20      0.30       1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        2.20      0.30       1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B       10.90      0.30       1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.33
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   25.30
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.98;6H= 2.78;24H= 4.64
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  1.3%
           MOUNTAIN= 97.9%;FOOTHILL=  0.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.87; LAG(HR) = 0.70; Fm(INCH/HR) = 0.24; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8313.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0280; Lca/L=0.4,n=.0251; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0215
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    1729.73
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5144.92
  TOTAL AREA(ACRES) =   8313.20       PEAK FLOW RATE(CFS) =    5457.80
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1051.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  52.39
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.405
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        9.10      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        1.30      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C        5.80      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       29.60      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        8.80      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       40.70      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   95.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.98;6H= 2.78;24H= 4.64
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  1.9%
           MOUNTAIN= 96.8%;FOOTHILL=  1.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.87; LAG(HR) = 0.70; Fm(INCH/HR) = 0.24; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8408.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0280; Lca/L=0.4,n=.0251; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0215
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    1749.03
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5187.83
  TOTAL AREA(ACRES) =   8408.50       PEAK FLOW RATE(CFS) =    5457.80
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1051.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
```

```
============================================================================
  MAINLINE Tc(MIN) =  52.39
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.405
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D       23.10      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        7.10      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      178.60      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       93.40      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D       31.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =  333.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.98;6H= 2.78;24H= 4.63
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  3.7%
           MOUNTAIN= 93.1%;FOOTHILL=  3.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.87; LAG(HR) = 0.70; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.69; 30M = 0.69; 1HR = 0.69;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8742.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0280; Lca/L=0.4,n=.0251; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0215
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    1827.08
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5350.46
  TOTAL AREA(ACRES) =   8742.10       PEAK FLOW RATE(CFS) =    5457.80
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   8742.10  TC(MIN.) =     52.39
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.50
  PEAK FLOW RATE(CFS)   =   5457.80
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: ME52100E.DAT
  TIME/DATE OF STUDY: 10:29 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.440
   2)  10.000;  3.530
   3)  15.000;  2.790
   4)  20.000;  2.320
   5)  30.000;  1.830
   6)  60.000;  1.260
   7) 120.000;  0.890
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  =====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.300
        MOUNTAIN                           0.100
        VALLEY(UNDEVELOPED)/DESERT         0.600
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1051.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: ME51100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5457.80    Tc(MIN.) =  52.39
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.50
  TOTAL AREA(ACRES) =    8742.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1051.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5457.80    Tc(MIN.) =  52.39
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.50
  TOTAL AREA(ACRES) =    8742.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1051.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    330.00  DOWNSTREAM(FEET) =    300.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2333.00   CHANNEL SLOPE =  0.0129
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   5457.80
  FLOW VELOCITY(FEET/SEC.) =  15.21   FLOW DEPTH(FEET) =  11.42
  TRAVEL TIME(MIN.) =   2.56   Tc(MIN.) =  54.95
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  54.95
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.567
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   A        7.20      0.40      1.00    78
  NATURAL FAIR COVER
  "GRASS"                    A        1.40      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        4.70      0.40      1.00    46
  PUBLIC PARK                A        1.10      0.40      0.85    32
  NATURAL FAIR COVER
  "WOODLAND"                 A       12.10      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       14.10      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.35
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   40.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.98;6H= 2.78;24H= 4.63
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  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  4.0%
           MOUNTAIN= 92.7%;FOOTHILL=  3.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.92; LAG(HR) = 0.73; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.69; 30M = 0.69; 1HR = 0.69;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8782.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0214
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    1831.85
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5290.48
  TOTAL AREA(ACRES) =   8782.70       PEAK FLOW RATE(CFS) =    5457.80
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  54.95
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.356
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   C        4.30      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C       14.50      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       12.10      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.20      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       14.60      0.20      1.00    81
  NATURAL POOR COVER
  "BARREN"                   D       36.10      0.20      1.00    93
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   81.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.98;6H= 2.78;24H= 4.63
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  4.5%
           MOUNTAIN= 91.9%;FOOTHILL=  3.5%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.92; LAG(HR) = 0.73; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.69; 30M = 0.69; 1HR = 0.69;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8864.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0214
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    1851.54
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5328.44
  TOTAL AREA(ACRES) =   8864.50       PEAK FLOW RATE(CFS) =    5457.80
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  54.95
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.356
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D      104.40      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       28.80      0.20      1.00    83
  PUBLIC PARK                D        1.10      0.20      0.85    75
  NATURAL FAIR COVER
  "WOODLAND"                 D       34.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  168.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.98;6H= 2.78;24H= 4.63
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  5.5%
           MOUNTAIN= 90.4%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.92; LAG(HR) = 0.73; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.69; 30M = 0.69; 1HR = 0.69;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9032.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0214
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    1889.89
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5406.79
  TOTAL AREA(ACRES) =   9032.90       PEAK FLOW RATE(CFS) =    5457.80
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   9032.90  TC(MIN.) =     54.95
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.50
  PEAK FLOW RATE(CFS)   =   5457.80
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
         (c) Copyright 1983-2003 Advanced Engineering Software (aes)
             Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: ME53100E.DAT
  TIME/DATE OF STUDY: 10:29 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.440
   2)  10.000;  3.530
   3)  15.000;  2.790
   4)  20.000;  2.320
   5)  30.000;  1.830
   6)  60.000;  1.260
   7) 120.000;  0.890
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.300
        MOUNTAIN                           0.100
        VALLEY(UNDEVELOPED)/DESERT         0.600
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1052.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: ME52100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5457.80    Tc(MIN.) =  54.95
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.50
  TOTAL AREA(ACRES) =    9032.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1052.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5457.80    Tc(MIN.) =  54.95
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.50
  TOTAL AREA(ACRES) =    9032.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1052.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    300.00  DOWNSTREAM(FEET) =    265.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  3322.00   CHANNEL SLOPE =  0.0105
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   5457.80
  FLOW VELOCITY(FEET/SEC.) =  14.14   FLOW DEPTH(FEET) =  12.04
  TRAVEL TIME(MIN.) =   3.92   Tc(MIN.) =  58.86
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  58.86
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.506
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        1.60      0.40      1.00    40
  NATURAL POOR COVER
  "BARREN"                   A        0.90      0.40      1.00    78
  NATURAL FAIR COVER
  "GRASS"                    A       13.10      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        3.20      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A       16.90      0.40      1.00    36
  NATURAL FAIR COVER
  "GRASS"                    B       21.80      0.30      1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.36
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   57.50
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.98;6H= 2.78;24H= 4.63
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  5.9%
           MOUNTAIN= 89.9%;FOOTHILL=  4.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.98; LAG(HR) = 0.78; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.69; 30M = 0.69; 1HR = 0.69;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9090.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0251; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0215
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    1895.17
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5160.09
  TOTAL AREA(ACRES) =   9090.40       PEAK FLOW RATE(CFS) =    5457.80
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

 ****************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) =  58.86
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.282
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        4.20      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                  B        4.40      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C       66.60      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        C       16.90      0.25      0.50    69
  NATURAL POOR COVER
  "BARREN"                    C        8.70      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                     C       24.90      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
  SUBAREA AREA(ACRES) =  125.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.98;6H= 2.78;24H= 4.62
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  6.6%
           MOUNTAIN= 88.8%;FOOTHILL=  4.5%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.98; LAG(HR) = 0.78; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.68; 30M = 0.69; 1HR = 0.69;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9216.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0251; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0215
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    1919.91
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5209.81
  TOTAL AREA(ACRES) =   9216.10       PEAK FLOW RATE(CFS) =    5457.80
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

 ****************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
```

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 ============================================================================
  MAINLINE Tc(MIN) =  58.86
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.282
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       63.50      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C       47.00      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D       12.50      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D       12.90      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                    D        4.90      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                     D      325.90      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  466.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.97;6H= 2.77;24H= 4.62
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  9.2%
           MOUNTAIN= 85.0%;FOOTHILL=  5.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.98; LAG(HR) = 0.78; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.68; 30M = 0.68; 1HR = 0.68;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9682.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0251; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0215
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    2023.60
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5404.63
  TOTAL AREA(ACRES) =   9682.80       PEAK FLOW RATE(CFS) =    5457.80
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

 ****************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) =  58.86
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.282
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                D      125.00      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D       73.50      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  198.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.97;6H= 2.77;24H= 4.62
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 10.2%
           MOUNTAIN= 83.5%;FOOTHILL=  6.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.98; LAG(HR) = 0.78; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.67; 30M = 0.68; 1HR = 0.68;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9881.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.
```

```
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0251; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0215
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    2067.39
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5487.14
  TOTAL AREA(ACRES) =   9881.30       PEAK FLOW RATE(CFS) =    5487.14

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   9881.30  TC(MIN.) =     58.86
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.50
  PEAK FLOW RATE(CFS)   =   5487.14
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: ME54100E.DAT
  TIME/DATE OF STUDY: 10:29 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.440
   2)  10.000;  3.530
   3)  15.000;  2.790
   4)  20.000;  2.320
   5)  30.000;  1.830
   6)  60.000;  1.260
   7) 120.000;  0.890
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.300
        MOUNTAIN                           0.200
        VALLEY(UNDEVELOPED)/DESERT         0.500
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1053.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: ME53100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5487.14    Tc(MIN.) =  58.86
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.50
  TOTAL AREA(ACRES) =    9881.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1053.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5487.14    Tc(MIN.) =  58.86
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.50
  TOTAL AREA(ACRES) =    9881.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1053.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    265.00  DOWNSTREAM(FEET) =    245.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1390.00   CHANNEL SLOPE =  0.0144
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   5487.14
  FLOW VELOCITY(FEET/SEC.) =  15.87   FLOW DEPTH(FEET) =  11.11
  TRAVEL TIME(MIN.) =   1.46   Tc(MIN.) =  60.32
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  60.32
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.485
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   A       12.00      0.40      1.00    78
  NATURAL FAIR COVER
  "GRASS"                    A        5.00      0.40      1.00    50
  NATURAL FAIR COVER
  "WOODLAND"                 A        1.30      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       21.70      0.30      1.00    63
  NATURAL POOR COVER
  "BARREN"                   B       12.50      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B      143.50      0.30      1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.31
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  196.00
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.41;30M= 0.87;1H= 1.16;3H= 1.97;6H= 2.77;24H= 4.61
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 11.0%
           MOUNTAIN= 82.3%;FOOTHILL=  6.7%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.01; LAG(HR) = 0.80; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.67; 30M = 0.68; 1HR = 0.68;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  10077.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0214
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    2096.30
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5439.37
  TOTAL AREA(ACRES) =  10077.30       PEAK FLOW RATE(CFS) =    5487.14
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  60.32
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.258
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       25.80      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B       97.00      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      265.40      0.25      1.00    75
  NATURAL FAIR COVER
  "WOODLAND"                 C      166.10      0.25      1.00    73
  NATURAL POOR COVER
  "BARREN"                   C       12.30      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C      255.00      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  821.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.87;1H= 1.16;3H= 1.97;6H= 2.77;24H= 4.60
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 13.9%
           MOUNTAIN= 77.6%;FOOTHILL=  8.5%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.01; LAG(HR) = 0.80; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.66; 30M = 0.66; 1HR = 0.67;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  10898.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0214
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    2241.04
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5725.01
  TOTAL AREA(ACRES) =  10898.90       PEAK FLOW RATE(CFS) =    5725.01

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  60.32
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.258
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      361.10      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        0.90      0.25      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       53.40      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.70      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D       30.70      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      594.10      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1040.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.87;1H= 1.16;3H= 1.97;6H= 2.76;24H= 4.59
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 17.1%
           MOUNTAIN= 72.6%;FOOTHILL= 10.4%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.01; LAG(HR) = 0.80; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.64; 30M = 0.65; 1HR = 0.66;
  3HR = 0.93; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  11939.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0214
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    2465.97
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6147.45
  TOTAL AREA(ACRES) =  11939.80       PEAK FLOW RATE(CFS) =    6147.45

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  60.32
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.258
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      275.50      0.20      1.00    83
  PUBLIC PARK                D        0.70      0.20      0.85    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        0.70      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       87.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  364.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.87;1H= 1.16;3H= 1.97;6H= 2.76;24H= 4.59
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 18.1%
           MOUNTAIN= 71.0%;FOOTHILL= 10.9%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.01; LAG(HR) = 0.80; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.65; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12304.10
```

```
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0214
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    2546.11
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6294.74
  TOTAL AREA(ACRES) =  12304.10       PEAK FLOW RATE(CFS) =    6294.74

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  12304.10  TC(MIN.) =     60.32
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.50
  PEAK FLOW RATE(CFS)   =   6294.74
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
        (c) Copyright 1983-2003 Advanced Engineering Software (aes)
            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: ME55100E.DAT
  TIME/DATE OF STUDY: 10:29 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.440
   2)  10.000;  3.530
   3)  15.000;  2.790
   4)  20.000;  2.320
   5)  30.000;  1.830
   6)  60.000;  1.260
   7) 120.000;  0.890
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.400
        MOUNTAIN                           0.000
        VALLEY(UNDEVELOPED)/DESERT         0.600
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1054.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: ME54100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     6294.74    Tc(MIN.) =  60.32
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.50
  TOTAL AREA(ACRES) =   12304.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1054.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     6294.74    Tc(MIN.) =  60.32
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.50
  TOTAL AREA(ACRES) =   12304.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1054.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    245.00  DOWNSTREAM(FEET) =    215.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2724.00   CHANNEL SLOPE =  0.0110
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   6294.74
  FLOW VELOCITY(FEET/SEC.) =  14.76   FLOW DEPTH(FEET) =  11.64
  TRAVEL TIME(MIN.) =   3.08   Tc(MIN.) =  63.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  63.40
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.444
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    A        7.20      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        1.80      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A        5.50      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        5.80      0.30      1.00    63
  NATURAL POOR COVER
  "BARREN"                   B        6.90      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B       22.60      0.30      1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.33
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   49.80
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.41;30M= 0.87;1H= 1.16;3H= 1.97;6H= 2.76;24H= 4.59
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 18.2%
           MOUNTAIN= 70.7%;FOOTHILL= 11.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.06; LAG(HR) = 0.85; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.64; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12353.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0214
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    2552.38
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6244.89
  TOTAL AREA(ACRES) =  12353.90       PEAK FLOW RATE(CFS) =    6294.74
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  63.40
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.239
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        7.90      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        9.50      0.30      1.00    60
  NATURAL FAIR COVER
  "WOODLAND"                 C       23.30      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       71.90      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        0.40      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C       14.60      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  127.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.87;1H= 1.16;3H= 1.97;6H= 2.76;24H= 4.59
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 18.7%
           MOUNTAIN= 70.0%;FOOTHILL= 11.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.06; LAG(HR) = 0.85; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.64; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12481.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0214
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    2574.21
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6285.29
  TOTAL AREA(ACRES) =  12481.50       PEAK FLOW RATE(CFS) =    6294.74
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  63.40
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.239
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       66.50      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        0.20      0.25      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        4.60      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        2.20      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        0.20      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D       45.50      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  119.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.87;1H= 1.16;3H= 1.97;6H= 2.76;24H= 4.59
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 19.0%
           MOUNTAIN= 69.3%;FOOTHILL= 11.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.06; LAG(HR) = 0.85; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.64; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12600.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0214
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    2598.67
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6326.71
  TOTAL AREA(ACRES) =  12600.70       PEAK FLOW RATE(CFS) =    6326.71

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  63.40
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.239
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       16.90      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        0.20      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       10.90      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   28.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.87;1H= 1.16;3H= 1.97;6H= 2.76;24H= 4.59
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 19.1%
           MOUNTAIN= 69.2%;FOOTHILL= 11.7%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.06; LAG(HR) = 0.85; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.64; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12628.70
```

```
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0214
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    2604.74
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6336.95
  TOTAL AREA(ACRES) =  12628.70       PEAK FLOW RATE(CFS) =    6336.95

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  12628.70  TC(MIN.) =     63.40
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.50
  PEAK FLOW RATE(CFS)   =   6336.95
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: ME56100E.DAT
  TIME/DATE OF STUDY: 10:29 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.440
   2)  10.000;  3.530
   3)  15.000;  2.790
   4)  20.000;  2.320
   5)  30.000;  1.830
   6)  60.000;  1.260
   7) 120.000;  0.890
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.300
        MOUNTAIN                           0.000
        VALLEY(UNDEVELOPED)/DESERT         0.700
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1055.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: ME55100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     6336.95    Tc(MIN.) =  63.40
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.50
  TOTAL AREA(ACRES) =   12628.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1055.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     6336.95    Tc(MIN.) =  63.40
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.50
  TOTAL AREA(ACRES) =   12628.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1055.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    215.00  DOWNSTREAM(FEET) =    185.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2880.00   CHANNEL SLOPE =  0.0104
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   6336.95
  FLOW VELOCITY(FEET/SEC.) =  14.49   FLOW DEPTH(FEET) =  11.87
  TRAVEL TIME(MIN.) =   3.31   Tc(MIN.) =  66.71
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  66.71
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.402
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    A        1.80      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        1.10      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A        9.30      0.40      1.00    36
  NATURAL POOR COVER
  "BARREN"                   B        1.80      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B       14.80      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.20      0.30      1.00    66
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.34
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   30.00
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.41;30M= 0.87;1H= 1.16;3H= 1.97;6H= 2.76;24H= 4.59
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 19.3%
           MOUNTAIN= 69.0%;FOOTHILL= 11.7%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.11; LAG(HR) = 0.89; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.64; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12658.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0215
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    2606.05
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6175.14
  TOTAL AREA(ACRES) =  12658.70       PEAK FLOW RATE(CFS) =    6336.95
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

 ****************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) =  66.71
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.219
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  B        5.10      0.30      1.00    60
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        C        8.60      0.25      0.50    69
  NATURAL POOR COVER
  "BARREN"                    C        2.40      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                     C        1.30      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.20      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        4.70      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.81
  SUBAREA AREA(ACRES) =   22.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.87;1H= 1.16;3H= 1.97;6H= 2.76;24H= 4.59
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 19.3%
           MOUNTAIN= 68.9%;FOOTHILL= 11.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.11; LAG(HR) = 0.89; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.64; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12681.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0215
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    2610.69
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6182.85
  TOTAL AREA(ACRES) =  12681.00       PEAK FLOW RATE(CFS) =    6336.95
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

 ****************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) =  66.71
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.219
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D      142.30      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                    D       32.60      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                     D      110.40      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                      D        0.80      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"                D       36.40      0.20      1.00    83
  COMMERCIAL                  D        2.70      0.20      0.10    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.77
  SUBAREA AREA(ACRES) =  325.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.87;1H= 1.16;3H= 1.97;6H= 2.76;24H= 4.59
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 20.6%
           MOUNTAIN= 67.2%;FOOTHILL= 12.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.11; LAG(HR) = 0.89; Fm(INCH/HR) = 0.24; Ybar = 0.49
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.62; 30M = 0.64; 1HR = 0.64;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  13006.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0215
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    2692.08
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6309.29
  TOTAL AREA(ACRES) =  13006.20       PEAK FLOW RATE(CFS) =    6336.95
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

 ****************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) =  66.71
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.219
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      D        0.70      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                  D       14.60      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   15.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.87;1H= 1.16;3H= 1.97;6H= 2.76;24H= 4.59
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 20.7%
           MOUNTAIN= 67.1%;FOOTHILL= 12.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.11; LAG(HR) = 0.89; Fm(INCH/HR) = 0.24; Ybar = 0.49
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.62; 30M = 0.64; 1HR = 0.64;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  13021.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
```

```
 Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0215
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    2695.25
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6314.51
  TOTAL AREA(ACRES) =  13021.50       PEAK FLOW RATE(CFS) =    6336.95
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  13021.50  TC(MIN.) =     66.71
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.49
  PEAK FLOW RATE(CFS)   =   6336.95
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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             Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: ME57100E.DAT
  TIME/DATE OF STUDY: 10:29 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.440
   2)  10.000;  3.530
   3)  15.000;  2.790
   4)  20.000;  2.320
   5)  30.000;  1.830
   6)  60.000;  1.260
   7) 120.000;  0.890
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.100
        MOUNTAIN                           0.600
        VALLEY(UNDEVELOPED)/DESERT         0.300
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1056.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: ME56100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     6336.95    Tc(MIN.) =  66.71
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.49
  TOTAL AREA(ACRES) =   13021.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1056.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     6336.95    Tc(MIN.) =  66.71
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.49
  TOTAL AREA(ACRES) =   13021.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1056.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    185.00  DOWNSTREAM(FEET) =    165.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2367.00   CHANNEL SLOPE =  0.0084
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   6336.95
  FLOW VELOCITY(FEET/SEC.) =  13.25   FLOW DEPTH(FEET) =  11.52
  TRAVEL TIME(MIN.) =   2.98   Tc(MIN.) =  69.69
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 56077.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  69.69
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.367
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       38.90      0.40      1.00    40
  NATURAL FAIR COVER
  "GRASS"                    A        2.00      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A       40.30      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A       74.70      0.40      1.00    36
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       25.40      0.30      1.00    66
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       18.50      0.30      1.00    63
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.38
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  199.80
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.41;30M= 0.87;1H= 1.16;3H= 1.97;6H= 2.76;24H= 4.59
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 20.8%
           MOUNTAIN= 67.0%;FOOTHILL= 12.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.16; LAG(HR) = 0.93; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.62; 30M = 0.63; 1HR = 0.64;
  3HR = 0.92; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  13221.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 56077.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0281; Lca/L=0.4,n=.0252; Lca/L=0.5,n=.0231;Lca/L=0.6,n=.0216
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    2709.89
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6127.84
  TOTAL AREA(ACRES) =  13221.30       PEAK FLOW RATE(CFS) =    6336.95
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.43; 30M = 0.89; 1HR = 1.19; 3HR = 2.07; 6HR = 2.95; 24HR = 4.97

****************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  69.69
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B       18.90      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B      105.00      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      554.00      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C       12.80      0.25      0.50    69
  NATURAL FAIR COVER
  "GRASS"                    C       54.60      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      369.00      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) = 1114.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.97;6H= 2.77;24H= 4.62
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 21.5%
           MOUNTAIN= 66.4%;FOOTHILL= 12.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.16; LAG(HR) = 0.93; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.60; 30M = 0.62; 1HR = 0.63;
  3HR = 0.92; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  14335.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 56077.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0281; Lca/L=0.4,n=.0252; Lca/L=0.5,n=.0231;Lca/L=0.6,n=.0216
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    2938.15
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6507.48
  TOTAL AREA(ACRES) =  14335.60       PEAK FLOW RATE(CFS) =    6507.48

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.43; 30M = 0.89; 1HR = 1.19; 3HR = 2.07; 6HR = 2.95; 24HR = 4.97

****************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  69.69
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C       37.10      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D     1538.10      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D     1877.20      0.20      1.00    83
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D       87.50      0.20      0.50    75
  NATURAL FAIR COVER
  "GRASS"                    D      411.30      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                     D        1.70      0.20      1.00    82
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) = 3952.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.17;3H= 2.00;6H= 2.81;24H= 4.70
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 23.4%
           MOUNTAIN= 65.1%;FOOTHILL= 11.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.16; LAG(HR) = 0.93; Fm(INCH/HR) = 0.23; Ybar = 0.48
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.55; 30M = 0.57; 1HR = 0.58;
  3HR = 0.90; 6HR = 0.95; 24HR= 0.97
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  18288.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 56077.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0281; Lca/L=0.4,n=.0252; Lca/L=0.5,n=.0231;Lca/L=0.6,n=.0216
  TIME OF PEAK FLOW(HR) = 16.67  RUNOFF VOLUME(AF) =    3916.12
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7961.17
  TOTAL AREA(ACRES) =  18288.50       PEAK FLOW RATE(CFS) =    7961.17

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.43; 30M = 0.89; 1HR = 1.19; 3HR = 2.07; 6HR = 2.95; 24HR = 4.97

****************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  69.69
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       22.00      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D      270.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  292.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.17;3H= 2.00;6H= 2.81;24H= 4.70
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 23.5%
           MOUNTAIN= 65.0%;FOOTHILL= 11.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.16; LAG(HR) = 0.93; Fm(INCH/HR) = 0.23; Ybar = 0.48
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.54; 30M = 0.57; 1HR = 0.58;
  3HR = 0.90; 6HR = 0.95; 24HR= 0.97
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  18580.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 56077.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0281; Lca/L=0.4,n=.0252; Lca/L=0.5,n=.0231;Lca/L=0.6,n=.0216
```

```
  TIME OF PEAK FLOW(HR) = 16.67  RUNOFF VOLUME(AF) =    3983.66
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8062.08
  TOTAL AREA(ACRES) =  18580.60       PEAK FLOW RATE(CFS) =    8062.08

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.43; 30M = 0.89; 1HR = 1.19; 3HR = 2.07; 6HR = 2.95; 24HR = 4.97
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  18580.60  TC(MIN.) =     69.69
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.48
  PEAK FLOW RATE(CFS)   =   8062.08
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

TECHNICAL APPENDIX II-B
HYDROLOGIC ANALYSIS
EXISTING CONDITION
100-YEAR HIGH CONFIDENCE

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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             Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: ME49100H.DAT
  TIME/DATE OF STUDY: 10:54 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.030
   2)  10.000;  4.570
   3)  15.000;  3.560
   4)  20.000;  2.970
   5)  30.000;  2.340
   6)  60.000;  1.590
   7) 120.000;  1.120
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1048.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU48100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     4822.07    Tc(MIN.) =  41.59
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.43
  TOTAL AREA(ACRES) =    4407.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 33517.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1048.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     4822.07    Tc(MIN.) =  41.59
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.43
  TOTAL AREA(ACRES) =    4407.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 33517.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1048.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    445.00  DOWNSTREAM(FEET) =    400.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2427.00   CHANNEL SLOPE =  0.0185
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   4822.07
  FLOW VELOCITY(FEET/SEC.) =  16.81   FLOW DEPTH(FEET) =   9.67
  TRAVEL TIME(MIN.) =   2.41   Tc(MIN.) =  43.99
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  43.99
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.780
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       39.10      0.40      1.00    40
  NATURAL FAIR COVER
  "GRASS"                    A       26.90      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A       43.60      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A       72.70      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       70.70      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                    B       65.10      0.30      1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.36
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  318.10
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.54;30M= 1.11;1H= 1.48;3H= 2.52;6H= 3.53;24H= 5.98
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.73; LAG(HR) = 0.59; Fm(INCH/HR) = 0.25; Ybar = 0.45
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.79; 30M = 0.79; 1HR = 0.79;
  3HR = 0.97; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4725.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0265; Lca/L=0.4,n=.0237; Lca/L=0.5,n=.0218;Lca/L=0.6,n=.0203
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    1423.71
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4978.69
  TOTAL AREA(ACRES) =   4725.10       PEAK FLOW RATE(CFS) =    4978.69

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  43.99
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.990
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       39.60      0.30      1.00    66
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        2.00      0.30      1.00    72
  NATURAL FAIR COVER
  "WOODLAND"                 B       81.70      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      709.70      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        2.20      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C       92.30      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  927.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.51;6H= 3.51;24H= 5.92
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.73; LAG(HR) = 0.59; Fm(INCH/HR) = 0.25; Ybar = 0.46
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.77; 30M = 0.77; 1HR = 0.77;
  3HR = 0.96; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   5652.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0265; Lca/L=0.4,n=.0237; Lca/L=0.5,n=.0218;Lca/L=0.6,n=.0203
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    1666.06
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5741.34
  TOTAL AREA(ACRES) =   5652.60       PEAK FLOW RATE(CFS) =    5741.34

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  43.99
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.990
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      838.80      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       78.30      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C       84.40      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      141.90      0.20      1.00    81
  NATURAL POOR COVER
  "BARREN"                   D        1.00      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      481.50      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1625.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.49;6H= 3.47;24H= 5.85
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.73; LAG(HR) = 0.59; Fm(INCH/HR) = 0.24; Ybar = 0.45
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.73; 30M = 0.73; 1HR = 0.73;
  3HR = 0.96; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   7278.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0265; Lca/L=0.4,n=.0237; Lca/L=0.5,n=.0218;Lca/L=0.6,n=.0203
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    2141.50
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6990.65
  TOTAL AREA(ACRES) =   7278.50       PEAK FLOW RATE(CFS) =    6990.65

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  43.99
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.990
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      419.60      0.20      1.00    83
  NATURAL GOOD COVER
  "MEADOWS"                  D        0.40      0.20      1.00    78
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       21.60      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       70.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  511.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.49;6H= 3.47;24H= 5.84
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.73; LAG(HR) = 0.59; Fm(INCH/HR) = 0.24; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.71; 30M = 0.71; 1HR = 0.71;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   7790.20
```

```
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0265; Lca/L=0.4,n=.0237; Lca/L=0.5,n=.0218;Lca/L=0.6,n=.0203
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    2301.90
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7363.67
  TOTAL AREA(ACRES) =   7790.20       PEAK FLOW RATE(CFS) =    7363.67

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   7790.20  TC(MIN.) =     43.99
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.44
  PEAK FLOW RATE(CFS)   =   7363.67
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: ME50100H.DAT
  TIME/DATE OF STUDY: 10:54 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.030
   2)  10.000;  4.570
   3)  15.000;  3.560
   4)  20.000;  2.970
   5)  30.000;  2.340
   6)  60.000;  1.590
   7) 120.000;  1.120
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.100
        MOUNTAIN                           0.700
        VALLEY(UNDEVELOPED)/DESERT         0.200
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1049.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: ME49100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     7363.67    Tc(MIN.) =  43.99
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.44
  TOTAL AREA(ACRES) =    7790.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1049.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     7363.67    Tc(MIN.) =  43.99
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.44
  TOTAL AREA(ACRES) =    7790.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1049.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1050.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    400.00  DOWNSTREAM(FEET) =    390.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   616.00   CHANNEL SLOPE =  0.0162
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   7363.67
  FLOW VELOCITY(FEET/SEC.) =  17.94   FLOW DEPTH(FEET) =  12.59
  TRAVEL TIME(MIN.) =   0.57   Tc(MIN.) =  44.57
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1050.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  44.57
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.767
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    A        0.30      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        0.20      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A        1.10      0.40      1.00    36
  NATURAL FAIR COVER
  "GRASS"                    B        2.20      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        0.20      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.40      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.34
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    4.40
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.49;6H= 3.47;24H= 5.84
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.74; LAG(HR) = 0.59; Fm(INCH/HR) = 0.24; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.71; 30M = 0.71; 1HR = 0.71;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   7794.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0264; Lca/L=0.4,n=.0237; Lca/L=0.5,n=.0217;Lca/L=0.6,n=.0203
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    2302.27
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7319.54
  TOTAL AREA(ACRES) =   7794.60       PEAK FLOW RATE(CFS) =    7363.67
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1050.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  44.57
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.976
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       88.30      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        0.90      0.25      0.50    69
  NATURAL POOR COVER
  "BARREN"                   C        1.10      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C       36.50      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      245.30      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C       38.00      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  410.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.48;6H= 3.46;24H= 5.83
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  1.0%
           MOUNTAIN= 98.5%;FOOTHILL=  0.5%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.74; LAG(HR) = 0.59; Fm(INCH/HR) = 0.24; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8204.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0264; Lca/L=0.4,n=.0237; Lca/L=0.5,n=.0217;Lca/L=0.6,n=.0203
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    2413.45
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7573.53
  TOTAL AREA(ACRES) =   8204.70       PEAK FLOW RATE(CFS) =    7573.53

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1050.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  44.57
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.976
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        2.50      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        6.90      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        0.20      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D       62.60      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        9.20      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D        1.80      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.96
  SUBAREA AREA(ACRES) =   83.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.48;6H= 3.46;24H= 5.83
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  1.2%
           MOUNTAIN= 98.2%;FOOTHILL=  0.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.74; LAG(HR) = 0.59; Fm(INCH/HR) = 0.24; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8287.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0264; Lca/L=0.4,n=.0237; Lca/L=0.5,n=.0217;Lca/L=0.6,n=.0203
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    2440.17
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7628.20
  TOTAL AREA(ACRES) =   8287.90       PEAK FLOW RATE(CFS) =    7628.20

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   8287.90  TC(MIN.) =     44.57
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.44
  PEAK FLOW RATE(CFS)   =   7628.20
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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             Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                         Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: ME51100H.DAT
  TIME/DATE OF STUDY: 10:54 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.030
   2)  10.000;  4.570
   3)  15.000;  3.560
   4)  20.000;  2.970
   5)  30.000;  2.340
   6)  60.000;  1.590
   7) 120.000;  1.120
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.500
        MOUNTAIN                           0.000
        VALLEY(UNDEVELOPED)/DESERT         0.500
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1050.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: ME50100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     7628.20    Tc(MIN.) =  44.57
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.44
  TOTAL AREA(ACRES) =    8287.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1050.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     7628.20    Tc(MIN.) =  44.57
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.44
  TOTAL AREA(ACRES) =    8287.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1050.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1051.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    390.00  DOWNSTREAM(FEET) =    330.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  4501.00   CHANNEL SLOPE =  0.0133
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   7628.20
  FLOW VELOCITY(FEET/SEC.) =  16.84   FLOW DEPTH(FEET) =  13.51
  TRAVEL TIME(MIN.) =   4.45   Tc(MIN.) =  49.02
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1051.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  49.02
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.673
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A        0.70      0.40       0.50    32
  NATURAL FAIR COVER
  "GRASS"                    A        1.80      0.40       1.00    50
  NATURAL FAIR COVER
  "WOODLAND"                 A        6.50      0.40       1.00    36
  NATURAL FAIR COVER
  "GRASS"                    B        3.20      0.30       1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        2.20      0.30       1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B       10.90      0.30       1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.33
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   25.30
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.48;6H= 3.46;24H= 5.83
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  1.3%
           MOUNTAIN= 97.9%;FOOTHILL=  0.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.82; LAG(HR) = 0.65; Fm(INCH/HR) = 0.24; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8313.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0262; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0201
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    2444.31
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7150.99
  TOTAL AREA(ACRES) =   8313.20       PEAK FLOW RATE(CFS) =    7628.20
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1051.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  49.02
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.864
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        9.10      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        1.30      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C        5.80      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       29.60      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        8.80      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       40.70      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   95.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.48;6H= 3.46;24H= 5.82
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  1.9%
           MOUNTAIN= 96.8%;FOOTHILL=  1.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.82; LAG(HR) = 0.65; Fm(INCH/HR) = 0.24; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8408.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0262; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0201
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    2471.54
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7205.02
  TOTAL AREA(ACRES) =   8408.50       PEAK FLOW RATE(CFS) =    7628.20
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1051.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  49.02
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.864
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D       23.10      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        7.10      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      178.60      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       93.40      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D       31.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =  333.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.48;6H= 3.45;24H= 5.82
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  3.7%
           MOUNTAIN= 93.1%;FOOTHILL=  3.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.82; LAG(HR) = 0.65; Fm(INCH/HR) = 0.24; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.69; 30M = 0.69; 1HR = 0.69;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8742.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0262; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0201
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    2578.32
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7406.75
  TOTAL AREA(ACRES) =   8742.10       PEAK FLOW RATE(CFS) =    7628.20
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   8742.10  TC(MIN.) =     49.02
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.44
  PEAK FLOW RATE(CFS)   =   7628.20
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: ME52100H.DAT
  TIME/DATE OF STUDY: 10:54 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.030
   2)  10.000;  4.570
   3)  15.000;  3.560
   4)  20.000;  2.970
   5)  30.000;  2.340
   6)  60.000;  1.590
   7) 120.000;  1.120
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.300
        MOUNTAIN                           0.100
        VALLEY(UNDEVELOPED)/DESERT         0.600
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1051.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: ME51100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     7628.20    Tc(MIN.) =  49.02
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.44
  TOTAL AREA(ACRES) =    8742.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1051.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     7628.20    Tc(MIN.) =  49.02
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.44
  TOTAL AREA(ACRES) =    8742.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1051.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    330.00  DOWNSTREAM(FEET) =    300.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2333.00   CHANNEL SLOPE =  0.0129
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   7628.20
  FLOW VELOCITY(FEET/SEC.) =  16.62   FLOW DEPTH(FEET) =  13.64
  TRAVEL TIME(MIN.) =   2.34   Tc(MIN.) =  51.36
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  51.36
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.629
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   A        7.20      0.40      1.00    78
  NATURAL FAIR COVER
  "GRASS"                    A        1.40      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        4.70      0.40      1.00    46
  PUBLIC PARK                A        1.10      0.40      0.85    32
  NATURAL FAIR COVER
  "WOODLAND"                 A       12.10      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       14.10      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.35
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   40.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.48;6H= 3.45;24H= 5.82
```

```
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  4.0%
           MOUNTAIN= 92.7%;FOOTHILL=  3.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.86; LAG(HR) = 0.68; Fm(INCH/HR) = 0.24; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.69; 30M = 0.69; 1HR = 0.69;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8782.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    2585.68
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7226.81
  TOTAL AREA(ACRES) =   8782.70       PEAK FLOW RATE(CFS) =    7628.20
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  51.36
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.806
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   C        4.30      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C       14.50      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       12.10      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.20      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       14.60      0.20      1.00    81
  NATURAL POOR COVER
  "BARREN"                   D       36.10      0.20      1.00    93
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   81.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.48;6H= 3.45;24H= 5.81
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  4.5%
           MOUNTAIN= 91.9%;FOOTHILL=  3.5%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.86; LAG(HR) = 0.68; Fm(INCH/HR) = 0.24; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.69; 30M = 0.69; 1HR = 0.69;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8864.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    2612.41
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7280.90
  TOTAL AREA(ACRES) =   8864.50       PEAK FLOW RATE(CFS) =    7628.20
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  51.36
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.806
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D      104.40      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       28.80      0.20      1.00    83
  PUBLIC PARK                D        1.10      0.20      0.85    75
  NATURAL FAIR COVER
  "WOODLAND"                 D       34.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  168.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.48;6H= 3.45;24H= 5.81
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  5.5%
           MOUNTAIN= 90.4%;FOOTHILL=  4.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.86; LAG(HR) = 0.68; Fm(INCH/HR) = 0.24; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.69; 30M = 0.69; 1HR = 0.69;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9032.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    2665.18
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7392.98
  TOTAL AREA(ACRES) =   9032.90       PEAK FLOW RATE(CFS) =    7628.20
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   9032.90  TC(MIN.) =     51.36
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.43
  PEAK FLOW RATE(CFS)   =   7628.20
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: ME53100H.DAT
  TIME/DATE OF STUDY: 10:54 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.030
   2)  10.000;  4.570
   3)  15.000;  3.560
   4)  20.000;  2.970
   5)  30.000;  2.340
   6)  60.000;  1.590
   7) 120.000;  1.120
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.300
        MOUNTAIN                           0.100
        VALLEY(UNDEVELOPED)/DESERT         0.600
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1052.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: ME52100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     7628.20    Tc(MIN.) =  51.36
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.43
  TOTAL AREA(ACRES) =    9032.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1052.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     7628.20    Tc(MIN.) =  51.36
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.43
  TOTAL AREA(ACRES) =    9032.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1052.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    300.00  DOWNSTREAM(FEET) =    265.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  3322.00   CHANNEL SLOPE =  0.0105
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   7628.20
  FLOW VELOCITY(FEET/SEC.) =  15.43   FLOW DEPTH(FEET) =  14.38
  TRAVEL TIME(MIN.) =   3.59   Tc(MIN.) =  54.95
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  54.95
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.567
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        1.60      0.40      1.00    40
  NATURAL POOR COVER
  "BARREN"                   A        0.90      0.40      1.00    78
  NATURAL FAIR COVER
  "GRASS"                    A       13.10      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        3.20      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A       16.90      0.40      1.00    36
  NATURAL FAIR COVER
  "GRASS"                    B       21.80      0.30      1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.36
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   57.50
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.48;6H= 3.45;24H= 5.81
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  5.9%
           MOUNTAIN= 89.9%;FOOTHILL=  4.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.92; LAG(HR) = 0.73; Fm(INCH/HR) = 0.24; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.69; 30M = 0.69; 1HR = 0.69;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9090.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    2673.85
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7297.67
  TOTAL AREA(ACRES) =   9090.40       PEAK FLOW RATE(CFS) =    7628.20
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  54.95
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.716
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        4.20      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        4.40      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       66.60      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C       16.90      0.25      0.50    69
  NATURAL POOR COVER
  "BARREN"                   C        8.70      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C       24.90      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
  SUBAREA AREA(ACRES) =  125.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.48;6H= 3.45;24H= 5.81
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  6.6%
           MOUNTAIN= 88.8%;FOOTHILL=  4.5%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.92; LAG(HR) = 0.73; Fm(INCH/HR) = 0.24; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.68; 30M = 0.69; 1HR = 0.69;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9216.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    2708.80
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7370.66
  TOTAL AREA(ACRES) =   9216.10       PEAK FLOW RATE(CFS) =    7628.20
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  54.95
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.716
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       63.50      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C       47.00      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       12.50      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D       12.90      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        4.90      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      325.90      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  466.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.48;6H= 3.44;24H= 5.80
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  9.2%
           MOUNTAIN= 85.0%;FOOTHILL=  5.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.92; LAG(HR) = 0.73; Fm(INCH/HR) = 0.24; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.68; 30M = 0.68; 1HR = 0.68;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9682.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    2852.03
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7651.09
  TOTAL AREA(ACRES) =   9682.80       PEAK FLOW RATE(CFS) =    7651.09

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  54.95
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.716
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      125.00      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D       73.50      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  198.50
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.47;6H= 3.44;24H= 5.80
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 10.2%
           MOUNTAIN= 83.5%;FOOTHILL=  6.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.92; LAG(HR) = 0.73; Fm(INCH/HR) = 0.24; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.67; 30M = 0.68; 1HR = 0.68;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9881.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
```

```
 Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    2912.63
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7769.77
  TOTAL AREA(ACRES) =   9881.30       PEAK FLOW RATE(CFS) =    7769.77

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   9881.30  TC(MIN.) =     54.95
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.43
  PEAK FLOW RATE(CFS)   =   7769.77
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: ME54100H.DAT
  TIME/DATE OF STUDY: 10:54 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.030
   2)  10.000;  4.570
   3)  15.000;  3.560
   4)  20.000;  2.970
   5)  30.000;  2.340
   6)  60.000;  1.590
   7) 120.000;  1.120
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.300
        MOUNTAIN                           0.200
        VALLEY(UNDEVELOPED)/DESERT         0.500
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1053.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: ME53100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     7769.77    Tc(MIN.) =  54.95
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.43
  TOTAL AREA(ACRES) =    9881.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1053.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     7769.77    Tc(MIN.) =  54.95
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.43
  TOTAL AREA(ACRES) =    9881.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1053.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    265.00  DOWNSTREAM(FEET) =    245.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1390.00   CHANNEL SLOPE =  0.0144
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   7769.77
  FLOW VELOCITY(FEET/SEC.) =  17.40   FLOW DEPTH(FEET) =  13.38
  TRAVEL TIME(MIN.) =   1.33   Tc(MIN.) =  56.28
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  56.28
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.545
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   A       12.00      0.40      1.00    78
  NATURAL FAIR COVER
  "GRASS"                    A        5.00      0.40      1.00    50
  NATURAL FAIR COVER
  "WOODLAND"                 A        1.30      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       21.70      0.30      1.00    63
  NATURAL POOR COVER
  "BARREN"                   B       12.50      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B      143.50      0.30      1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.31
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  196.00
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.47;6H= 3.44;24H= 5.79
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 11.0%
           MOUNTAIN= 82.3%;FOOTHILL=  6.7%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.94; LAG(HR) = 0.75; Fm(INCH/HR) = 0.24; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.67; 30M = 0.68; 1HR = 0.68;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  10077.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    2956.24
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7753.34
  TOTAL AREA(ACRES) =  10077.30       PEAK FLOW RATE(CFS) =    7769.77
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  56.28
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.683
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       25.80      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B       97.00      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      265.40      0.25      1.00    75
  NATURAL FAIR COVER
  "WOODLAND"                 C      166.10      0.25      1.00    73
  NATURAL POOR COVER
  "BARREN"                   C       12.30      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C      255.00      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  821.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.47;6H= 3.44;24H= 5.78
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 13.9%
           MOUNTAIN= 77.6%;FOOTHILL=  8.5%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.94; LAG(HR) = 0.75; Fm(INCH/HR) = 0.24; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.66; 30M = 0.66; 1HR = 0.67;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  10898.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    3165.85
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8179.95
  TOTAL AREA(ACRES) =  10898.90       PEAK FLOW RATE(CFS) =    8179.95

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  56.28
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.683
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      361.10      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        0.90      0.25      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       53.40      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.70      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D       30.70      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      594.10      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1040.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.47;6H= 3.43;24H= 5.77
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 17.1%
           MOUNTAIN= 72.6%;FOOTHILL= 10.4%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.94; LAG(HR) = 0.75; Fm(INCH/HR) = 0.24; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.64; 30M = 0.65; 1HR = 0.66;
  3HR = 0.93; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  11939.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    3478.46
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8740.55
  TOTAL AREA(ACRES) =  11939.80       PEAK FLOW RATE(CFS) =    8740.55

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  56.28
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.683
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      275.50      0.20      1.00    83
  PUBLIC PARK                D        0.70      0.20      0.85    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        0.70      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       87.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  364.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.47;6H= 3.43;24H= 5.76
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 18.1%
           MOUNTAIN= 71.0%;FOOTHILL= 10.9%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.94; LAG(HR) = 0.75; Fm(INCH/HR) = 0.24; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.65; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12304.10
```

```
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    3589.39
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8934.83
  TOTAL AREA(ACRES) =  12304.10       PEAK FLOW RATE(CFS) =    8934.83

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  12304.10  TC(MIN.) =     56.28
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.43
  PEAK FLOW RATE(CFS)   =   8934.83
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: ME55100H.DAT
  TIME/DATE OF STUDY: 10:54 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.030
   2)  10.000;  4.570
   3)  15.000;  3.560
   4)  20.000;  2.970
   5)  30.000;  2.340
   6)  60.000;  1.590
   7) 120.000;  1.120
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.400
        MOUNTAIN                           0.000
        VALLEY(UNDEVELOPED)/DESERT         0.600
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1054.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: ME54100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     8934.83    Tc(MIN.) =  56.28
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.43
  TOTAL AREA(ACRES) =   12304.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1054.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     8934.83    Tc(MIN.) =  56.28
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.43
  TOTAL AREA(ACRES) =   12304.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1054.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    245.00  DOWNSTREAM(FEET) =    215.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2724.00   CHANNEL SLOPE =  0.0110
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   8934.83
  FLOW VELOCITY(FEET/SEC.) =  16.23   FLOW DEPTH(FEET) =  14.09
  TRAVEL TIME(MIN.) =   2.80   Tc(MIN.) =  59.08
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  59.08
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.503
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    A        7.20      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        1.80      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A        5.50      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        5.80      0.30      1.00    63
  NATURAL POOR COVER
  "BARREN"                   B        6.90      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B       22.60      0.30      1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.33
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   49.80
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.47;6H= 3.43;24H= 5.76
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 18.2%
           MOUNTAIN= 70.7%;FOOTHILL= 11.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.98; LAG(HR) = 0.79; Fm(INCH/HR) = 0.24; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.64; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12353.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    3599.05
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8606.59
  TOTAL AREA(ACRES) =  12353.90       PEAK FLOW RATE(CFS) =    8934.83
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  59.08
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.613
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        7.90      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        9.50      0.30      1.00    60
  NATURAL FAIR COVER
  "WOODLAND"                 C       23.30      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       71.90      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        0.40      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C       14.60      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  127.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.47;6H= 3.43;24H= 5.76
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 18.7%
           MOUNTAIN= 70.0%;FOOTHILL= 11.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.98; LAG(HR) = 0.79; Fm(INCH/HR) = 0.24; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.64; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12481.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    3630.83
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8661.05
  TOTAL AREA(ACRES) =  12481.50       PEAK FLOW RATE(CFS) =    8934.83
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  59.08
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.613
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       66.50      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        0.20      0.25      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        4.60      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        2.20      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        0.20      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D       45.50      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  119.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.46;6H= 3.43;24H= 5.76
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 19.0%
           MOUNTAIN= 69.3%;FOOTHILL= 11.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.98; LAG(HR) = 0.79; Fm(INCH/HR) = 0.24; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.64; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12600.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    3665.18
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8715.69
  TOTAL AREA(ACRES) =  12600.70       PEAK FLOW RATE(CFS) =    8934.83
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  59.08
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.613
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       16.90      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        0.20      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       10.90      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   28.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.46;6H= 3.42;24H= 5.76
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 19.1%
           MOUNTAIN= 69.2%;FOOTHILL= 11.7%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.98; LAG(HR) = 0.79; Fm(INCH/HR) = 0.24; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.64; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
```

```
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12628.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    3673.60
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8729.06
  TOTAL AREA(ACRES) =  12628.70       PEAK FLOW RATE(CFS) =    8934.83
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  12628.70  TC(MIN.) =     59.08
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.43
  PEAK FLOW RATE(CFS)   =   8934.83
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: ME56100H.DAT
  TIME/DATE OF STUDY: 10:54 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.030
   2)  10.000;  4.570
   3)  15.000;  3.560
   4)  20.000;  2.970
   5)  30.000;  2.340
   6)  60.000;  1.590
   7) 120.000;  1.120
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.300
        MOUNTAIN                           0.000
        VALLEY(UNDEVELOPED)/DESERT         0.700
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1055.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: ME55100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     8934.83    Tc(MIN.) =  59.08
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.43
  TOTAL AREA(ACRES) =   12628.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1055.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     8934.83    Tc(MIN.) =  59.08
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.43
  TOTAL AREA(ACRES) =   12628.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1055.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    215.00  DOWNSTREAM(FEET) =    185.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2880.00   CHANNEL SLOPE =  0.0104
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   8934.83
  FLOW VELOCITY(FEET/SEC.) =  15.90   FLOW DEPTH(FEET) =  14.30
  TRAVEL TIME(MIN.) =   3.02   Tc(MIN.) =  62.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  62.10
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.461
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    A        1.80      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        1.10      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A        9.30      0.40      1.00    36
  NATURAL POOR COVER
  "BARREN"                   B        1.80      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B       14.80      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.20      0.30      1.00    66
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.34
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   30.00
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.46;6H= 3.42;24H= 5.76
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 19.3%
           MOUNTAIN= 69.0%;FOOTHILL= 11.7%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.03; LAG(HR) = 0.83; Fm(INCH/HR) = 0.24; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.64; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12658.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    3678.69
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8642.48
  TOTAL AREA(ACRES) =  12658.70       PEAK FLOW RATE(CFS) =    8934.83
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

 ****************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) =  62.10
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.574
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  B        5.10      0.30      1.00    60
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        C        8.60      0.25      0.50    69
  NATURAL POOR COVER
  "BARREN"                    C        2.40      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                     C        1.30      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.20      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        4.70      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.81
  SUBAREA AREA(ACRES) =   22.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.46;6H= 3.42;24H= 5.76
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 19.3%
           MOUNTAIN= 68.9%;FOOTHILL= 11.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.03; LAG(HR) = 0.83; Fm(INCH/HR) = 0.24; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.64; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12681.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    3685.11
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8653.78
  TOTAL AREA(ACRES) =  12681.00       PEAK FLOW RATE(CFS) =    8934.83
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

 ****************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
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 ============================================================================
  MAINLINE Tc(MIN) =  62.10
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.574
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D      142.30      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                    D       32.60      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                     D      110.40      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                      D        0.80      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"                D       36.40      0.20      1.00    83
  COMMERCIAL                  D        2.70      0.20      0.10    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.77
  SUBAREA AREA(ACRES) =  325.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.46;6H= 3.42;24H= 5.76
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 20.6%
           MOUNTAIN= 67.2%;FOOTHILL= 12.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.03; LAG(HR) = 0.83; Fm(INCH/HR) = 0.24; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.62; 30M = 0.64; 1HR = 0.64;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  13006.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    3794.38
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8832.77
  TOTAL AREA(ACRES) =  13006.20       PEAK FLOW RATE(CFS) =    8934.83
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

 ****************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) =  62.10
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.574
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      D        0.70      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                  D       14.60      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   15.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.46;6H= 3.42;24H= 5.76
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 20.7%
           MOUNTAIN= 67.1%;FOOTHILL= 12.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.03; LAG(HR) = 0.83; Fm(INCH/HR) = 0.24; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.62; 30M = 0.64; 1HR = 0.64;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  13021.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
```

```
 Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    3798.80
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8840.43
  TOTAL AREA(ACRES) =  13021.50       PEAK FLOW RATE(CFS) =    8934.83
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  13021.50  TC(MIN.) =     62.10
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.43
  PEAK FLOW RATE(CFS)   =   8934.83
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
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************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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             Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: ME57100H.DAT
  TIME/DATE OF STUDY: 10:54 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.030
   2)  10.000;  4.570
   3)  15.000;  3.560
   4)  20.000;  2.970
   5)  30.000;  2.340
   6)  60.000;  1.590
   7) 120.000;  1.120
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.100
        MOUNTAIN                           0.600
        VALLEY(UNDEVELOPED)/DESERT         0.300
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1056.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: ME56100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     8934.83    Tc(MIN.) =  62.10
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.43
  TOTAL AREA(ACRES) =   13021.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1056.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     8934.83    Tc(MIN.) =  62.10
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.43
  TOTAL AREA(ACRES) =   13021.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1056.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    185.00  DOWNSTREAM(FEET) =    165.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2367.00   CHANNEL SLOPE =  0.0084
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   8934.83
  FLOW VELOCITY(FEET/SEC.) =  14.58   FLOW DEPTH(FEET) =  13.94
  TRAVEL TIME(MIN.) =   2.71   Tc(MIN.) =  64.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 56077.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  64.80
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.426
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       38.90      0.40      1.00    40
  NATURAL FAIR COVER
  "GRASS"                    A        2.00      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A       40.30      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A       74.70      0.40      1.00    36
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       25.40      0.30      1.00    66
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       18.50      0.30      1.00    63
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.38
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  199.80
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.47;6H= 3.43;24H= 5.76
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 20.8%
           MOUNTAIN= 67.0%;FOOTHILL= 12.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.08; LAG(HR) = 0.86; Fm(INCH/HR) = 0.24; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.62; 30M = 0.63; 1HR = 0.64;
  3HR = 0.92; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  13221.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 56077.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0201
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    3830.19
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8780.84
  TOTAL AREA(ACRES) =  13221.30       PEAK FLOW RATE(CFS) =    8934.83
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.55; 30M = 1.12; 1HR = 1.51; 3HR = 2.60; 6HR = 3.68; 24HR = 6.27

****************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  64.80
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.552
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B       18.90      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B      105.00      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      554.00      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C       12.80      0.25      0.50    69
  NATURAL FAIR COVER
  "GRASS"                    C       54.60      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      369.00      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) = 1114.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.48;6H= 3.45;24H= 5.80
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 21.5%
           MOUNTAIN= 66.4%;FOOTHILL= 12.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.08; LAG(HR) = 0.86; Fm(INCH/HR) = 0.24; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.60; 30M = 0.62; 1HR = 0.63;
  3HR = 0.92; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  14335.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 56077.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0201
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    4159.97
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9336.92
  TOTAL AREA(ACRES) =  14335.60       PEAK FLOW RATE(CFS) =    9336.92

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.55; 30M = 1.12; 1HR = 1.51; 3HR = 2.60; 6HR = 3.68; 24HR = 6.27

****************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  64.80
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.552
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C       37.10      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D     1538.10      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D     1877.20      0.20      1.00    83
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D       87.50      0.20      0.50    75
  NATURAL FAIR COVER
  "GRASS"                    D      411.30      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                     D        1.70      0.20      1.00    82
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) = 3952.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.50;6H= 3.50;24H= 5.90
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 23.4%
           MOUNTAIN= 65.1%;FOOTHILL= 11.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.08; LAG(HR) = 0.86; Fm(INCH/HR) = 0.23; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.55; 30M = 0.57; 1HR = 0.58;
  3HR = 0.90; 6HR = 0.95; 24HR= 0.97
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  18288.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 56077.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0201
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    5518.43
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  11385.84
  TOTAL AREA(ACRES) =  18288.50       PEAK FLOW RATE(CFS) =   11385.84

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.55; 30M = 1.12; 1HR = 1.51; 3HR = 2.60; 6HR = 3.68; 24HR = 6.27

****************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  64.80
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.552
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       22.00      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D      270.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  292.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.48;3H= 2.50;6H= 3.50;24H= 5.91
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT= 23.5%
           MOUNTAIN= 65.0%;FOOTHILL= 11.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.08; LAG(HR) = 0.86; Fm(INCH/HR) = 0.23; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.54; 30M = 0.57; 1HR = 0.58;
  3HR = 0.90; 6HR = 0.95; 24HR= 0.97
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  18580.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 56077.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0201
```

```
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    5613.31
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  11527.73
  TOTAL AREA(ACRES) =  18580.60       PEAK FLOW RATE(CFS) =   11527.73

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.55; 30M = 1.12; 1HR = 1.51; 3HR = 2.60; 6HR = 3.68; 24HR = 6.27
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  18580.60  TC(MIN.) =     64.80
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.41
  PEAK FLOW RATE(CFS)   =  11527.73
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
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PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

TECHNICAL APPENDIX II-C
HYDROLOGIC ANALYSIS
PROPOSED CONDITION
2-YEAR EXPECTED VALUE

Rainfall Depths
2-Year - Expected Value - Existing Condition

	Area	< 2000	> 2000	Rainfall Depth							Area	< 2000	> 2000	Rainfall Depth					
Subarea	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr	Node	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr
		X		0.13	0.28	0.37	0.62	0.85	1.44			X		0.13	0.28	0.37	0.62	0.85	1.44
			X	0.18	0.32	0.46	0.94	1.46	2.67				X	0.18	0.32	0.46	0.94	1.46	2.67
1000	0.3	0.0	0.3	0.18	0.32	0.46	0.94	1.46	2.67	1001	0.3	0.0	0.3	0.18	0.32	0.46	0.94	1.46	2.67
1001	0.3	0.0	0.3	0.18	0.32	0.46	0.94	1.46	2.67	1002	0.6	0.0	0.6	0.18	0.32	0.46	0.94	1.46	2.67
1002	0.3	0.0	0.3	0.18	0.32	0.46	0.94	1.46	2.67	1003	0.9	0.0	0.9	0.18	0.32	0.46	0.94	1.46	2.67
1003	0.4	0.0	0.4	0.18	0.32	0.46	0.94	1.46	2.67	1004	1.3	0.0	1.3	0.18	0.32	0.46	0.94	1.46	2.67
1004	0.6	0.0	0.6	0.18	0.32	0.46	0.94	1.46	2.67	1005	1.9	0.0	1.9	0.18	0.32	0.46	0.94	1.46	2.67
1005	0.6	0.0	0.6	0.18	0.32	0.46	0.94	1.46	2.67										
1010	0.6	0.0	0.6	0.18	0.32	0.46	0.94	1.46	2.67	1011	0.6	0.0	0.6	0.18	0.32	0.46	0.94	1.46	2.67
1011	0.4	0.0	0.4	0.18	0.32	0.46	0.94	1.46	2.67	1012	1.0	0.0	1.0	0.18	0.32	0.46	0.94	1.46	2.67
1012	0.9	0.0	0.9	0.18	0.32	0.46	0.94	1.46	2.67	1013	1.9	0.0	1.9	0.18	0.32	0.46	0.94	1.46	2.67
1013	1.1	0.0	1.1	0.18	0.32	0.46	0.94	1.46	2.67	1014	5.5	0.0	5.5	0.18	0.32	0.46	0.94	1.46	2.67
1014	3.8	0.0	3.8	0.18	0.32	0.46	0.94	1.46	2.67	1015	9.3	0.0	9.3	0.18	0.32	0.46	0.94	1.46	2.67
1015	3.4	1.0	2.4	0.17	0.31	0.43	0.85	1.28	2.31	1016	12.7	1.0	11.7	0.18	0.32	0.45	0.91	1.41	2.57
1016	16.2	4.1	12.1	0.17	0.31	0.44	0.86	1.31	2.36	1017	28.9	5.1	23.8	0.17	0.31	0.44	0.88	1.35	2.45
1017	4.6	2.8	1.8	0.15	0.30	0.41	0.75	1.09	1.92										
1020	0.7	0.0	0.7	0.18	0.32	0.46	0.94	1.46	2.67	1021	0.7	0.0	0.7	0.18	0.32	0.46	0.94	1.46	2.67
1021	0.5	0.0	0.5	0.18	0.32	0.46	0.94	1.46	2.67	1022	1.2	0.0	1.2	0.18	0.32	0.46	0.94	1.46	2.67
1022	1.7	0.0	1.7	0.18	0.32	0.46	0.94	1.46	2.67	1023	2.9	0.0	2.9	0.18	0.32	0.46	0.94	1.46	2.67
1023	0.3	0.0	0.3	0.18	0.32	0.46	0.94	1.46	2.67	1024	3.2	0.0	3.2	0.18	0.32	0.46	0.94	1.46	2.67
1024	1.8	0.0	1.8	0.18	0.32	0.46	0.94	1.46	2.67	1025	5.0	0.0	5.0	0.18	0.32	0.46	0.94	1.46	2.67
1025	3.4	0.0	3.4	0.18	0.32	0.46	0.94	1.46	2.67	1026	8.4	0.0	8.4	0.18	0.32	0.46	0.94	1.46	2.67
1026	6.2	0.0	6.2	0.18	0.32	0.46	0.94	1.46	2.67	1027	14.6	0.0	14.6	0.18	0.32	0.46	0.94	1.46	2.67
1027	9.9	0.0	9.9	0.18	0.32	0.46	0.94	1.46	2.67	1028	24.5	0.0	24.5	0.18	0.32	0.46	0.94	1.46	2.67
1028	4.0	2.0	2.0	0.16	0.30	0.42	0.78	1.16	2.06	1029	62.0	9.9	52.1	0.17	0.31	0.45	0.89	1.36	2.47
1029	33.7	26.3	7.4	0.14	0.29	0.39	0.69	0.98	1.71	1030	95.7	36.2	59.5	0.16	0.30	0.43	0.82	1.23	2.20
1030	83.9	54.2	29.7	0.15	0.29	0.40	0.73	1.07	1.88	1031	179.6	90.4	89.2	0.15	0.30	0.41	0.78	1.15	2.05
1031	176.1	116.9	59.2	0.15	0.29	0.40	0.73	1.06	1.85	1032	355.7	207.3	148.4	0.15	0.30	0.41	0.75	1.10	1.95
1032	75.8	75.5	0.3	0.13	0.28	0.37	0.62	0.85	1.44	1033	431.5	282.8	148.7	0.15	0.29	0.40	0.73	1.06	1.86
1033	133.0	133.0	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1034	564.5	415.8	148.7	0.14	0.29	0.39	0.70	1.01	1.76
1034	46.5	46.5	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1035	611.0	462.3	148.7	0.14	0.29	0.39	0.70	1.00	1.74
1035	59.0	59.0	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1036	670.0	521.3	148.7	0.14	0.29	0.39	0.69	0.99	1.71
1036	348.9	341.2	7.7	0.13	0.28	0.37	0.63	0.86	1.47	1037	1,018.9	862.5	156.4	0.14	0.29	0.38	0.67	0.94	1.63
1037	84.2	84.2	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1038	1,103.1	946.7	156.4	0.14	0.29	0.38	0.67	0.94	1.61

Rainfall Depths
2-Year - Expected Value - Existing Condition

	Area	< 2000	> 2000	Rainfall Depth							Area	< 2000	> 2000	Rainfall Depth					
Subarea	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr	Node	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr
		X		0.13	0.28	0.37	0.62	0.85	1.44			X		0.13	0.28	0.37	0.62	0.85	1.44
			X	0.18	0.32	0.46	0.94	1.46	2.67				X	0.18	0.32	0.46	0.94	1.46	2.67
1038	426.5	358.5	68.0	0.14	0.29	0.38	0.67	0.95	1.64	1039	1,529.6	1,305.2	224.4	0.14	0.29	0.38	0.67	0.94	1.62
1039	584.2	520.2	64.0	0.14	0.28	0.38	0.66	0.92	1.57	1040	2,113.8	1,825.4	288.4	0.14	0.29	0.38	0.66	0.93	1.61
1040	629.8	628.6	1.2	0.13	0.28	0.37	0.62	0.85	1.44	1041	2,743.6	2,454.0	289.6	0.14	0.28	0.38	0.65	0.91	1.57
1041	135.8	135.8	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1042	2,879.4	2,589.8	289.6	0.14	0.28	0.38	0.65	0.91	1.56
1042	475.9	475.9	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1043	3,355.3	3,065.7	289.6	0.13	0.28	0.38	0.65	0.90	1.55
1043	165.2	165.2	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1044	3,520.5	3,230.9	289.6	0.13	0.28	0.38	0.65	0.90	1.54
1044	339.3	339.3	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1045	3,859.8	3,570.2	289.6	0.13	0.28	0.38	0.64	0.90	1.53
1045	155.5	155.5	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1046	4,015.3	3,725.7	289.6	0.13	0.28	0.38	0.64	0.89	1.53
1046	190.7	190.7	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1047	4,206.0	3,916.4	289.6	0.13	0.28	0.38	0.64	0.89	1.52
1047	200.9	200.9	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1048	4,406.9	4,117.3	289.6	0.13	0.28	0.38	0.64	0.89	1.52
1048	3,383.3	3,383.3	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1049	7,790.2	7,500.6	289.6	0.13	0.28	0.37	0.63	0.87	1.49
1049	497.6	497.6	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1050	8,287.8	7,998.2	289.6	0.13	0.28	0.37	0.63	0.87	1.48
1050	454.4	454.4	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1051	8,742.2	8,452.6	289.6	0.13	0.28	0.37	0.63	0.87	1.48
1051	290.9	290.9	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1052	9,033.1	8,743.5	289.6	0.13	0.28	0.37	0.63	0.87	1.48
1052	848.4	848.4	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1053	9,881.5	9,591.9	289.6	0.13	0.28	0.37	0.63	0.87	1.48
1053	2,422.6	2,422.6	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1054	12,304.1	12,014.5	289.6	0.13	0.28	0.37	0.63	0.86	1.47
1054	324.5	324.5	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1055	12,628.6	12,339.0	289.6	0.13	0.28	0.37	0.63	0.86	1.47
1055	392.6	392.6	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1056	13,021.2	12,731.6	289.6	0.13	0.28	0.37	0.63	0.86	1.47
1056	5,559.2	4,931.8	627.4	0.14	0.28	0.38	0.66	0.92	1.58	1057	18,580.4	17,663.4	917.0	0.13	0.28	0.37	0.64	0.88	1.50

Channel Hydraulics, Travel Times, Times of Concentration, and Lag Estimates
2-Year - Expected Value - Existing Condition

U/S Node	D/S Node	U/S Elevation	D/S Elevation	Length (ft)	Manning (n)	Base (ft)	Sideslope (z)	Height (ft)	Q(2) (cfs)	Dn (ft)	V (fps)	Tt (min)	Tc (min)	Lag (hr)
	1036		1100		Data from Rational Method Analysis:				56				31.03	0.41
1036	1037	1100	1010	1517	0.040	7	1	7	139	1.59	10.16	2.49	33.52	0.45
1037	1038	1010	925	2069	0.040	8	1	8	193	1.99	9.69	3.56	37.08	0.49
1038	1039	925	873	1383	0.040	8	1	8	193	2.04	9.39	2.45	39.53	0.53
1039	1040	873	780	2714	0.040	9	1	9	235	2.21	9.49	4.76	44.30	0.59
1040	1041	780	695	2758	0.040	10	1	10	304	2.50	9.75	4.71	49.01	0.65
1041	1042	695	650	1846	0.040	15	1	10	335	2.25	8.63	3.56	52.58	0.70
1042	1043	650	600	2257	0.040	15	1	10	337	2.32	8.38	4.49	57.07	0.76
1043	1044	600	580	1011	0.040	20	1	10	337	2.03	7.55	2.23	59.30	0.79
1044	1045	580	540	1918	0.040	20	1	10	337	2.00	7.68	4.16	63.46	0.85
1045	1046	540	515	1273	0.040	20	1	10	342	2.05	7.57	2.80	66.27	0.88
1046	1047	515	485	1705	0.040	20	1	10	347	2.14	7.33	3.88	70.14	0.94
1047	1048	485	445	2398	0.040	20	1	10	347	2.17	7.21	5.55	75.69	1.01
1048	1049	445	400	2427	0.040	20	1	10	347	2.10	7.46	5.42	81.11	1.08
1049	1050	400	390	616	0.040	20	1	15	444	2.54	7.77	1.32	82.43	1.10
1050	1051	390	330	4501	0.040	20	1	15	457	2.74	7.35	10.21	92.64	1.24
1051	1052	330	300	2333	0.040	20	1	15	457	2.76	7.26	5.36	98.00	1.31
1052	1053	300	265	3322	0.040	20	1	15	457	2.93	6.79	8.15	106.15	1.42
1053	1054	265	245	1390	0.040	20	1	15	460	2.68	7.55	3.07	109.22	1.46
1054	1055	245	215	2724	0.040	25	1	15	508	2.71	6.78	6.69	115.91	1.55
1055	1056	215	185	2880	0.040	25	1	15	508	2.75	6.66	7.21	123.12	1.64
1056	1057	185	165	2367	0.040	30	1	15	508	2.63	5.93	6.65	129.77	1.73

Rainfall Depths
2-Year - Expected Value - Proposed Condition

	Area	< 2000	> 2000	Rainfall Depth							Area	< 2000	> 2000	Rainfall Depth					
Subarea	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr	Node	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr
		X		0.13	0.28	0.37	0.62	0.85	1.44			X		0.13	0.28	0.37	0.62	0.85	1.44
			X	0.18	0.32	0.46	0.94	1.46	2.67				X	0.18	0.32	0.46	0.94	1.46	2.67
1000	0.3	0.0	0.3	0.18	0.32	0.46	0.94	1.46	2.67	1001	0.3	0.0	0.3	0.18	0.32	0.46	0.94	1.46	2.67
1001	0.3	0.0	0.3	0.18	0.32	0.46	0.94	1.46	2.67	1002	0.6	0.0	0.6	0.18	0.32	0.46	0.94	1.46	2.67
1002	0.3	0.0	0.3	0.18	0.32	0.46	0.94	1.46	2.67	1003	0.9	0.0	0.9	0.18	0.32	0.46	0.94	1.46	2.67
1003	0.4	0.0	0.4	0.18	0.32	0.46	0.94	1.46	2.67	1004	1.3	0.0	1.3	0.18	0.32	0.46	0.94	1.46	2.67
1004	0.6	0.0	0.6	0.18	0.32	0.46	0.94	1.46	2.67	1005	1.9	0.0	1.9	0.18	0.32	0.46	0.94	1.46	2.67
1005	0.6	0.0	0.6	0.18	0.32	0.46	0.94	1.46	2.67										
1010	0.6	0.0	0.6	0.18	0.32	0.46	0.94	1.46	2.67	1011	0.6	0.0	0.6	0.18	0.32	0.46	0.94	1.46	2.67
1011	0.4	0.0	0.4	0.18	0.32	0.46	0.94	1.46	2.67	1012	1.0	0.0	1.0	0.18	0.32	0.46	0.94	1.46	2.67
1012	0.9	0.0	0.9	0.18	0.32	0.46	0.94	1.46	2.67	1013	1.9	0.0	1.9	0.18	0.32	0.46	0.94	1.46	2.67
1013	1.1	0.0	1.1	0.18	0.32	0.46	0.94	1.46	2.67	1014	5.5	0.0	5.5	0.18	0.32	0.46	0.94	1.46	2.67
1014	3.8	0.0	3.8	0.18	0.32	0.46	0.94	1.46	2.67	1015	9.3	0.0	9.3	0.18	0.32	0.46	0.94	1.46	2.67
1015	3.4	1.0	2.4	0.17	0.31	0.43	0.85	1.28	2.31	1016	12.7	1.0	11.7	0.18	0.32	0.45	0.91	1.41	2.57
1016	16.2	4.1	12.1	0.17	0.31	0.44	0.86	1.31	2.36	1017	28.9	5.1	23.8	0.17	0.31	0.44	0.88	1.35	2.45
1017	4.6	2.8	1.8	0.15	0.30	0.41	0.75	1.09	1.92										
1020	0.7	0.0	0.7	0.18	0.32	0.46	0.94	1.46	2.67	1021	0.7	0.0	0.7	0.18	0.32	0.46	0.94	1.46	2.67
1021	0.5	0.0	0.5	0.18	0.32	0.46	0.94	1.46	2.67	1022	1.2	0.0	1.2	0.18	0.32	0.46	0.94	1.46	2.67
1022	1.7	0.0	1.7	0.18	0.32	0.46	0.94	1.46	2.67	1023	2.9	0.0	2.9	0.18	0.32	0.46	0.94	1.46	2.67
1023	0.3	0.0	0.3	0.18	0.32	0.46	0.94	1.46	2.67	1024	3.2	0.0	3.2	0.18	0.32	0.46	0.94	1.46	2.67
1024	1.8	0.0	1.8	0.18	0.32	0.46	0.94	1.46	2.67	1025	5.0	0.0	5.0	0.18	0.32	0.46	0.94	1.46	2.67
1025	3.4	0.0	3.4	0.18	0.32	0.46	0.94	1.46	2.67	1026	8.4	0.0	8.4	0.18	0.32	0.46	0.94	1.46	2.67
1026	6.2	0.0	6.2	0.18	0.32	0.46	0.94	1.46	2.67	1027	14.6	0.0	14.6	0.18	0.32	0.46	0.94	1.46	2.67
1027	9.9	0.0	9.9	0.18	0.32	0.46	0.94	1.46	2.67	1028	24.5	0.0	24.5	0.18	0.32	0.46	0.94	1.46	2.67
1028	4.0	2.0	2.0	0.16	0.30	0.42	0.78	1.16	2.06	1029	62.0	9.9	52.1	0.17	0.31	0.45	0.89	1.36	2.47
1029	33.7	26.3	7.4	0.14	0.29	0.39	0.69	0.98	1.71	1030	95.7	36.2	59.5	0.16	0.30	0.43	0.82	1.23	2.20
1030	83.9	54.2	29.7	0.15	0.29	0.40	0.73	1.07	1.88	1031	179.6	90.4	89.2	0.15	0.30	0.41	0.78	1.15	2.05
1031	176.1	116.9	59.2	0.15	0.29	0.40	0.73	1.06	1.85	1032	355.7	207.3	148.4	0.15	0.30	0.41	0.75	1.10	1.95
1032	75.8	75.5	0.3	0.13	0.28	0.37	0.62	0.85	1.44	1033	431.5	282.8	148.7	0.15	0.29	0.40	0.73	1.06	1.86
1033	133.0	133.0	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1034	564.5	415.8	148.7	0.14	0.29	0.39	0.70	1.01	1.76
1034	46.5	46.5	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1035	611.0	462.3	148.7	0.14	0.29	0.39	0.70	1.00	1.74
1035	59.0	59.0	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1036	670.0	521.3	148.7	0.14	0.29	0.39	0.69	0.99	1.71
1036	348.9	341.2	7.7	0.13	0.28	0.37	0.63	0.86	1.47	1037	1,018.9	862.5	156.4	0.14	0.29	0.38	0.67	0.94	1.63
1037	84.2	84.2	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1038	1,103.1	946.7	156.4	0.14	0.29	0.38	0.67	0.94	1.61

Rainfall Depths
2-Year - Expected Value - Proposed Condition

	Area	< 2000	> 2000	Rainfall Depth							Area	< 2000	> 2000	Rainfall Depth					
Subarea	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr	Node	(ac)	(ac)	(ac)	5-min	30-min	1-hr	3-hr	6-hr	24-hr
		X		0.13	0.28	0.37	0.62	0.85	1.44			X		0.13	0.28	0.37	0.62	0.85	1.44
			X	0.18	0.32	0.46	0.94	1.46	2.67				X	0.18	0.32	0.46	0.94	1.46	2.67
1038	426.5	358.5	68.0	0.14	0.29	0.38	0.67	0.95	1.64	1039	1,529.6	1,305.2	224.4	0.14	0.29	0.38	0.67	0.94	1.62
1039	584.2	520.2	64.0	0.14	0.28	0.38	0.66	0.92	1.57	1040	2,113.8	1,825.4	288.4	0.14	0.29	0.38	0.66	0.93	1.61
1040	629.8	628.6	1.2	0.13	0.28	0.37	0.62	0.85	1.44	1041	2,743.6	2,454.0	289.6	0.14	0.28	0.38	0.65	0.91	1.57
1041	135.8	135.8	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1042	2,879.4	2,589.8	289.6	0.14	0.28	0.38	0.65	0.91	1.56
1042	475.9	475.9	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1043	3,355.3	3,065.7	289.6	0.13	0.28	0.38	0.65	0.90	1.55
1043	165.2	165.2	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1044	3,520.5	3,230.9	289.6	0.13	0.28	0.38	0.65	0.90	1.54
1044	339.3	339.3	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1045	3,859.8	3,570.2	289.6	0.13	0.28	0.38	0.64	0.90	1.53
1045	155.5	155.5	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1046	4,015.3	3,725.7	289.6	0.13	0.28	0.38	0.64	0.89	1.53
1046	190.7	190.7	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1047	4,206.0	3,916.4	289.6	0.13	0.28	0.38	0.64	0.89	1.52
1047	200.9	200.9	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1048	4,406.9	4,117.3	289.6	0.13	0.28	0.38	0.64	0.89	1.52
1048	3,383.3	3,383.3	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1049	7,790.2	7,500.6	289.6	0.13	0.28	0.37	0.63	0.87	1.49
1049	496.3	496.3	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1050	8,286.5	7,996.9	289.6	0.13	0.28	0.37	0.63	0.87	1.48
1050	300.9	300.9	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1051	8,587.4	8,297.8	289.6	0.13	0.28	0.37	0.63	0.87	1.48
1051	365.0	365.0	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1052	8,952.4	8,662.8	289.6	0.13	0.28	0.37	0.63	0.87	1.48
1052	679.9	679.9	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1053	9,632.3	9,342.7	289.6	0.13	0.28	0.37	0.63	0.87	1.48
1053	2,538.8	2,538.8	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1054	12,171.1	11,881.5	289.6	0.13	0.28	0.37	0.63	0.86	1.47
1054	351.6	351.6	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1055	12,522.7	12,233.1	289.6	0.13	0.28	0.37	0.63	0.86	1.47
1055	367.9	367.9	0.0	0.13	0.28	0.37	0.62	0.85	1.44	1056	12,890.6	12,601.0	289.6	0.13	0.28	0.37	0.63	0.86	1.47
1056	5,665.4	5,037.9	627.5	0.14	0.28	0.38	0.66	0.92	1.58	1057	18,556.0	17,638.9	917.1	0.13	0.28	0.37	0.64	0.88	1.50

Channel Hydraulics, Travel Times, Times of Concentration, and Lag Estimates
2-Year - Expected Value - Proposed Condition

U/S Node	D/S Node	U/S Elevation	D/S Elevation	Length (ft)	Manning (n)	Base (ft)	Sideslope (z)	Height (ft)	Q(2) (cfs)	Dn (ft)	V (fps)	Tt (min)	Tc (min)	Lag (hr)
	1036		1100		Data from Rational Method Analysis:				56.21				31.03	0.41
1036	1037	1100	1010	1517	0.040	7	1	7	138.92	1.59	10.16	2.49	33.52	0.45
1037	1038	1010	925	2069	0.040	8	1	8	192.54	1.99	9.69	3.56	37.08	0.49
1038	1039	925	873	1383	0.040	8	1	8	192.58	2.04	9.39	2.45	39.53	0.53
1039	1040	873	780	2714	0.040	9	1	9	234.70	2.21	9.49	4.76	44.30	0.59
1040	1041	780	695	2758	0.040	10	1	10	303.94	2.50	9.75	4.71	49.01	0.65
1041	1042	695	650	1846	0.040	15	1	10	334.68	2.25	8.63	3.56	52.58	0.70
1042	1043	650	600	2257	0.040	15	1	10	336.96	2.32	8.38	4.49	57.07	0.76
1043	1044	600	580	1011	0.040	20	1	10	337.14	2.03	7.55	2.23	59.30	0.79
1044	1045	580	540	1918	0.040	20	1	10	337.08	2.00	7.68	4.16	63.46	0.85
1045	1046	540	515	1273	0.040	20	1	10	342.30	2.05	7.57	2.80	66.27	0.88
1046	1047	515	485	1705	0.040	20	1	10	346.50	2.14	7.33	3.88	70.14	0.94
1047	1048	485	445	2398	0.040	20	1	10	346.68	2.17	7.21	5.55	75.69	1.01
1048	1049	445	400	2427	0.040	20	1	10	346.55	2.10	7.46	5.42	81.11	1.08
1049	1050	400	390	616	0.040	20	1	15	444.07	2.54	7.77	1.32	82.43	1.10
1050	1051	390	330	4501	0.040	20	1	15	456.57	2.73	7.35	10.21	92.65	1.24
1051	1052	330	300	2333	0.040	20	1	15	456.73	2.76	7.26	5.36	98.00	1.31
1052	1053	300	265	3322	0.040	20	1	15	456.58	2.93	6.79	8.15	106.16	1.42
1053	1054	265	245	1390	0.040	20	1	15	456.69	2.67	7.54	3.07	109.23	1.46
1054	1055	245	215	2724	0.040	25	1	15	503.05	2.69	6.76	6.72	115.95	1.55
1055	1056	215	185	2880	0.040	25	1	15	503.33	2.73	6.64	7.23	123.18	1.64
1056	1057	185	165	2367	0.040	30	1	15	503.34	2.61	5.91	6.67	129.85	1.73

Losses

Node	U1036
Total Area (ac)	670.1
24-Hour Rainfall Depth (in)	1.71
Fm (in/hr)	0.60
Y-Bar	0.78

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	25.9	0.0	83.0	421.9	25.9	0.0	83.0	421.9
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.1	9.1	0.0	0.0	0.1	9.1
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	11.7	0.0	47.1	69.4	11.7	0.0	47.1	69.4
Woodland (Fair)	100	36	60	73	79	0.0	0.0	0.1	0.8	0.0	0.0	0.1	0.8
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.07	0.15
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.07	0.15
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.07	0.15
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.07	0.15
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.07	0.15
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.19	0.37	0.53	0.62
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.03	0.15	0.25
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.11	0.25	0.37
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.07	0.21	0.32
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.08	0.23	0.32
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.01	0.09	0.19
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.05	0.18	0.30
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.01	0.12	0.21
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.18	0.37	0.53	0.66
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.04	0.18	0.27
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.07	0.21	0.32
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.04	0.18	0.27

Losses

Node	U1037
Total Area (ac)	1,019.0
24-Hour Rainfall Depth (in)	1.63
Fm (in/hr)	0.60
Y-Bar	0.80

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	23.7	0.0	82.5	2.5	49.6	0.0	165.5	424.4
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	24.2	10.6	0.0	0.0	24.3	19.7
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	6.7	0.0	114.0	84.7	18.4	0.0	161.1	154.1
Woodland (Fair)	100	36	60	73	79	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.18	0.36	0.52	0.60
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.02	0.13	0.24
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.09	0.24	0.36
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.06	0.20	0.30
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.07	0.22	0.30
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.08	0.18
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.04	0.16	0.28
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.01	0.11	0.20
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.16	0.36	0.52	0.65
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.16	0.26
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.06	0.20	0.30
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.16	0.26

Losses

Node	U1038
Total Area (ac)	1,103.1
24-Hour Rainfall Depth (in)	1.61
Fm (in/hr)	0.60
Y-Bar	0.81

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	10.2	0.0	31.2	1.2	59.8	0.0	196.7	425.6
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	4.7	1.9	0.0	0.0	29.0	21.6
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.4	0.0	17.5	17.0	18.8	0.0	178.6	171.1
Woodland (Fair)	100	36	60	73	79	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.18	0.35	0.52	0.60
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.02	0.13	0.23
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.09	0.23	0.35
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.06	0.19	0.30
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.07	0.21	0.30
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.08	0.18
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.04	0.16	0.28
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.01	0.10	0.19
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.16	0.35	0.52	0.64
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.16	0.25
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.06	0.19	0.30
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.16	0.25

Losses

Node	U1039
Total Area (ac)	1,529.7
24-Hour Rainfall Depth (in)	1.62
Fm (in/hr)	0.60
Y-Bar	0.81

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	55.8	0.0	106.0	28.5	115.6	0.0	302.7	454.1
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	1.9	0.8	0.0	0.0	30.9	22.4
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	25.5	0.0	0.0	0.0	26.5
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	2.3	0.0	112.0	92.9	21.1	0.0	290.6	264.0
Woodland (Fair)	100	36	60	73	79	0.2	0.0	0.7	0.0	0.2	0.0	0.8	0.8
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.18	0.35	0.52	0.60
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.02	0.13	0.23
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.09	0.23	0.35
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.06	0.20	0.30
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.07	0.21	0.30
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.08	0.18
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.04	0.16	0.28
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.01	0.10	0.20
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.16	0.35	0.52	0.65
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.16	0.26
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.06	0.20	0.30
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.16	0.26

Losses

Node	U1040
Total Area (ac)	2,113.7
24-Hour Rainfall Depth (in)	1.61
Fm (in/hr)	0.60
Y-Bar	0.81

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	31.1	0.0	122.3	129.9	146.7	0.0	425.0	584.0
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	4.4	0.0	0.0	30.9	26.8
Grass (Fair)	100	50	69	79	84	2.2	0.0	1.6	12.7	2.2	0.0	1.6	39.2
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	12.1	0.0	137.4	116.4	33.2	0.0	428.0	380.4
Woodland (Fair)	100	36	60	73	79	8.7	0.0	0.9	2.9	8.9	0.0	1.7	3.7
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	1.3	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.13
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.18	0.35	0.52	0.60
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.02	0.13	0.23
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.09	0.23	0.35
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.06	0.19	0.30
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.07	0.21	0.30
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.08	0.18
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.04	0.16	0.28
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.01	0.10	0.19
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.16	0.35	0.52	0.64
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.16	0.25
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.06	0.19	0.30
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.16	0.25

Losses

Node	U1041
Total Area (ac)	2,743.6
24-Hour Rainfall Depth (in)	1.57
Fm (in/hr)	0.60
Y-Bar	0.82

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	30.0	0.0	87.4	36.1	176.7	0.0	512.4	620.1
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	0.0	30.9	26.8
Grass (Fair)	100	50	69	79	84	1.2	0.0	10.4	56.8	3.4	0.0	12.0	96.0
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	28.6	0.0	138.6	220.7	61.8	0.0	566.6	601.1
Woodland (Fair)	100	36	60	73	79	14.7	0.0	2.9	0.9	23.6	0.0	4.6	4.6
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	1.6	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.12
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.12
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.12
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.12
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.06	0.12
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.17	0.34	0.51	0.59
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.02	0.12	0.22
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.09	0.22	0.34
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.06	0.19	0.29
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.06	0.20	0.29
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.07	0.17
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.15	0.27
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.01	0.10	0.19
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.15	0.34	0.51	0.64
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.15	0.24
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.06	0.19	0.29
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.15	0.24

Losses

Node	U1042
Total Area (ac)	2,879.3
24-Hour Rainfall Depth (in)	1.56
Fm (in/hr)	0.60
Y-Bar	0.82

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	1.3	0.0	25.1	18.0	178.0	0.0	537.5	638.1
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	0.0	30.9	26.8
Grass (Fair)	100	50	69	79	84	0.2	0.0	3.2	2.2	3.6	0.0	15.2	98.2
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	2.2	0.0	28.6	44.1	64.0	0.0	595.2	645.2
Woodland (Fair)	100	36	60	73	79	5.3	0.0	0.9	4.6	28.9	0.0	5.5	9.2
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.17	0.34	0.51	0.59
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.02	0.12	0.22
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.08	0.22	0.34
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.18	0.29
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.06	0.20	0.29
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.07	0.17
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.15	0.27
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.10	0.18
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.15	0.34	0.51	0.64
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.15	0.24
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.18	0.29
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.03	0.15	0.24

Losses

Node	U1043
Total Area (ac)	3,355.1
24-Hour Rainfall Depth (in)	1.55
Fm (in/hr)	0.60
Y-Bar	0.82

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	5.5	6.4	52.9	95.6	183.5	6.4	590.4	733.7
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	13.5	0.0	0.0	0.0	44.4	26.8
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.6	3.6	0.0	15.2	98.8
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	8.0	2.6	57.9	213.7	72.0	2.6	653.1	858.9
Woodland (Fair)	100	36	60	73	79	1.1	9.6	0.0	8.4	30.0	9.6	5.5	17.6
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.16	0.34	0.50	0.59
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.12	0.22
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.08	0.22	0.34
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.18	0.29
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.06	0.20	0.29
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.07	0.16
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.15	0.26
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.09	0.18
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.15	0.34	0.50	0.63
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.15	0.24
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.18	0.29
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.15	0.24

Losses

Node	U1044
Total Area (ac)	3,520.2
24-Hour Rainfall Depth (in)	1.54
Fm (in/hr)	0.60
Y-Bar	0.82

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	1.3	0.4	27.5	33.2	184.8	6.8	617.9	766.9
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.7	7.6	0.0	0.0	0.7	52.0	26.8
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	3.6	0.0	15.2	98.8
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	1.3	1.6	32.5	50.7	73.3	4.2	685.6	909.6
Woodland (Fair)	100	36	60	73	79	0.9	2.8	0.9	3.7	30.9	12.4	6.4	21.3
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.16	0.34	0.50	0.59
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.12	0.22
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.08	0.22	0.34
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.18	0.28
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.06	0.20	0.28
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.07	0.16
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.15	0.26
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.09	0.18
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.15	0.34	0.50	0.63
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.15	0.24
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.18	0.28
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.15	0.24

Losses

Node	U1045
Total Area (ac)	3,859.5
24-Hour Rainfall Depth (in)	1.53
Fm (in/hr)	0.60
Y-Bar	0.82

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	6.2	4.5	90.4	75.7	191.0	11.3	708.3	842.6
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	2.2	0.0	0.0	0.7	54.2	26.8
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	3.6	0.0	15.2	98.8
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	2.0	2.4	49.6	85.1	75.3	6.6	735.2	994.7
Woodland (Fair)	100	36	60	73	79	6.0	0.2	6.7	8.3	36.9	12.6	13.1	29.6
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.16	0.33	0.50	0.58
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.12	0.22
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.08	0.22	0.33
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.18	0.28
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.06	0.20	0.28
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.07	0.16
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.15	0.26
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.09	0.18
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.15	0.33	0.50	0.63
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.15	0.24
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.18	0.28
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.15	0.24

Losses

Node	U1046
Total Area (ac)	4,015.1
24-Hour Rainfall Depth (in)	1.53
Fm (in/hr)	0.60
Y-Bar	0.82

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.1	6.7	90.0	1.6	191.1	18.0	798.3	844.2
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.2	3.8	0.0	0.0	0.9	58.0	26.8
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	3.6	0.0	15.2	98.8
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	1.1	42.9	1.7	75.3	7.7	778.1	996.4
Woodland (Fair)	100	36	60	73	79	0.0	1.0	0.8	5.7	36.9	13.6	13.9	35.3
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.12
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.16	0.33	0.50	0.58
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.12	0.22
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.08	0.22	0.33
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.18	0.28
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.06	0.20	0.28
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.07	0.16
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.15	0.26
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.09	0.18
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.15	0.33	0.50	0.63
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.15	0.24
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.18	0.28
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.15	0.24

Losses

Node	U1047
Total Area (ac)	4,206.0
24-Hour Rainfall Depth (in)	1.52
Fm (in/hr)	0.60
Y-Bar	0.83

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	7.4	88.5	2.6	191.1	25.4	886.8	846.8
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	12.7	0.7	0.0	0.9	70.7	27.5
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.7	1.1	3.6	0.0	15.9	99.9
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	4.7	48.3	7.1	75.3	12.4	826.4	1,003.5
Woodland (Fair)	100	36	60	73	79	0.0	2.7	5.7	8.7	36.9	16.3	19.6	44.0
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.16	0.33	0.50	0.58
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.08	0.21	0.33
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.18	0.28
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.06	0.19	0.28
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.07	0.16
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.14	0.26
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.09	0.18
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.33	0.50	0.63
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.18	0.28
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	U1048
Total Area (ac)	4,407.0
24-Hour Rainfall Depth (in)	1.52
Fm (in/hr)	0.60
Y-Bar	0.83

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	1.8	86.1	6.8	191.1	27.2	972.9	853.6
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	0.9	70.7	27.5
Grass (Fair)	100	50	69	79	84	0.0	3.0	4.7	6.3	3.6	3.0	20.6	106.2
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	0.0	47.3	2.8	75.3	12.4	873.7	1,006.3
Woodland (Fair)	100	36	60	73	79	0.0	8.1	22.4	11.7	36.9	24.4	42.0	55.7
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.16	0.33	0.50	0.58
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.08	0.21	0.33
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.18	0.28
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.06	0.19	0.28
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.07	0.16
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.14	0.26
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.09	0.18
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.33	0.50	0.63
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.18	0.28
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	E1049
Total Area (ac)	7,790.2
24-Hour Rainfall Depth (in)	1.49
Fm (in/hr)	0.60
Y-Bar	0.84

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	2.2	1.0	0.0	0.0	2.2	1.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	39.1	70.7	709.7	141.9	230.2	97.9	1,682.6	995.5
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	2.0	78.3	21.6	0.0	2.9	149.0	49.1
Grass (Fair)	100	50	69	79	84	26.9	65.1	92.3	481.5	30.5	68.1	112.9	587.7
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.4
Open Brush (Fair)	100	46	66	77	83	43.6	39.6	838.8	419.6	118.9	52.0	1,712.5	1,425.9
Woodland (Fair)	100	36	60	73	79	72.7	81.7	84.4	70.1	109.6	106.1	126.4	125.8
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.33	0.49	0.58
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.21	0.33
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.19	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.33	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	E1050
Total Area (ac)	8,287.9
24-Hour Rainfall Depth (in)	1.48
Fm (in/hr)	0.60
Y-Bar	0.84

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.9	6.9	0.0	0.0	0.9	6.9
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	1.1	0.2	0.0	0.0	3.3	1.2
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.0	88.3	2.5	230.2	97.9	1,770.9	998.0
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	2.9	149.0	49.1
Grass (Fair)	100	50	69	79	84	0.3	2.2	36.5	62.6	30.8	70.3	149.4	650.3
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Open Brush (Fair)	100	46	66	77	83	0.2	0.2	245.3	9.2	119.1	52.2	1,957.8	1,435.1
Woodland (Fair)	100	36	60	73	79	1.1	0.4	38.0	1.8	110.7	106.5	164.4	127.6
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.21	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.19	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	E1051
Total Area (ac)	8,742.1
24-Hour Rainfall Depth (in)	1.48
Fm (in/hr)	0.60
Y-Bar	0.84

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.7	0.0	0.0	23.1	0.7	0.0	0.9	30.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	1.3	7.1	0.0	0.0	4.6	8.3
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.0	9.1	40.7	230.2	97.9	1,780.0	1,038.7
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	2.9	149.0	49.1
Grass (Fair)	100	50	69	79	84	1.8	3.2	5.8	178.6	32.6	73.5	155.2	828.9
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Open Brush (Fair)	100	46	66	77	83	0.0	2.2	29.6	93.4	119.1	54.4	1,987.4	1,528.5
Woodland (Fair)	100	36	60	73	79	6.5	10.9	8.8	31.4	117.2	117.4	173.2	159.0
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.21	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.19	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	E1052
Total Area (ac)	9,032.9
24-Hour Rainfall Depth (in)	1.48
Fm (in/hr)	0.60
Y-Bar	0.84

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.7	0.0	0.9	30.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	1.1	0.0	0.0	1.1	1.1	0.0	0.0	1.1
Barren (Poor)	100	78	86	91	93	7.2	0.0	4.3	36.1	7.2	0.0	8.9	44.4
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.0	14.1	14.6	230.2	97.9	1,794.1	1,053.3
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	2.9	149.0	49.1
Grass (Fair)	100	50	69	79	84	1.4	0.0	14.5	104.4	34.0	73.5	169.7	933.3
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Open Brush (Fair)	100	46	66	77	83	4.7	0.0	12.1	28.8	123.8	54.4	1,999.5	1,557.3
Woodland (Fair)	100	36	60	73	79	12.1	0.0	0.2	34.1	129.3	117.4	173.4	193.1
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.21	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.19	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	E1053
Total Area (ac)	9,881.3
24-Hour Rainfall Depth (in)	1.48
Fm (in/hr)	0.60
Y-Bar	0.83

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	16.9	12.9	0.7	0.0	17.8	42.9
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.1
Barren (Poor)	100	78	86	91	93	0.9	0.0	8.7	4.9	8.1	0.0	17.6	49.3
Chaparral, Broadleaf (Fair)	100	40	63	75	81	1.6	0.0	66.6	12.5	231.8	97.9	1,860.7	1,065.8
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	2.9	149.0	49.1
Grass (Fair)	100	50	69	79	84	13.1	21.8	24.9	325.9	47.1	95.3	194.6	1,259.2
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Open Brush (Fair)	100	46	66	77	83	3.2	4.2	63.5	125.0	127.0	58.6	2,063.0	1,682.3
Woodland (Fair)	100	36	60	73	79	16.9	4.4	47.0	73.5	146.2	121.8	220.4	266.6
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.21	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.19	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	E1054
Total Area (ac)	12,304.1
24-Hour Rainfall Depth (in)	1.47
Fm (in/hr)	0.60
Y-Bar	0.83

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.7	0.7	0.0	17.8	43.6
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.7	1.1	0.0	0.0	1.8
Barren (Poor)	100	78	86	91	93	12.0	12.5	12.3	30.7	20.1	12.5	29.9	80.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	21.7	265.4	53.4	231.8	119.6	2,126.1	1,119.2
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.9	0.7	0.0	2.9	149.9	49.8
Grass (Fair)	100	50	69	79	84	5.0	143.5	255.0	594.1	52.1	238.8	449.6	1,853.3
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Open Brush (Fair)	100	46	66	77	83	0.0	25.8	361.1	275.5	127.0	84.4	2,424.1	1,957.8
Woodland (Fair)	100	36	60	73	79	1.3	97.0	166.1	87.4	147.5	218.8	386.5	354.0
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.20
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.20	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.18	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.13	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.13	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22

Losses

Node	E1055
Total Area (ac)	12,628.7
24-Hour Rainfall Depth (in)	1.47
Fm (in/hr)	0.60
Y-Bar	0.83

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	2.2	0.7	0.0	17.8	45.8
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.8
Barren (Poor)	100	78	86	91	93	0.0	6.9	0.4	0.2	20.1	19.4	30.3	80.2
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	5.8	71.9	4.6	231.8	125.4	2,198.0	1,123.8
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.2	0.2	0.0	2.9	150.1	50.0
Grass (Fair)	100	50	69	79	84	7.2	22.6	14.6	45.5	59.3	261.4	464.2	1,898.8
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Open Brush (Fair)	100	46	66	77	83	1.8	7.9	66.5	16.9	128.8	92.3	2,490.6	1,974.7
Woodland (Fair)	100	36	60	73	79	5.5	9.5	23.3	10.9	153.0	228.3	409.8	364.9
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.20
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.20	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.18	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.13	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.13	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22

Losses

Node	E1056
Total Area (ac)	13,021.5
24-Hour Rainfall Depth (in)	1.47
Fm (in/hr)	0.59
Y-Bar	0.83

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	2.7	0.0	0.0	0.0	2.7
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	8.6	142.3	0.7	0.0	26.4	188.1
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.8
Barren (Poor)	100	78	86	91	93	0.0	1.8	2.4	32.6	20.1	21.2	32.7	112.8
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.0	0.0	4.7	231.8	125.4	2,198.0	1,128.5
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.7	0.0	2.9	150.1	50.7
Grass (Fair)	100	50	69	79	84	1.8	14.8	1.3	110.4	61.1	276.2	465.5	2,009.2
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Open Brush (Fair)	100	46	66	77	83	1.1	1.2	0.2	36.4	129.9	93.5	2,490.8	2,011.1
Woodland (Fair)	100	36	60	73	79	9.3	5.1	0.0	14.6	162.3	233.4	409.8	379.5
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.8

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.20
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.20	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.18	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.13	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.13	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22

Losses

Node	E1057
Total Area (ac)	18,580.6
24-Hour Rainfall Depth (in)	1.50
Fm (in/hr)	0.59
Y-Bar	0.82

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	12.8	87.5	0.7	0.0	39.2	275.6
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.8
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	20.1	21.2	32.7	112.8
Chaparral, Broadleaf (Fair)	100	40	63	75	81	38.9	18.5	554.0	1,538.1	270.7	143.9	2,752.0	2,666.6
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	22.0	0.0	2.9	150.1	72.7
Grass (Fair)	100	50	69	79	84	2.0	18.9	54.6	411.3	63.1	295.1	520.1	2,420.5
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Open Brush (Fair)	100	46	66	77	83	40.3	25.4	369.0	1,877.2	170.2	118.9	2,859.8	3,888.3
Woodland (Fair)	100	36	60	73	79	74.7	105.0	37.1	270.1	237.0	338.4	446.9	649.6
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	1.7	0.0	0.0	0.0	2.5

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.16	0.33	0.49	0.58
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.08	0.21	0.33
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.28
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.06	0.19	0.28
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.07	0.16
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.09	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.33	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.28
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	P1049
Total Area (ac)	7,790.2
24-Hour Rainfall Depth (in)	1.49
Fm (in/hr)	0.60
Y-Bar	0.84

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	1.1	13.1	26.5	0.0	1.1	13.1	26.5
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	2.2	1.0	0.0	0.0	2.2	1.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	38.0	70.0	710.2	145.3	229.1	97.2	1,683.1	998.9
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	2.0	75.6	21.6	0.0	2.9	146.3	49.1
Grass (Fair)	100	50	69	79	84	10.9	38.4	89.7	367.2	14.5	41.4	110.3	473.4
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	37.8	37.4	819.4	373.6	113.1	49.8	1,693.1	1,379.9
Woodland (Fair)	100	36	60	73	79	53.6	77.2	82.2	58.4	90.5	101.6	124.2	114.1
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	42.0	32.9	13.1	142.8	42.0	32.9	13.1	142.8

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.33	0.49	0.58
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.21	0.33
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.19	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.33	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	P1050
Total Area (ac)	8,286.4
24-Hour Rainfall Depth (in)	1.48
Fm (in/hr)	0.60
Y-Bar	0.84

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	1.1	13.1	26.5
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	2.2	1.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.0	53.0	41.6	229.1	97.2	1,736.1	1,040.5
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	2.9	146.3	49.1
Grass (Fair)	100	50	69	79	84	0.3	2.2	318.8	29.9	14.8	43.6	429.1	503.3
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.2	0.2	33.3	8.6	113.3	50.0	1,726.4	1,388.5
Woodland (Fair)	100	36	60	73	79	1.1	0.4	4.8	1.8	91.6	102.0	129.0	115.9
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	42.0	32.9	13.1	142.8

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.21	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.19	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	P1051
Total Area (ac)	8,587.1
24-Hour Rainfall Depth (in)	1.48
Fm (in/hr)	0.60
Y-Bar	0.84

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.7	0.0	0.0	5.1	0.7	0.0	0.0	5.1
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	7.8	0.0	1.1	13.1	34.3
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.6	0.0	0.0	2.2	1.6
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.0	5.6	57.5	229.1	97.2	1,741.7	1,098.0
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	2.9	146.3	49.1
Grass (Fair)	100	50	69	79	84	1.8	3.2	38.2	92.5	16.6	46.8	467.3	595.8
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	2.2	3.8	14.6	113.3	52.2	1,730.2	1,403.1
Woodland (Fair)	100	36	60	73	79	6.5	10.9	7.0	31.4	98.1	112.9	136.0	147.3
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	11.3	42.0	32.9	13.1	154.1

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.21	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.19	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	P1052
Total Area (ac)	8,952.0
24-Hour Rainfall Depth (in)	1.48
Fm (in/hr)	0.60
Y-Bar	0.84

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.7	0.0	0.0	5.1
3-4 Dwellings / Acre	60	32	56	69	75	7.6	0.0	27.3	85.5	7.6	1.1	40.4	119.8
Public Park	85	32	56	69	75	1.1	0.0	0.0	0.0	1.1	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	3.8	0.0	3.3	7.3	3.8	0.0	5.5	8.9
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.4	0.7	49.5	229.1	97.6	1,742.4	1,147.5
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	2.9	146.3	49.1
Grass (Fair)	100	50	69	79	84	0.6	0.0	0.0	13.5	17.2	46.8	467.3	609.3
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.4	0.0	0.3	0.8	113.7	52.2	1,730.5	1,403.9
Woodland (Fair)	100	36	60	73	79	10.1	0.0	0.2	15.0	108.2	112.9	136.2	162.3
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	2.9	3.8	0.0	130.8	44.9	36.7	13.1	284.9

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.21	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.19	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	P1053
Total Area (ac)	9,632.2
24-Hour Rainfall Depth (in)	1.48
Fm (in/hr)	0.59
Y-Bar	0.84

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	7.7	3.3	0.7	0.0	7.7	8.4
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	17.9	12.7	7.6	1.1	58.3	132.5
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.9	0.0	8.5	4.9	4.7	0.0	14.0	13.8
Chaparral, Broadleaf (Fair)	100	40	63	75	81	1.6	0.0	47.2	79.8	230.7	97.6	1,789.6	1,227.3
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	2.9	146.3	49.1
Grass (Fair)	100	50	69	79	84	12.5	11.4	17.2	105.1	29.7	58.2	484.5	714.4
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	2.9	1.3	49.1	67.8	116.6	53.5	1,779.6	1,471.7
Woodland (Fair)	100	36	60	73	79	16.9	4.2	43.1	49.4	125.1	117.1	179.3	211.7
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.9	9.3	0.0	104.6	45.8	46.0	13.1	389.5

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.21	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.19	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

Losses

Node	P1054
Total Area (ac)	12,171.0
24-Hour Rainfall Depth (in)	1.47
Fm (in/hr)	0.58
Y-Bar	0.84

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.7	0.0	7.7	8.4
3-4 Dwellings / Acre	60	32	56	69	75	14.7	24.7	56.8	499.3	22.3	25.8	115.1	631.8
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	12.5	0.0	15.4	4.7	12.5	14.0	29.2
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	36.3	295.4	38.1	230.7	133.9	2,085.0	1,265.4
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.9	0.7	0.0	2.9	147.2	49.8
Grass (Fair)	100	50	69	79	84	2.3	99.2	140.4	282.8	32.0	157.4	624.9	997.2
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	22.9	312.4	171.9	116.6	76.4	2,092.0	1,643.6
Woodland (Fair)	100	36	60	73	79	1.3	92.6	153.3	72.0	126.4	209.7	332.6	283.7
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	9.8	102.4	80.7	45.8	55.8	115.5	470.2

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.20
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.20	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.18	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.13	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.13	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22

Losses

Node	P1055
Total Area (ac)	12,522.5
24-Hour Rainfall Depth (in)	1.47
Fm (in/hr)	0.58
Y-Bar	0.85

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	1.2	0.7	0.0	7.7	9.6
3-4 Dwellings / Acre	60	32	56	69	75	0.4	0.0	0.3	50.1	22.7	25.8	115.4	681.9
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	6.9	0.4	0.2	4.7	19.4	14.4	29.4
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	5.8	71.9	3.5	230.7	139.7	2,156.9	1,268.9
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.2	0.2	0.0	2.9	147.4	50.0
Grass (Fair)	100	50	69	79	84	6.8	22.6	14.6	33.5	38.8	180.0	639.5	1,030.7
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	1.8	7.9	66.5	9.5	118.4	84.3	2,158.5	1,653.1
Woodland (Fair)	100	36	60	73	79	5.5	9.5	23.3	8.9	131.9	219.2	355.9	292.6
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	45.8	55.8	115.5	470.2

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.20
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.20	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.18	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.13	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.13	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22

Losses

Node	P1056
Total Area (ac)	12,890.6
24-Hour Rainfall Depth (in)	1.47
Fm (in/hr)	0.58
Y-Bar	0.84

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	2.7	0.0	0.0	0.0	2.7
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	8.5	128.0	0.7	0.0	16.2	137.6
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	42.8	22.7	25.8	115.4	724.7
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	1.8	2.4	32.6	4.7	21.2	16.8	62.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.0	0.0	3.1	230.7	139.7	2,156.9	1,272.0
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.7	0.0	2.9	147.4	50.7
Grass (Fair)	100	50	69	79	84	1.8	14.8	1.3	74.3	40.6	194.8	640.8	1,105.0
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	1.1	1.2	0.2	21.8	119.5	85.5	2,158.7	1,674.9
Woodland (Fair)	100	36	60	73	79	9.3	5.1	0.0	13.8	141.2	224.3	355.9	306.4
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.8	45.8	55.8	115.5	471.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.04	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.15	0.32	0.49	0.57
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.20
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.07	0.20	0.32
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.05	0.18	0.27
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.06	0.15
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.02	0.13	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.08	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.13	0.32	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.04	0.17	0.27
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.13	0.22

Losses

Node	P1057
Total Area (ac)	18,555.7
24-Hour Rainfall Depth (in)	1.50
Fm (in/hr)	0.58
Y-Bar	0.83

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	1.4	48.3	0.7	0.0	17.6	185.9
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	145.9	398.0	22.7	25.8	261.3	1,122.7
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	4.7	21.2	16.8	62.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	38.9	18.5	540.8	1,590.5	269.6	158.2	2,697.7	2,862.5
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	22.0	0.0	2.9	147.4	72.7
Grass (Fair)	100	50	69	79	84	2.0	18.9	106.1	198.3	42.6	213.7	746.9	1,303.3
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	40.3	25.4	236.6	1,749.2	159.8	110.9	2,395.3	3,424.1
Woodland (Fair)	100	36	60	73	79	74.7	105.0	35.4	267.2	215.9	329.3	391.3	573.6
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	1.7	0.0	45.8	55.8	117.2	471.0

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.00	0.00	0.05	0.11
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.16	0.33	0.49	0.58
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.00	0.01	0.11	0.21
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.00	0.08	0.21	0.33
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.00	0.05	0.17	0.28
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.00	0.06	0.19	0.28
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.00	0.00	0.07	0.16
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.00	0.03	0.14	0.25
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.00	0.00	0.09	0.17
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.14	0.33	0.49	0.62
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.00	0.05	0.17	0.28
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.00	0.02	0.14	0.23

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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MP49002E.FLD
  TIME/DATE OF STUDY: 14:04 03/26/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1049.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    7790.200 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.080 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  1.000
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.840
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.13
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.28
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.37
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.63
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  0.87
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.49

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.714
          30-MINUTE FACTOR = 0.714
           1-HOUR FACTOR = 0.714
           3-HOUR FACTOR = 0.953
           6-HOUR FACTOR = 0.975
          24-HOUR FACTOR = 0.984

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   7.716


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.857	807.722
2	2.559	1602.933
3	4.761	2074.571
4	7.386	2473.194
5	10.752	3171.369
6	15.002	4003.586
7	20.525	5203.927
8	26.880	5987.055
9	33.122	5881.171
10	38.092	4682.432
11	42.009	3690.111
12	45.580	3363.764
13	48.591	2837.149
14	51.376	2623.979
15	53.598	2092.717
16	55.531	1821.361
17	57.208	1580.140
18	58.806	1505.709
19	60.349	1453.899
20	61.869	1431.509
21	63.196	1250.806
22	64.433	1165.192
23	65.603	1102.481
24	66.761	1090.607
25	67.854	1029.381
26	68.845	933.933
27	69.809	908.596
28	70.774	908.826
29	71.733	903.823
30	72.562	781.011
31	73.334	726.995
32	74.091	713.517
33	74.797	665.229
34	75.499	660.816
35	76.182	643.766
36	76.827	607.403
37	77.470	605.728
38	78.092	586.055
39	78.648	523.808
40	79.199	519.165
41	79.750	519.280
42	80.281	500.325
43	80.796	484.821
44	81.310	484.584
45	81.823	483.391
46	82.275	425.442
47	82.692	393.003
48	83.109	393.011
49	83.526	392.773
50	83.938	388.475
51	84.296	337.204
52	84.639	323.137
53	84.982	322.893
54	85.325	323.375
55	85.668	322.893
56	86.005	317.653
57	86.312	289.513
58	86.615	284.977
59	86.917	284.977
60	87.220	285.214
61	87.523	284.984
62	87.825	285.214

63	88.114	272.104
64	88.385	255.406
65	88.656	255.169
66	88.926	254.695
67	89.197	255.169
68	89.468	255.169
69	89.739	255.169
70	90.005	250.878
71	90.248	228.459
72	90.487	225.117
73	90.726	225.598
74	90.966	225.598
75	91.205	225.598
76	91.444	225.124
77	91.683	225.598
78	91.922	224.642
79	92.134	200.326
80	92.334	187.919
81	92.533	187.438
82	92.732	187.445
83	92.931	187.919
84	93.130	187.438
85	93.329	187.445
86	93.529	187.919
87	93.728	187.438
88	93.926	186.971
89	94.097	160.728
90	94.250	144.045
91	94.402	144.038
92	94.555	143.563
93	94.708	144.038
94	94.861	144.038
95	95.014	144.045
96	95.166	143.563
97	95.319	144.512
98	95.472	143.563
99	95.625	144.038
100	95.777	144.045
101	95.930	144.038
102	96.060	122.575
103	96.172	105.410
104	96.282	103.498
105	96.394	104.928
106	96.504	104.454
107	96.615	104.447
108	96.727	104.936
109	96.838	104.447
110	96.948	104.454
111	97.060	104.928
112	97.171	104.454
113	97.281	103.980
114	97.392	104.928
115	97.504	104.928
116	97.615	104.928
117	97.725	103.972
118	97.837	104.936
119	97.947	103.972
120	98.016	64.863
121	98.046	28.622
122	98.077	28.615
123	98.107	28.615
124	98.138	28.622
125	98.168	28.615
126	98.197	27.659
127	98.229	29.571
128	98.258	27.666
129	98.289	29.571
130	98.319	27.666
131	98.349	28.615
132	98.381	29.571
133	98.409	26.710
134	98.440	29.571
135	98.471	28.615
136	98.501	28.622
137	98.531	28.615
138	98.561	27.659
139	98.591	28.622
140	98.622	28.615
141	98.652	28.615
142	98.683	29.571
143	98.713	27.666
144	98.743	28.615
145	98.774	29.571
146	98.805	28.622
147	98.833	26.710
148	98.864	28.615
149	98.894	28.615
150	98.925	29.571

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 781.4597

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 168.5287

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                    2 4 - H O U R    S T O R M
                  R U N O F F    H Y D R O G R A P H

================================================================================
             HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
       (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      125.0     250.0     375.0     500.0
--------------------------------------------------------------------------------
  14.000     44.7983     87.71  .      Q  V         .         .         .
  14.083     45.4160     89.69  .      Q  V         .         .         .
  14.167     46.0512     92.22  .      Q  V         .         .         .
  14.250     46.7062     95.12  .      Q  .V        .         .         .
  14.333     47.3834     98.32  .      Q  .V        .         .         .
  14.417     48.0862    102.04  .       Q .V        .         .         .
  14.500     48.8186    106.34  .       Q .V        .         .         .
  14.583     49.5863    111.48  .       Q .V        .         .         .
  14.667     50.3933    117.17  .        Q.V        .         .         .
  14.750     51.2392    122.83  .        Q. V       .         .         .
  14.833     52.1190    127.75  .         Q V       .         .         .
  14.917     53.0286    132.07  .         Q V       .         .         .
  15.000     53.9669    136.24  .         Q V       .         .         .
  15.083     54.9321    140.16  .         .Q V      .         .         .
  15.167     55.9241    144.03  .         .Q V      .         .         .
  15.250     56.9411    147.67  .         .Q V      .         .         .
  15.333     57.9828    151.26  .         . QV      .         .         .
  15.417     59.0427    153.90  .         . Q V     .         .         .
  15.500     60.1153    155.74  .         . Q V     .         .         .
  15.583     61.1986    157.29  .         . Q V     .         .         .
  15.667     62.2917    158.72  .         . Q V     .         .         .
  15.750     63.3929    159.89  .         . Q  V    .         .         .
  15.833     64.5008    160.86  .         . Q  V    .         .         .
  15.917     65.6157    161.89  .         . Q  V    .         .         .
  16.000     66.7486    164.49  .         .  Q V    .         .         .
  16.083     68.1247    199.81  .         .   QV    .         .         .
  16.167     69.7510    236.14  .         .    V Q  .         .         .
  16.250     71.5478    260.90  .         .    V   Q .         .         .
  16.333     73.4987    283.27  .         .     V  . Q        .         .
  16.417     75.6939    318.75  .         .     V  .   Q      .         .
  16.500     78.1700    359.53  .         .      V .      Q .         .
  16.583     81.0091    412.23  .         .       V.         . Q       .
  16.667     84.0665    443.94  .         .       V.         .   Q     .
  16.750     87.0718    436.36  .         .        V         .  Q      .
  16.833     89.7230    384.96  .         .        .V       Q          .
  16.917     92.0846    342.90  .         .        .V    Q  .          .
  17.000     94.3451    328.23  .         .        . V  Q    .         .
  17.083     96.4538    306.18  .         .        . V Q     .         .
  17.167     98.4825    294.56  .         .        .  Q      .         .
  17.250    100.3412    269.89  .         .        .Q V      .         .
  17.333    102.1001    255.39  .         .       Q   V      .         .
  17.417    103.7667    241.99  .         .      Q.   V      .         .
  17.500    105.3850    234.98  .         .      Q .    V    .         .
  17.583    106.9535    227.74  .         .      Q .    V    .         .
  17.667    108.4738    220.74  .         .     Q  .    V    .         .
  17.750    109.9032    207.56  .         .    Q   .     V   .         .
  17.833    111.2743    199.07  .         .   Q    .     V   .         .
  17.917    112.5993    192.40  .         .   Q    .     V   .         .
  18.000    113.8940    187.98  .         .   Q    .      V  .         .
  18.083    115.1458    181.77  .         .  Q     .      V  .         .
  18.167    116.3461    174.29  .         . Q      .      V  .         .
  18.250    117.5162    169.89  .         . Q      .      V  .         .
  18.333    118.6639    166.65  .         . Q      .       V .         .
  18.417    119.7868    163.05  .         . Q      .       V .         .
  18.500    120.8529    154.80  .         .Q       .       V .         .
  18.583    121.8805    149.21  .         .Q       .       V .         .
  18.667    122.8805    145.21  .         .Q       .       V.          .
  18.750    123.8457    140.15  .         .Q       .       V.          .
  18.833    124.7894    137.03  .          Q       .       V.          .
  18.917    125.7100    133.66  .          Q       .       V.          .
  19.000    126.6031    129.69  .          Q       .        V          .
  19.083    127.4789    127.16  .          Q       .        V          .
  19.167    128.3336    124.11  .         Q.       .        V          .
  19.250    129.1578    119.67  .         Q.       .        V          .
  19.333    129.9673    117.54  .         Q.       .        V          .
  19.417    130.7642    115.71  .         Q.       .        .V         .
  19.500    131.5440    113.24  .         Q.       .        .V         .
  19.583    132.3084    110.98  .        Q .       .        .V         .
  19.667    133.0613    109.33  .        Q .       .        .V         .
  19.750    133.8027    107.65  .        Q .       .        .V         .
  19.833    134.5177    103.81  .        Q .       .        .V         .
  19.917    135.2136    101.04  .        Q .       .        . V        .
  20.000    135.8999     99.65  .       Q  .       .        . V        .
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  END OF FLOODSCx ROUTING ANALYSIS
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             F L O O D    R O U T I N G    A N A L Y S I S
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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MP50002E.FLD
  TIME/DATE OF STUDY: 14:04 03/26/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1050.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    8286.400 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.100 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.980
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.840
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.13
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.28
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.37
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.63
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  0.87
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.48

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.701
          30-MINUTE FACTOR = 0.701
           1-HOUR FACTOR = 0.701
           3-HOUR FACTOR = 0.950
           6-HOUR FACTOR = 0.973
          24-HOUR FACTOR = 0.983

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   7.576


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.834	835.951
2	2.489	1658.475
3	4.599	2114.760
4	7.137	2542.779
5	10.345	3214.869
6	14.407	4070.594
7	19.671	5275.608
8	25.686	6028.183
9	32.059	6386.604
10	37.015	4966.486
11	41.033	4026.406
12	44.694	3669.081
13	47.825	3137.705
14	50.763	2943.898
15	53.169	2411.009
16	55.095	1930.121
17	56.936	1844.864
18	58.547	1615.126
19	60.102	1558.223
20	61.643	1543.872
21	63.039	1399.162
22	64.308	1271.705
23	65.476	1170.273
24	66.646	1172.521
25	67.745	1101.454
26	68.777	1034.569
27	69.731	955.406
28	70.679	950.559
29	71.625	947.432
30	72.525	902.192
31	73.292	768.247
32	74.047	757.000
33	74.762	716.149
34	75.446	685.429
35	76.129	684.611
36	76.776	648.645
37	77.403	628.277
38	78.030	628.239
39	78.613	584.230
40	79.150	538.632
41	79.688	538.502
42	80.223	536.307
43	80.732	510.404
44	81.233	501.787
45	81.733	501.290
46	82.228	495.900
47	82.653	426.515
48	83.057	404.786
49	83.461	404.258
50	83.865	405.038
51	84.261	397.186
52	84.605	344.263
53	84.937	333.123
54	85.270	333.375
55	85.601	332.075
56	85.932	331.334
57	86.257	325.752
58	86.553	297.135
59	86.845	292.073
60	87.137	292.325
61	87.428	292.081
62	87.720	292.066

63	88.011	292.325
64	88.294	282.967
65	88.555	262.186
66	88.816	261.712
67	89.077	260.909
68	89.338	261.964
69	89.599	261.169
70	89.860	261.704
71	90.119	260.160
72	90.359	239.922
73	90.590	231.305
74	90.820	230.808
75	91.050	230.801
76	91.282	231.802
77	91.511	230.304
78	91.743	231.802
79	91.973	230.808
80	92.193	220.678
81	92.386	193.329
82	92.579	192.817
83	92.771	192.824
84	92.963	192.320
85	93.154	191.808
86	93.347	192.817
87	93.538	191.815
88	93.731	192.824
89	93.922	192.312
90	94.109	186.746
91	94.262	153.327
92	94.409	147.753
93	94.557	147.745
94	94.704	147.248
95	94.852	148.258
96	94.998	147.248
97	95.146	148.258
98	95.293	147.248
99	95.441	147.753
100	95.589	148.258
101	95.736	147.241
102	95.883	147.761
103	96.031	147.753
104	96.151	120.412
105	96.258	107.743
106	96.365	107.101
107	96.472	107.361
108	96.579	106.849
109	96.686	107.353
110	96.793	106.849
111	96.899	106.849
112	97.006	107.353
113	97.113	106.849
114	97.220	107.353
115	97.326	106.352
116	97.433	107.346
117	97.540	107.353
118	97.648	107.361
119	97.754	106.344
120	97.861	107.346
121	97.968	107.361
122	98.048	80.012
123	98.079	31.401
124	98.108	29.367
125	98.137	28.350
126	98.165	28.366
127	98.195	30.384
128	98.225	29.367
129	98.253	28.366
130	98.282	29.359
131	98.313	30.392
132	98.341	28.350
133	98.370	29.375
134	98.399	29.375
135	98.429	29.367
136	98.458	29.375
137	98.487	29.367
138	98.516	28.358
139	98.546	30.384
140	98.574	28.358
141	98.605	30.384
142	98.633	28.358
143	98.662	29.375
144	98.692	29.367
145	98.721	29.367
146	98.749	28.358
147	98.779	30.384
148	98.808	28.358
149	98.837	29.375
150	98.866	29.375

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 825.6131

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 176.9522

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 125.0 250.0 375.0 500.0
14.000	46.8622	92.85	. Q V . . .
14.083	47.5162	94.97	. Q V . . .
14.167	48.1890	97.68	. Q V . . .
14.250	48.8830	100.76	. Q .V . . .
14.333	49.6005	104.18	. Q .V . . .
14.417	50.3451	108.13	. Q .V . . .
14.500	51.1213	112.70	. Q.V . . .
14.583	51.9349	118.13	. Q.V . . .
14.667	52.7897	124.13	. Q.V . . .
14.750	53.6879	130.41	. Q V . . .
14.833	54.6228	135.74	. Q V . . .
14.917	55.5903	140.49	. .QV . . .
15.000	56.5892	145.04	. .QV . . .
15.083	57.6176	149.32	. .Q V . . .
15.167	58.6751	153.55	. . QV . . .
15.250	59.7601	157.54	. . QV . . .
15.333	60.8711	161.31	. . QV . . .
15.417	62.0017	164.17	. . QV . . .
15.500	63.1454	166.06	. . QV . . .
15.583	64.3002	167.67	. . QV . . .
15.667	65.4649	169.11	. . QV . . .
15.750	66.6381	170.35	. . Q V . . .
15.833	67.8178	171.30	. . Q V . . .
15.917	69.0043	172.28	. . Q V . . .
16.000	70.2086	174.86	. . Q V . . .
16.083	71.6504	209.35	. . Q . . .
16.167	73.3387	245.13	. . V Q. . .
16.250	75.1861	268.25	. . V .Q . .
16.333	77.1885	290.74	. . V . Q . .
16.417	79.4206	324.11	. . V . Q . .
16.500	81.9307	364.47	. . V . Q. .
16.583	84.7948	415.87	. . V. . Q .
16.667	87.8694	446.43	. . V. . Q .
16.750	91.0147	456.69	. . V . Q .
16.833	93.7663	399.53	. . .V .Q .
16.917	96.2541	361.23	. . .V Q . .
17.000	98.6374	346.06	. . . V Q . .
17.083	100.8774	325.25	. . . V Q . .
17.167	103.0449	314.72	. . . V Q . .
17.250	105.0474	290.76	. . . Q . .
17.333	106.8994	268.91	. . .Q V . .
17.417	108.7000	261.45	. . Q V . .
17.500	110.4128	248.70	. . Q. V . .
17.583	112.0747	241.31	. . Q. V . .
17.667	113.6895	234.46	. . Q . V . .
17.750	115.2216	222.46	. . Q . V . .
17.833	116.6819	212.04	. . Q . V . .
17.917	118.0841	203.59	. . Q . V . .
18.000	119.4571	199.36	. . Q . V . .
18.083	120.7834	192.58	. . Q . V . .
18.167	122.0638	185.91	. . Q . V . .
18.250	123.2975	179.13	. . Q . V . .
18.333	124.5063	175.52	. . Q . V . .
18.417	125.6893	171.78	. . Q . V . .
18.500	126.8348	166.32	. . Q . V . .
18.583	127.9196	157.51	. . Q . V . .
18.667	128.9754	153.30	. . Q . V . .
18.750	129.9960	148.19	. .Q . V . .
18.833	130.9872	143.91	. .Q . V . .
18.917	131.9577	140.93	. .Q . V . .
19.000	132.8998	136.79	. Q . V . .
19.083	133.8185	133.40	. Q . V . .
19.167	134.7195	130.82	. Q . V . .
19.250	135.5934	126.90	. Q . V . .
19.333	136.4414	123.13	. Q. . V . .
19.417	137.2755	121.11	. Q. . .V . .
19.500	138.0960	119.14	. Q. . .V . .
19.583	138.8975	116.37	. Q. . .V . .
19.667	139.6847	114.31	. Q. . .V . .
19.750	140.4603	112.60	. Q. . .V . .
19.833	141.2226	110.69	. Q . . .V . .
19.917	141.9559	106.47	. Q . . . V . .
20.000	142.6729	104.11	. Q . . . V . .

END OF FLOODSCx ROUTING ANALYSIS

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             F L O O D    R O U T I N G    A N A L Y S I S
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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MP51002E.FLD
  TIME/DATE OF STUDY: 14:05 03/26/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1051.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    8587.100 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.240 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.020
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.020
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.950
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.840
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.13
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.28
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.37
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.63
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  0.87
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.48

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.695
          30-MINUTE FACTOR = 0.696
           1-HOUR FACTOR = 0.697
           3-HOUR FACTOR = 0.949
           6-HOUR FACTOR = 0.972
          24-HOUR FACTOR = 0.983

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   6.720


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.731	759.557
2	2.186	1511.125
3	3.860	1738.093
4	6.055	2279.095
5	8.496	2534.775
6	11.610	3234.350
7	15.493	4032.319
8	20.326	5019.204
9	25.656	5534.837
10	31.353	5917.042
11	35.744	4560.227
12	39.617	4021.574
13	42.971	3483.525
14	46.044	3190.812
15	48.891	2956.529
16	51.453	2660.592
17	53.566	2195.107
18	55.322	1823.159
19	57.039	1783.036
20	58.512	1530.292
21	59.946	1488.580
22	61.341	1448.775
23	62.705	1416.983
24	63.892	1232.156
25	65.019	1170.185
26	66.057	1078.681
27	67.108	1091.381
28	68.088	1017.839
29	69.030	977.969
30	69.887	890.340
31	70.734	879.738
32	71.574	872.322
33	72.411	868.321
34	73.171	789.834
35	73.845	700.010
36	74.513	693.085
37	75.146	657.756
38	75.749	626.182
39	76.352	626.134
40	76.940	611.358
41	77.495	575.474
42	78.046	573.065
43	78.597	571.481
44	79.098	520.376
45	79.571	491.370
46	80.043	490.577
47	80.515	490.023
48	80.970	472.560
49	81.410	456.373
50	81.849	456.397
51	82.288	456.104
52	82.715	443.363
53	83.078	376.547
54	83.430	366.152
55	83.783	366.437
56	84.136	365.875
57	84.488	366.152
58	84.809	333.652
59	85.100	301.896
60	85.391	301.555
61	85.681	301.832
62	85.970	299.986

63	86.257	298.053
64	86.542	296.064
65	86.804	271.685
66	87.057	262.993
67	87.310	263.183
68	87.563	262.549
69	87.816	262.827
70	88.069	262.549
71	88.323	263.128
72	88.569	255.664
73	88.797	236.720
74	89.023	235.032
75	89.250	235.317
76	89.476	235.531
77	89.702	234.446
78	89.929	235.500
79	90.155	234.295
80	90.380	234.343
81	90.588	215.399
82	90.787	207.365
83	90.987	207.943
84	91.188	207.959
85	91.387	206.786
86	91.588	208.529
87	91.787	207.349
88	91.987	207.388
89	92.187	207.943
90	92.380	200.495
91	92.549	175.252
92	92.716	173.049
93	92.881	172.114
94	93.048	172.677
95	93.213	171.544
96	93.379	172.693
97	93.545	172.685
98	93.711	171.536
99	93.877	172.693
100	94.043	172.677
101	94.208	171.544
102	94.351	148.606
103	94.479	131.960
104	94.606	132.554
105	94.734	133.109
106	94.862	132.546
107	94.989	131.968
108	95.117	133.133
109	95.244	131.968
110	95.372	132.546
111	95.500	132.538
112	95.628	133.117
113	95.755	131.968
114	95.882	132.538
115	96.010	132.538
116	96.137	131.968
117	96.245	111.891
118	96.338	96.979
119	96.431	95.799
120	96.524	96.829
121	96.616	95.696
122	96.708	95.688
123	96.800	95.688
124	96.893	96.258
125	96.985	95.696
126	97.078	96.250
127	97.170	95.688
128	97.263	96.258
129	97.354	94.539
130	97.447	96.845
131	97.540	96.829
132	97.631	94.547
133	97.724	96.829
134	97.815	94.103
135	97.908	96.338
136	97.999	95.197
137	98.087	90.601
138	98.123	37.857
139	98.147	25.227
140	98.174	27.525
141	98.198	25.235
142	98.225	27.525
143	98.249	25.227
144	98.273	25.227
145	98.298	25.235
146	98.323	26.384
147	98.348	26.368
148	98.374	26.384
149	98.399	26.384
150	98.424	25.227

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 855.6541

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 182.0733

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                    2 4 - H O U R    S T O R M
                  R U N O F F    H Y D R O G R A P H

================================================================================
             HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
       (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      125.0     250.0     375.0     500.0
--------------------------------------------------------------------------------
  14.000     47.2245     93.62  .      Q  V         .         .         .
  14.083     47.8833     95.67  .      Q  V         .         .         .
  14.167     48.5602     98.29  .      Q  V         .         .         .
  14.250     49.2565    101.10  .       Q V         .         .         .
  14.333     49.9752    104.35  .       Q V         .         .         .
  14.417     50.7176    107.80  .       Q .V        .         .         .
  14.500     51.4875    111.78  .       Q .V        .         .         .
  14.583     52.2889    116.37  .        Q.V        .         .         .
  14.667     53.1270    121.70  .        Q.V        .         .         .
  14.750     54.0047    127.43  .         QV        .         .         .
  14.833     54.9238    133.47  .         Q V       .         .         .
  14.917     55.8782    138.57  .         .QV       .         .         .
  15.000     56.8656    143.38  .         .QV       .         .         .
  15.083     57.8839    147.86  .         .QV       .         .         .
  15.167     58.9324    152.24  .         . Q       .         .         .
  15.250     60.0106    156.55  .         . QV      .         .         .
  15.333     61.1179    160.79  .         . QV      .         .         .
  15.417     62.2466    163.88  .         .  Q      .         .         .
  15.500     63.3899    166.00  .         .  Q      .         .         .
  15.583     64.5474    168.07  .         .  QV     .         .         .
  15.667     65.7158    169.66  .         .  QV     .         .         .
  15.750     66.8969    171.49  .         .  QV     .         .         .
  15.833     68.0900    173.25  .         .  QV     .         .         .
  15.917     69.2973    175.30  .         .   QV    .         .         .
  16.000     70.5255    178.33  .         .   QV    .         .         .
  16.083     71.9667    209.26  .         .    VQ   .         .         .
  16.167     73.6150    239.34  .         .     V  Q.         .         .
  16.250     75.3494    251.83  .         .     V   Q         .         .
  16.333     77.2514    276.17  .         .     V   . Q       .         .
  16.417     79.2629    292.08  .         .      V  .  Q      .         .
  16.500     81.5044    325.47  .         .      V  .     Q   .         .
  16.583     83.9959    361.76  .         .       V .       Q .         .
  16.667     86.7729    403.22  .         .        V.         . Q       .
  16.750     89.6928    423.98  .         .        V.         .  Q      .
  16.833     92.6933    435.66  .         .         V         .   Q     .
  16.917     95.3305    382.93  .         .         V        Q          .
  17.000     97.8152    360.77  .         .         .V      Q .         .
  17.083    100.1533    339.50  .         .         . V    Q  .         .
  17.167    102.4090    327.52  .         .         . V   Q   .         .
  17.250    104.5852    315.98  .         .         . V  Q    .         .
  17.333    106.6592    301.15  .         .         .  VQ     .         .
  17.417    108.5861    279.79  .         .         . QV      .         .
  17.500    110.3899    261.91  .         .         Q   V     .         .
  17.583    112.1517    255.81  .         .         Q   V     .         .
  17.667    113.8158    241.62  .         .        Q.    V    .         .
  17.750    115.4312    234.57  .         .       Q .    V    .         .
  17.833    116.9952    227.09  .         .       Q .    V    .         .
  17.917    118.5155    220.74  .         .      Q  .     V   .         .
  18.000    119.9550    209.01  .         .     Q   .     V   .         .
  18.083    121.3470    202.12  .         .     Q   .     V   .         .
  18.167    122.6868    194.54  .         .    Q    .     V   .         .
  18.250    124.0024    191.04  .         .    Q    .      V  .         .
  18.333    125.2721    184.36  .         .   Q     .      V  .         .
  18.417    126.5060    179.15  .         .   Q     .      V  .         .
  18.500    127.6937    172.45  .         .  Q      .       V .         .
  18.583    128.8546    168.57  .         .  Q      .       V .         .
  18.667    129.9895    164.78  .         .  Q      .       V .         .
  18.750    131.0978    160.93  .         . Q       .       V .         .
  18.833    132.1597    154.19  .         . Q       .        V.         .
  18.917    133.1755    147.49  .         .Q        .        V.         .
  19.000    134.1689    144.24  .         .Q        .        V.         .
  19.083    135.1350    140.28  .         .Q        .        V.         .
  19.167    136.0759    136.61  .         Q         .        V.         .
  19.250    136.9993    134.09  .         Q         .         V         .
  19.333    137.9028    131.19  .         Q         .         V         .
  19.417    138.7822    127.68  .         Q         .         V         .
  19.500    139.6466    125.52  .         Q         .         V         .
  19.583    140.4963    123.37  .        Q.         .         V         .
  19.667    141.3196    119.54  .        Q.         .         .V        .
  19.750    142.1230    116.66  .        Q.         .         .V        .
  19.833    142.9148    114.97  .        Q.         .         .V        .
  19.917    143.6956    113.38  .        Q.         .         .V        .
  20.000    144.4613    111.18  .       Q .         .         .V        .
================================================================================

  END OF FLOODSCx ROUTING ANALYSIS
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             F L O O D    R O U T I N G    A N A L Y S I S
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              Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MP52002E.FLD
  TIME/DATE OF STUDY: 14:05 03/26/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1052.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    8952.000 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.310 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.040
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.030
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.910
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.020
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.600
         LOW LOSS FRACTION = 0.840
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.13
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.28
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.37
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.63
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  0.87
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.48

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.689
          30-MINUTE FACTOR = 0.691
           1-HOUR FACTOR = 0.692
           3-HOUR FACTOR = 0.947
           6-HOUR FACTOR = 0.972
          24-HOUR FACTOR = 0.982

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   6.361


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.681	736.999
2	2.037	1468.066
3	3.529	1615.362
4	5.542	2179.663
5	7.691	2326.098
6	10.478	3017.994
7	13.832	3630.317
8	18.036	4552.400
9	22.721	5071.426
10	28.255	5991.328
11	32.868	4994.137
12	36.947	4416.267
13	40.282	3610.306
14	43.547	3535.393
15	46.484	3179.460
16	49.334	3085.195
17	51.791	2660.078
18	53.851	2229.923
19	55.620	1915.603
20	57.340	1861.704
21	58.804	1585.255
22	60.232	1545.964
23	61.602	1483.032
24	62.960	1470.204
25	64.152	1291.334
26	65.275	1214.963
27	66.306	1116.523
28	67.311	1088.026
29	68.281	1050.353
30	69.211	1007.030
31	70.073	932.675
32	70.886	880.324
33	71.687	867.803
34	72.479	857.246
35	73.264	849.953
36	73.963	755.816
37	74.600	690.555
38	75.226	677.248
39	75.818	641.095
40	76.381	608.931
41	76.943	609.105
42	77.498	600.184
43	78.018	563.271
44	78.533	557.258
45	79.046	556.002
46	79.539	533.469
47	79.983	480.846
48	80.424	477.220
49	80.863	475.675
50	81.299	472.314
51	81.714	448.823
52	82.123	442.454
53	82.531	441.868
54	82.940	442.768
55	83.329	421.821
56	83.661	359.336
57	83.986	351.844
58	84.311	351.869
59	84.636	351.538
60	84.961	352.166
61	85.269	332.739
62	85.538	291.861

63	85.806	290.350
64	86.075	290.366
65	86.342	289.210
66	86.606	285.633
67	86.868	284.452
68	87.124	276.283
69	87.358	253.312
70	87.590	251.727
71	87.822	250.744
72	88.053	250.752
73	88.285	251.016
74	88.517	251.058
75	88.749	250.711
76	88.974	244.408
77	89.183	226.253
78	89.391	225.320
79	89.599	224.725
80	89.807	225.023
81	90.014	224.420
82	90.221	223.990
83	90.427	222.726
84	90.634	223.974
85	90.834	216.680
86	91.018	199.128
87	91.201	197.972
88	91.383	197.930
89	91.566	197.955
90	91.749	197.906
91	91.932	197.972
92	92.115	198.517
93	92.298	197.947
94	92.482	198.542
95	92.658	191.322
96	92.814	168.856
97	92.966	164.478
98	93.117	163.545
99	93.268	163.569
100	93.420	164.139
101	93.571	163.561
102	93.723	164.172
103	93.874	163.536
104	94.025	163.553
105	94.176	163.553
106	94.327	164.172
107	94.476	160.522
108	94.598	132.091
109	94.715	126.656
110	94.831	126.045
111	94.948	126.053
112	95.064	126.037
113	95.181	126.648
114	95.297	125.426
115	95.413	126.062
116	95.530	126.640
117	95.646	125.442
118	95.763	126.656
119	95.880	126.053
120	95.996	126.053
121	96.112	126.053
122	96.229	126.664
123	96.341	120.602
124	96.429	95.806
125	96.514	92.180
126	96.600	92.783
127	96.684	91.197
128	96.769	91.742
129	96.853	90.536
130	96.937	91.734
131	97.021	90.536
132	97.106	91.750
133	97.189	90.536
134	97.274	91.734
135	97.359	91.750
136	97.443	90.536
137	97.526	90.528
138	97.611	91.742
139	97.695	90.536
140	97.779	91.742
141	97.863	90.908
142	97.946	89.537
143	98.030	90.742
144	98.112	89.537
145	98.182	75.016
146	98.206	26.613
147	98.229	24.201
148	98.252	25.407
149	98.275	24.201
150	98.298	25.407

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 892.1212

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 188.9998

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	125.0	250.0	375.0	500.0
14.000	48.6972	96.67	.	Q V	.	.	.
14.083	49.3773	98.75	.	Q V	.	.	.
14.167	50.0757	101.41	.	Q V	.	.	.
14.250	50.7931	104.17	.	Q V	.	.	.
14.333	51.5327	107.40	.	Q V	.	.	.
14.417	52.2955	110.75	.	Q .V	.	.	.
14.500	53.0851	114.65	.	Q.V	.	.	.
14.583	53.9046	119.00	.	Q.V	.	.	.
14.667	54.7591	124.07	.	Q.V	.	.	.
14.750	55.6511	129.52	.	QV	.	.	.
14.833	56.5856	135.69	.	QV	.	.	.
14.917	57.5579	141.18	.	.QV	.	.	.
15.000	58.5657	146.33	.	.QV	.	.	.
15.083	59.6053	150.94	.	. Q	.	.	.
15.167	60.6770	155.62	.	. Q	.	.	.
15.250	61.7797	160.11	.	. QV	.	.	.
15.333	62.9139	164.68	.	. Q	.	.	.
15.417	64.0719	168.14	.	. Q	.	.	.
15.500	65.2469	170.61	.	. Q	.	.	.
15.583	66.4377	172.90	.	. QV	.	.	.
15.667	67.6418	174.84	.	. QV	.	.	.
15.750	68.8604	176.94	.	. Q	.	.	.
15.833	70.0929	178.97	.	. Q	.	.	.
15.917	71.3420	181.37	.	. QV	.	.	.
16.000	72.6155	184.91	.	. QV	.	.	.
16.083	74.0940	214.68	.	. V Q	.	.	.
16.167	75.7676	243.00	.	. V Q.	.	.	.
16.250	77.4996	251.48	.	. V Q	.	.	.
16.333	79.3957	275.31	.	. V . Q	.	.	.
16.417	81.3695	286.59	.	. V . Q	.	.	.
16.500	83.5630	318.51	.	. V . Q	.	.	.
16.583	85.9558	347.42	.	. V . Q	.	.	.
16.667	88.6168	386.39	.	. V . Q	.	.	.
16.750	91.4303	408.51	.	. V.	. Q	.	.
16.833	94.4672	440.96	.	. V.	. Q	.	.
16.917	97.2431	403.06	.	. V	. Q	.	.
17.000	99.8576	379.63	.	. .V	Q	.	.
17.083	102.2622	349.14	.	. .V Q	.	.	.
17.167	104.6424	345.61	.	. . V Q	.	.	.
17.250	106.9227	331.09	.	. . V Q	.	.	.
17.333	109.1561	324.29	.	. . V Q	.	.	.
17.417	111.2541	304.63	.	. . VQ	.	.	.
17.500	113.2149	284.72	.	. . QV	.	.	.
17.583	115.0668	268.89	.	. .Q V	.	.	.
17.667	116.8717	262.07	.	. Q V	.	.	.
17.750	118.5732	247.06	.	. Q. V	.	.	.
17.833	120.2241	239.71	.	. Q. V	.	.	.
17.917	121.8223	232.06	.	. Q . V	.	.	.
18.000	123.3824	226.51	.	. Q . V	.	.	.
18.083	124.8648	215.25	.	. Q . V	.	.	.
18.167	126.2949	207.65	.	. Q . V	.	.	.
18.250	127.6701	199.69	.	. Q . V	.	.	.
18.333	129.0092	194.44	.	. Q . V	.	.	.
18.417	130.3115	189.09	.	. Q . V	.	.	.
18.500	131.5765	183.68	.	. Q . V	.	.	.
18.583	132.7975	177.29	.	. Q . V	.	.	.
18.667	133.9798	171.66	.	. Q . V	.	.	.
18.750	135.1342	167.62	.	. Q . V	.	.	.
18.833	136.2601	163.48	.	. Q . V	.	.	.
18.917	137.3590	159.56	.	. Q . V	.	.	.
19.000	138.4105	152.68	.	. Q . V	.	.	.
19.083	139.4247	147.25	.	.Q . V	.	.	.
19.167	140.4154	143.86	.	.Q . V	.	.	.
19.250	141.3795	139.98	.	.Q . V	.	.	.
19.333	142.3183	136.32	.	Q . V	.	.	.
19.417	143.2405	133.91	.	Q . V	.	.	.
19.500	144.1449	131.31	.	Q . V	.	.	.
19.583	145.0257	127.89	.	Q . V	.	.	.
19.667	145.8909	125.63	.	Q . V	.	.	.
19.750	146.7421	123.59	.	Q. . V	.	.	.
19.833	147.5740	120.80	.	Q. . V	.	.	.
19.917	148.3799	117.02	.	Q. . V	.	.	.
20.000	149.1735	115.22	.	Q. . V	.	.	.

END OF FLOODSCx ROUTING ANALYSIS

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             F L O O D    R O U T I N G    A N A L Y S I S
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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MP53002E.FLD
  TIME/DATE OF STUDY: 14:05 03/26/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1053.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
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      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    9632.200 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.420 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.060
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.860
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.030
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.590
         LOW LOSS FRACTION = 0.840
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.13
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.28
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.37
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.63
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  0.87
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.48

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.678
          30-MINUTE FACTOR = 0.682
           1-HOUR FACTOR = 0.684
           3-HOUR FACTOR = 0.943
           6-HOUR FACTOR = 0.970
          24-HOUR FACTOR = 0.981

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   5.869


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.615	715.987
2	1.841	1428.421
3	3.117	1486.355
4	4.873	2045.246
5	6.736	2170.510
6	9.015	2655.222
7	11.814	3260.655
8	15.175	3914.703
9	19.253	4750.146
10	23.581	5042.074
11	28.647	5901.425
12	32.705	4726.766
13	36.441	4352.894
14	39.551	3622.359
15	42.683	3648.791
16	45.572	3365.024
17	48.443	3344.560
18	51.032	3015.992
19	53.150	2466.735
20	54.960	2108.202
21	56.795	2138.424
22	58.274	1722.976
23	59.708	1670.398
24	61.076	1593.411
25	62.376	1514.704
26	63.679	1517.352
27	64.813	1320.922
28	65.889	1253.751
29	66.887	1161.970
30	67.826	1093.670
31	68.760	1087.982
32	69.633	1017.052
33	70.482	989.821
34	71.255	899.506
35	72.012	882.878
36	72.750	859.255
37	73.477	846.448
38	74.195	837.143
39	74.832	741.586
40	75.422	687.079
41	75.997	670.530
42	76.545	637.434
43	77.057	596.578
44	77.570	598.231
45	78.079	593.094
46	78.567	567.481
47	79.035	545.298
48	79.502	544.507
49	79.968	542.374
50	80.404	508.041
51	80.805	467.746
52	81.206	466.324
53	81.604	464.404
54	82.000	460.867
55	82.378	440.328
56	82.747	430.303
57	83.117	430.321
58	83.486	429.974
59	83.853	427.601
60	84.178	378.205
61	84.469	338.958
62	84.759	338.336

63	85.049	338.291
64	85.340	338.300
65	85.630	338.309
66	85.908	323.263
67	86.150	282.274
68	86.391	280.034
69	86.631	279.990
70	86.871	279.608
71	87.106	274.231
72	87.338	270.400
73	87.571	270.791
74	87.788	253.070
75	87.994	240.103
76	88.200	239.241
77	88.404	238.166
78	88.609	238.237
79	88.813	238.494
80	89.018	238.246
81	89.223	238.468
82	89.425	236.193
83	89.613	219.200
84	89.797	214.205
85	89.981	213.867
86	90.165	214.107
87	90.348	213.672
88	90.532	213.538
89	90.713	211.059
90	90.895	211.859
91	91.077	212.410
92	91.254	206.526
93	91.417	189.747
94	91.578	187.765
95	91.740	187.863
96	91.901	188.405
97	92.062	187.800
98	92.224	187.845
99	92.385	188.414
100	92.547	187.809
101	92.709	188.467
102	92.870	187.774
103	93.025	181.135
104	93.162	159.156
105	93.296	156.099
106	93.429	155.335
107	93.562	155.317
108	93.695	154.588
109	93.828	154.668
110	93.961	155.264
111	94.095	155.317
112	94.227	154.615
113	94.360	154.641
114	94.494	155.930
115	94.626	153.966
116	94.757	151.957
117	94.863	123.971
118	94.966	119.918
119	95.069	119.963
120	95.171	119.278
121	95.274	119.972
122	95.377	119.252
123	95.480	119.972
124	95.582	119.296
125	95.685	119.918
126	95.788	119.972
127	95.890	119.278
128	95.993	119.963
129	96.096	119.945
130	96.199	119.278
131	96.301	119.278
132	96.404	119.945
133	96.506	119.278
134	96.589	95.940
135	96.664	87.932
136	96.740	87.888
137	96.814	86.155
138	96.887	85.488
139	96.962	86.812
140	97.035	85.488
141	97.109	86.155
142	97.183	86.155
143	97.257	86.155
144	97.331	86.146
145	97.404	85.488
146	97.479	86.830
147	97.552	85.488
148	97.627	86.804
149	97.701	86.821
150	97.773	84.155

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 959.4523

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 201.7948

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	125.0	250.0	375.0	500.0
14.000	51.4624	102.25	.	Q V	.	.	.
14.083	52.1817	104.44	.	Q V	.	.	.
14.167	52.9198	107.17	.	Q V	.	.	.
14.250	53.6772	109.97	.	Q V	.	.	.
14.333	54.4567	113.19	.	QV	.	.	.
14.417	55.2593	116.54	.	QV	.	.	.
14.500	56.0876	120.26	.	Q.V	.	.	.
14.583	56.9450	124.49	.	Q.V	.	.	.
14.667	57.8348	129.20	.	QV	.	.	.
14.750	58.7616	134.58	.	QV	.	.	.
14.833	59.7270	140.17	.	.Q	.	.	.
14.917	60.7356	146.45	.	.QV	.	.	.
15.000	61.7818	151.91	.	. Q	.	.	.
15.083	62.8644	157.20	.	. Q	.	.	.
15.167	63.9803	162.02	.	. Q	.	.	.
15.250	65.1302	166.96	.	. VQ	.	.	.
15.333	66.3133	171.78	.	. Q	.	.	.
15.417	67.5243	175.84	.	. VQ	.	.	.
15.500	68.7566	178.93	.	. VQ	.	.	.
15.583	70.0087	181.82	.	. VQ	.	.	.
15.667	71.2763	184.05	.	. Q	.	.	.
15.750	72.5623	186.73	.	. Q	.	.	.
15.833	73.8654	189.21	.	. VQ	.	.	.
15.917	75.1882	192.08	.	. VQ	.	.	.
16.000	76.5391	196.15	.	. Q	.	.	.
16.083	78.0882	224.93	.	. V Q	.	.	.
16.167	79.8298	252.88	.	. V Q	.	.	.
16.250	81.5978	256.71	.	. V Q	.	.	.
16.333	83.5192	279.00	.	. V . Q	.	.	.
16.417	85.5031	288.06	.	. V . Q	.	.	.
16.500	87.6487	311.54	.	. V . Q	.	.	.
16.583	89.9871	339.53	.	. V . Q	.	.	.
16.667	92.5279	368.92	.	. V . Q.	.	.	.
16.750	95.3026	402.89	.	. V .	. Q	.	.
16.833	98.1659	415.75	.	. V.	. Q	.	.
16.917	101.2311	445.07	.	. V	. Q	.	.
17.000	104.0007	402.15	.	. V	. Q	.	.
17.083	106.6628	386.53	.	. .V	Q	.	.
17.167	109.1397	359.65	.	. .V	Q .	.	.
17.250	111.6218	360.41	.	. . V	Q .	.	.
17.333	114.0233	348.69	.	. . V	Q .	.	.
17.417	116.3990	344.95	.	. . V	Q .	.	.
17.500	118.6610	328.44	.	. . V	Q .	.	.
17.583	120.7566	304.29	.	. . VQ	.	.	.
17.667	122.7317	286.77	.	. . Q V	.	.	.
17.750	124.6777	282.57	.	. . Q V	.	.	.
17.833	126.4887	262.94	.	. .Q V	.	.	.
17.917	128.2450	255.02	.	. Q V	.	.	.
18.000	129.9468	247.11	.	. Q. V	.	.	.
18.083	131.5958	239.44	.	. Q. V	.	.	.
18.167	133.2103	234.43	.	. Q . V	.	.	.
18.250	134.7427	222.50	.	. Q . V	.	.	.
18.333	136.2249	215.22	.	. Q . V	.	.	.
18.417	137.6523	207.25	.	. Q . V	.	.	.
18.500	139.0328	200.46	.	. Q . V	.	.	.
18.583	140.3833	196.09	.	. Q . V	.	.	.
18.667	141.6892	189.63	.	. Q . V	.	.	.
18.750	142.9595	184.44	.	. Q . V	.	.	.
18.833	144.1815	177.43	.	. Q . V	.	.	.
18.917	145.3730	173.01	.	. Q . V	.	.	.
19.000	146.5345	168.65	.	. Q . V.	.	.	.
19.083	147.6693	164.76	.	. Q . V.	.	.	.
19.167	148.7780	160.99	.	. Q . V.	.	.	.
19.250	149.8414	154.40	.	. Q . V.	.	.	.
19.333	150.8708	149.47	.	.Q . V.	.	.	.
19.417	151.8766	146.05	.	.Q . V	.	.	.
19.500	152.8567	142.31	.	.Q . V	.	.	.
19.583	153.8104	138.47	.	.Q . V	.	.	.
19.667	154.7488	136.26	.	Q . V	.	.	.
19.750	155.6706	133.84	.	Q . V	.	.	.
19.833	156.5719	130.87	.	Q . .V	.	.	.
19.917	157.4539	128.07	.	Q . .V	.	.	.
20.000	158.3225	126.11	.	Q . .V	.	.	.

END OF FLOODSCx ROUTING ANALYSIS

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**************************************************************************

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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MP54002E.FLD
  TIME/DATE OF STUDY: 14:06 03/26/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1054.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   12171.000 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.460 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.130
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.100
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.720
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.040
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.010
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.580
         LOW LOSS FRACTION = 0.840
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.13
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.28
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.37
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.63
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  0.86
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.47

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.635
          30-MINUTE FACTOR = 0.647
           1-HOUR FACTOR = 0.652
           3-HOUR FACTOR = 0.930
           6-HOUR FACTOR = 0.965
          24-HOUR FACTOR = 0.978

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   5.708


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.558	820.836
2	1.671	1638.662
3	2.812	1680.128
4	4.372	2295.522
5	6.062	2487.755
6	8.077	2965.865
7	10.565	3662.265
8	13.573	4427.514
9	17.158	5277.560
10	21.064	5749.304
11	25.663	6769.294
12	29.751	6016.080
13	33.393	5361.119
14	36.771	4972.246
15	40.024	4789.035
16	43.206	4682.884
17	46.561	4938.432
18	49.833	4815.543
19	52.381	3751.400
20	54.632	3312.798
21	56.681	3016.254
22	58.673	2931.962
23	60.297	2389.944
24	61.878	2328.061
25	63.361	2182.426
26	64.742	2033.416
27	66.123	2032.821
28	67.313	1751.331
29	68.450	1672.688
30	69.479	1515.121
31	70.450	1429.032
32	71.377	1364.168
33	72.263	1304.368
34	73.119	1260.796
35	73.898	1146.666
36	74.658	1118.311
37	75.379	1060.825
38	76.076	1026.787
39	76.764	1012.210
40	77.388	918.777
41	77.963	845.491
42	78.515	813.148
43	79.027	753.439
44	79.502	699.400
45	79.977	698.569
46	80.447	691.787
47	80.904	672.314
48	81.337	637.681
49	81.768	635.120
50	82.197	631.830
51	82.613	611.122
52	82.988	552.771
53	83.358	544.888
54	83.725	539.823
55	84.090	536.342
56	84.442	519.160
57	84.779	495.790
58	85.115	494.185
59	85.450	493.286
60	85.785	493.623
61	86.107	473.263
62	86.377	397.484

63	86.631	373.586
64	86.885	374.181
65	87.138	373.193
66	87.393	374.159
67	87.646	373.306
68	87.884	349.723
69	88.096	312.978
70	88.309	312.338
71	88.520	311.226
72	88.732	311.182
73	88.933	296.223
74	89.129	288.767
75	89.325	288.340
76	89.510	272.393
77	89.684	256.862
78	89.858	255.683
79	90.031	254.313
80	90.203	253.797
81	90.376	253.583
82	90.548	253.684
83	90.720	253.808
84	90.892	253.302
85	91.055	239.456
86	91.211	228.889
87	91.366	228.215
88	91.521	228.810
89	91.676	228.496
90	91.829	224.981
91	91.983	225.755
92	92.135	224.004
93	92.288	225.037
94	92.440	224.958
95	92.583	209.539
96	92.719	200.207
97	92.854	199.410
98	92.990	199.646
99	93.126	199.567
100	93.261	198.804
101	93.396	199.556
102	93.531	198.826
103	93.667	200.275
104	93.802	198.208
105	93.937	199.444
106	94.067	190.392
107	94.181	167.607
108	94.294	166.416
109	94.405	163.542
110	94.516	163.508
111	94.627	163.474
112	94.739	164.137
113	94.849	162.868
114	94.961	164.137
115	95.072	164.204
116	95.183	162.823
117	95.294	164.170
118	95.405	163.474
119	95.516	162.755
120	95.610	138.117
121	95.697	127.898
122	95.783	127.258
123	95.870	127.179
124	95.956	127.213
125	96.043	127.954
126	96.129	126.494
127	96.216	127.943
128	96.302	127.201
129	96.389	127.190
130	96.475	127.213

131	96.561	126.865
132	96.647	126.180
133	96.733	126.921
134	96.819	126.168
135	96.905	126.180
136	96.990	126.180
137	97.073	121.834
138	97.139	97.173
139	97.203	93.545
140	97.267	94.264
141	97.330	92.815
142	97.393	92.804
143	97.454	89.413
144	97.514	88.694
145	97.575	90.131
146	97.636	90.143
147	97.697	88.683
148	97.757	89.424
149	97.818	89.402
150	97.879	89.413

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1204.1667

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 249.1757

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 150.0 300.0 450.0 600.0
14.000	65.1945	127.29	. Q V . . .
14.083	66.0900	130.03	. Q V . . .
14.167	67.0090	133.44	. Q V . . .
14.250	67.9522	136.95	. QV . . .
14.333	68.9230	140.95	. Q.V . . .
14.417	69.9227	145.15	. Q.V . . .
14.500	70.9540	149.76	. Q.V . . .
14.583	72.0213	154.96	. QV . . .
14.667	73.1288	160.81	. QV . . .
14.750	74.2816	167.39	. .Q . . .
14.833	75.4825	174.37	. .QV . . .
14.917	76.7373	182.20	. . Q . . .
15.000	78.0423	189.48	. . Q . . .
15.083	79.3941	196.29	. . VQ . . .
15.167	80.7912	202.86	. . VQ . . .
15.250	82.2333	209.39	. . Q . . .
15.333	83.7203	215.91	. . VQ . . .
15.417	85.2473	221.73	. . VQ . . .
15.500	86.8078	226.58	. . V Q . . .
15.583	88.3972	230.79	. . VQ . . .
15.667	90.0102	234.21	. . VQ . . .
15.750	91.6476	237.75	. . VQ . . .
15.833	93.3103	241.42	. . V Q . . .
15.917	94.9979	245.03	. . VQ . . .
16.000	96.7189	249.90	. . VQ . . .
16.083	98.6426	279.32	. . V Q . . .
16.167	100.7609	307.58	. . V Q . . .
16.250	102.9024	310.95	. . V Q . . .
16.333	105.1897	332.10	. . V . Q . . .
16.417	107.5506	342.81	. . V . Q . . .
16.500	110.0573	363.97	. . V . Q . . .
16.583	112.7592	392.32	. . V . Q . . .
16.667	115.6697	422.61	. . V . Q . . .
16.750	118.7940	453.64	. . V. Q . . .
16.833	122.0405	471.39	. . V. .Q . . .
16.917	125.5060	503.19	. . V . Q . . .
17.000	128.8097	479.70	. . V .Q . . .
17.083	131.9687	458.68	. . .V Q . . .
17.167	135.0402	445.98	. . .V Q. . . .
17.250	138.0822	441.71	. . . V Q. . . .
17.333	141.1023	438.52	. . . V Q. . . .
17.417	144.1594	443.89	. . . V Q. . . .
17.500	147.1552	434.99	. . . V Q . . . .
17.583	149.8840	396.22	. . . V Q . . . .
17.667	152.4776	376.59	. . . VQ . . . .
17.750	154.9693	361.78	. . . Q . . . .
17.833	157.4018	353.20	. . . Q V . . . .
17.917	159.6702	329.38	. . .Q V . . . .
18.000	161.8777	320.52	. . .Q V . . . .
18.083	164.0100	309.62	. . Q V . . . .
18.167	166.0683	298.86	. . Q. V . . . .
18.250	168.0798	292.08	. . Q. V . . . .
18.333	169.9864	276.83	. . Q . V . . . .
18.417	171.8286	267.49	. . Q . V . . . .
18.500	173.5912	255.93	. . Q . V . . . .
18.583	175.2957	247.49	. . Q . V . . . .
18.667	176.9479	239.90	. . Q . V . . . .
18.750	178.5501	232.63	. . Q . V . . . .
18.833	180.1048	225.75	. . Q . V . . . .
18.917	181.6000	217.10	. . Q . V. . . .
19.000	183.0557	211.37	. . Q . V. . . .
19.083	184.4679	205.06	. . Q . V. . . .
19.167	185.8428	199.63	. . Q . V. . . .
19.250	187.1834	194.66	. . Q . V . . . .
19.333	188.4755	187.61	. . Q . V . . . .
19.417	189.7238	181.25	. . Q . V . . . .
19.500	190.9386	176.38	. .Q . V . . . .
19.583	192.1172	171.13	. .Q . V . . . .
19.667	193.2627	166.34	. .Q . .V . . . .
19.750	194.3874	163.30	. Q . .V . . . .
19.833	195.4905	160.18	. Q . .V . . . .
19.917	196.5707	156.84	. Q . .V . . . .
20.000	197.6252	153.11	. Q . .V . . . .

END OF FLOODSCx ROUTING ANALYSIS

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              Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MP55002E.FLD
  TIME/DATE OF STUDY: 14:07 03/26/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1055.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   12522.500 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.550 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.140
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.110
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.700
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.580
         LOW LOSS FRACTION = 0.850
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.13
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.28
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.37
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.63
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  0.86
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.47

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.629
          30-MINUTE FACTOR = 0.643
           1-HOUR FACTOR = 0.648
           3-HOUR FACTOR = 0.928
           6-HOUR FACTOR = 0.965
          24-HOUR FACTOR = 0.978

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   5.376


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.522	790.557
2	1.565	1579.433
3	2.607	1578.787
4	4.003	2114.217
5	5.576	2381.000
6	7.298	2608.504
7	9.501	3335.706
8	12.112	3955.398
9	15.202	4679.234
10	18.785	5426.609
11	22.587	5757.583
12	26.905	6539.673
13	30.536	5498.435
14	33.920	5124.291
15	36.981	4635.361
16	40.123	4759.667
17	43.145	4576.012
18	46.409	4943.241
19	49.606	4841.107
20	52.111	3794.852
21	54.301	3315.564
22	56.288	3009.503
23	58.309	3060.042
24	59.918	2437.094
25	61.455	2328.564
26	62.929	2231.018
27	64.289	2060.638
28	65.631	2031.493
29	66.860	1862.050
30	67.984	1702.693
31	69.047	1609.277
32	70.005	1450.059
33	70.925	1393.790
34	71.795	1317.370
35	72.633	1269.952
36	73.446	1231.222
37	74.188	1122.785
38	74.911	1095.563
39	75.595	1035.724
40	76.258	1003.568
41	76.905	980.668
42	77.526	939.546
43	78.075	832.022
44	78.612	812.715
45	79.109	753.603
46	79.572	701.367
47	80.013	666.923
48	80.457	673.116
49	80.894	661.967
50	81.316	638.812
51	81.720	610.908
52	82.122	609.972
53	82.523	607.119
54	82.913	590.596
55	83.266	534.789
56	83.612	523.685
57	83.955	519.399
58	84.297	517.596
59	84.631	506.030
60	84.949	481.940
61	85.262	473.725
62	85.575	473.886

63	85.887	473.401
64	86.200	473.621
65	86.487	434.868
66	86.729	365.311
67	86.964	356.287
68	87.199	355.513
69	87.434	355.940
70	87.669	356.310
71	87.904	355.501
72	88.128	340.100
73	88.326	300.157
74	88.523	297.291
75	88.719	297.106
76	88.915	297.268
77	89.107	290.786
78	89.288	273.582
79	89.468	273.489
80	89.647	270.393
81	89.811	248.856
82	89.972	242.998
83	90.131	241.114
84	90.290	240.386
85	90.448	240.340
86	90.607	239.554
87	90.765	240.317
88	90.924	240.421
89	91.082	239.601
90	91.235	231.224
91	91.378	216.665
92	91.521	216.157
93	91.664	216.527
94	91.807	216.920
95	91.949	215.857
96	92.090	213.338
97	92.230	212.078
98	92.371	212.783
99	92.511	211.836
100	92.651	212.263
101	92.779	194.169
102	92.904	189.732
103	93.029	188.912
104	93.154	189.675
105	93.279	188.970
106	93.404	189.686
107	93.529	188.901
108	93.654	189.675
109	93.779	188.981
110	93.904	188.901
111	94.029	189.548
112	94.153	187.560
113	94.263	167.329
114	94.369	159.368
115	94.471	154.804
116	94.573	155.451
117	94.676	154.677
118	94.777	153.822
119	94.880	155.439
120	94.981	153.810
121	95.084	154.677
122	95.186	155.359
123	95.288	153.903
124	95.390	155.463
125	95.492	153.810
126	95.594	154.619
127	95.688	141.540
128	95.767	120.742
129	95.846	120.026
130	95.926	119.956
131	96.005	120.754
132	96.085	119.968
133	96.164	120.684
134	96.244	120.800
135	96.323	120.014
136	96.403	120.696
137	96.482	120.026
138	96.562	120.673
139	96.641	120.026
140	96.720	119.979
141	96.800	120.673
142	96.880	120.696
143	96.959	119.922
144	97.039	120.673
145	97.118	119.922
146	97.185	101.412
147	97.244	89.118
148	97.303	89.881
149	97.362	89.546
150	97.418	84.508

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1253.2402

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 240.6278

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 125.0 250.0 375.0 500.0
14.000	61.9327	120.83	. QV . . .
14.083	62.7825	123.40	. QV . . .
14.167	63.6545	126.61	. Q . . .
14.250	64.5486	129.83	. Q . . .
14.333	65.4680	133.50	. Q . . .
14.417	66.4143	137.39	. QV . . .
14.500	67.3888	141.49	. .Q . . .
14.583	68.3954	146.16	. .Q . . .
14.667	69.4376	151.33	. .VQ . . .
14.750	70.5194	157.08	. .VQ . . .
14.833	71.6450	163.43	. .V Q . . .
14.917	72.8162	170.06	. . VQ . . .
15.000	74.0374	177.33	. . V Q . . .
15.083	75.3035	183.84	. . V Q . . .
15.167	76.6131	190.15	. . V Q . . .
15.250	77.9640	196.15	. . V Q . . .
15.333	79.3575	202.35	. . V Q . . .
15.417	80.7871	207.57	. . V Q . . .
15.500	82.2492	212.30	. . V Q . . .
15.583	83.7447	217.15	. . V Q . . .
15.667	85.2660	220.89	. . V Q . . .
15.750	86.8119	224.47	. . V Q . . .
15.833	88.3839	228.25	. . V Q . . .
15.917	89.9836	232.29	. . V Q . . .
16.000	91.6169	237.14	. . V Q . . .
16.083	93.4442	265.33	. . V .Q . . .
16.167	95.4557	292.06	. . V . Q . . .
16.250	97.4849	294.65	. . V . Q . . .
16.333	99.6335	311.98	. . V . Q . . .
16.417	101.8622	323.61	. . V . Q . . .
16.500	104.1766	336.05	. . V . Q . . .
16.583	106.6835	364.00	. . V . Q. . .
16.667	109.3629	389.06	. . V . .Q . .
16.750	112.2300	416.29	. . V . . Q . .
16.833	115.2758	442.26	. . V. . Q . .
16.917	118.4035	454.14	. . V. . Q . .
17.000	121.6922	477.52	. . V . Q . .
17.083	124.7595	445.37	. . V . Q . .
17.167	127.7423	433.10	. . .V . Q . .
17.250	130.6240	418.43	. . .V . Q . .
17.333	133.5394	423.32	. . . V . Q . .
17.417	136.4174	417.88	. . . V . Q . .
17.500	139.3557	426.65	. . . V . Q . .
17.583	142.2372	418.39	. . . V . Q . .
17.667	144.8612	381.01	. . . V Q . .
17.750	147.3443	360.54	. . . V Q . . .
17.833	149.7276	346.06	. . . V Q . . .
17.917	152.0820	341.85	. . . V Q . . .
18.000	154.2618	316.51	. . . Q . . .
18.083	156.3759	306.96	. . . QV . . .
18.167	158.4281	297.98	. . . Q V . . .
18.250	160.4082	287.52	. . . Q V . . .
18.333	162.3390	280.35	. . . Q V . . .
18.417	164.1926	269.14	. . .Q V . . .
18.500	165.9689	257.92	. . Q V . . .
18.583	167.6808	248.58	. . Q. V . . .
18.667	169.3214	238.21	. . Q. V . . .
18.750	170.9133	231.15	. . Q . V . . .
18.833	172.4538	223.68	. . Q . V . . .
18.917	173.9489	217.09	. . Q . V . . .
19.000	175.4017	210.95	. . Q . V. . .
19.083	176.8009	203.16	. . Q . V. . .
19.167	178.1647	198.03	. . Q . V. . .
19.250	179.4888	192.25	. . Q . V. . .
19.333	180.7791	187.35	. . Q . V . .
19.417	182.0376	182.74	. . Q . V . .
19.500	183.2606	177.57	. . Q . V . .
19.583	184.4354	170.59	. . Q . V . .
19.667	185.5828	166.61	. . Q . V . .
19.750	186.6963	161.68	. . Q . .V . .
19.833	187.7790	157.20	. . Q . .V . .
19.917	188.8355	153.40	. . Q . .V . .
20.000	189.8757	151.04	. . Q . .V . .

END OF FLOODSCx ROUTING ANALYSIS

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**************************************************************************

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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MP56002E.FLD
  TIME/DATE OF STUDY: 14:07 03/26/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1056.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
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      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   12890.600 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.640 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.140
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.120
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.680
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.060
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.580
         LOW LOSS FRACTION = 0.840
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.13
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.28
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.37
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.63
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  0.86
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.47

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.623
          30-MINUTE FACTOR = 0.638
           1-HOUR FACTOR = 0.643
           3-HOUR FACTOR = 0.926
           6-HOUR FACTOR = 0.964
          24-HOUR FACTOR = 0.978

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   5.081


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.490	763.283
2	1.468	1525.783
3	2.437	1509.675
4	3.676	1932.457
5	5.143	2286.810
6	6.663	2369.356
7	8.602	3023.493
8	10.920	3612.480
9	13.598	4175.750
10	16.731	4883.990
11	20.122	5285.835
12	24.032	6095.364
13	27.883	6004.774
14	31.138	5073.874
15	34.348	5004.027
16	37.190	4430.899
17	40.220	4723.923
18	43.111	4507.163
19	46.284	4945.250
20	49.393	4847.982
21	51.852	3833.362
22	53.970	3301.377
23	55.905	3015.900
24	57.869	3063.142
25	59.500	2541.464
26	60.976	2302.212
27	62.417	2245.205
28	63.774	2116.816
29	65.017	1936.850
30	66.312	2018.311
31	67.404	1703.634
32	68.465	1654.215
33	69.459	1548.490
34	70.352	1393.239
35	71.225	1360.935
36	72.043	1275.347
37	72.838	1239.071
38	73.611	1204.899
39	74.321	1105.978
40	75.010	1075.101
41	75.663	1018.415
42	76.298	988.894
43	76.913	958.303
44	77.517	942.948
45	78.059	844.336
46	78.573	801.458
47	79.067	770.356
48	79.525	713.931
49	79.949	660.861
50	80.368	653.225
51	80.788	654.069
52	81.200	642.758
53	81.594	614.605
54	81.976	594.695
55	82.356	593.351
56	82.735	590.734
57	83.106	577.258
58	83.442	524.461
59	83.769	509.796
60	84.094	506.383
61	84.416	502.684
62	84.735	497.189

63	85.041	476.529
64	85.336	459.901
65	85.630	458.986
66	85.925	459.116
67	86.219	459.033
68	86.510	454.050
69	86.769	402.787
70	86.991	346.160
71	87.212	344.531
72	87.432	343.686
73	87.653	343.674
74	87.874	344.162
75	88.094	344.150
76	88.308	333.422
77	88.497	293.637
78	88.681	287.535
79	88.866	287.809
80	89.050	287.844
81	89.234	286.179
82	89.406	267.851
83	89.574	262.094
84	89.742	262.177
85	89.905	253.542
86	90.055	234.357
87	90.204	233.239
88	90.353	231.087
89	90.500	230.016
90	90.648	229.980
91	90.795	230.206
92	90.943	230.575
93	91.091	229.802
94	91.238	229.909
95	91.382	224.426
96	91.516	208.714
97	91.649	207.727
98	91.783	208.298
99	91.916	207.774
100	92.050	208.524
101	92.181	204.658
102	92.312	203.290
103	92.442	203.017
104	92.572	203.243
105	92.703	203.302
106	92.831	199.901
107	92.949	183.677
108	93.065	181.311
109	93.181	181.001
110	93.297	181.370
111	93.414	181.013
112	93.530	181.441
113	93.646	181.025
114	93.762	181.227
115	93.879	181.370
116	93.995	180.942
117	94.111	180.692
118	94.227	181.905
119	94.337	171.308
120	94.436	153.669
121	94.533	151.790
122	94.627	147.032
123	94.722	146.878
124	94.817	148.436
125	94.911	146.818
126	95.006	147.698
127	95.100	146.806
128	95.195	147.698
129	95.289	146.806
130	95.384	147.698
131	95.478	146.818
132	95.573	147.698
133	95.667	147.544
134	95.758	142.061
135	95.834	117.476
136	95.908	115.847
137	95.981	114.288
138	96.055	115.026
139	96.129	115.085
140	96.203	115.026
141	96.276	115.038
142	96.350	115.097
143	96.424	114.288
144	96.497	114.955
145	96.572	115.977
146	96.645	114.146
147	96.719	115.169
148	96.793	114.943
149	96.866	115.121
150	96.940	114.134

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1275.6704

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 259.7846

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 125.0 250.0 375.0 500.0
14.000	66.9521	130.51	. Q . . .
14.083	67.8700	133.28	. Q . . .
14.167	68.8113	136.67	. Q . . .
14.250	69.7761	140.10	. VQ . . .
14.333	70.7671	143.89	. VQ . . .
14.417	71.7864	148.00	. .Q . . .
14.500	72.8348	152.24	. .VQ . . .
14.583	73.9162	157.01	. .VQ . . .
14.667	75.0339	162.29	. .VQ . . .
14.750	76.1914	168.07	. .V Q . . .
14.833	77.3928	174.44	. .V Q . . .
14.917	78.6407	181.19	. . V Q . . .
15.000	79.9397	188.62	. . V Q . . .
15.083	81.2898	196.03	. . V Q . . .
15.167	82.6861	202.75	. . V Q . . .
15.250	84.1288	209.47	. . V Q . . .
15.333	85.6152	215.82	. . V Q . . .
15.417	87.1410	221.56	. . V Q . . .
15.500	88.6996	226.30	. . V Q . . .
15.583	90.2950	231.66	. . V Q . . .
15.667	91.9251	236.69	. . V Q . . .
15.750	93.5847	240.97	. . V Q. . . .
15.833	95.2749	245.41	. . V Q. . . .
15.917	96.9960	249.91	. . V Q. . . .
16.000	98.7568	255.67	. . V Q . . .
16.083	100.7058	283.00	. . V . Q . . .
16.167	102.8310	308.58	. . V . Q . . .
16.250	104.9735	311.08	. . V . Q . . .
16.333	107.2106	324.83	. . V . Q . . .
16.417	109.5360	337.65	. . V . Q . . .
16.500	111.9165	345.65	. . V . Q . . .
16.583	114.4660	370.19	. . V . Q. . .
16.667	117.1800	394.07	. . V . .Q . .
16.750	120.0482	416.45	. . V . . Q . .
16.833	123.0905	441.75	. . V . . Q . .
16.917	126.2369	456.86	. . V. . Q . .
17.000	129.5487	480.87	. . V. . Q . .
17.083	132.8358	477.28	. . V . Q . .
17.167	135.9291	449.15	. . V . Q . .
17.250	139.0032	446.37	. . .V . Q . .
17.333	141.9687	430.59	. . .V . Q . .
17.417	144.9978	439.83	. . . V . Q . .
17.500	147.9839	433.57	. . . V . Q . .
17.583	151.0396	443.69	. . . V . Q . .
17.667	154.0363	435.11	. . . V . Q . .
17.750	156.7866	399.35	. . . V .Q . .
17.833	159.3838	377.11	. . . V Q . .
17.917	161.8870	363.47	. . . V Q. . .
18.000	164.3569	358.63	. . . V Q . . .
18.083	166.6744	336.50	. . . VQ . . .
18.167	168.8999	323.14	. . . QV . . .
18.250	171.0700	315.09	. . . QV . . .
18.333	173.1761	305.81	. . . Q V . . .
18.417	175.2031	294.32	. . . Q V . . .
18.500	177.2005	290.01	. . . Q V . . .
18.583	179.0881	274.09	. . .Q V . . .
18.667	180.9178	265.68	. . .Q V . . .
18.750	182.6835	256.37	. . Q V . . .
18.833	184.3796	246.28	. . Q. V . . .
18.917	186.0305	239.70	. . Q. V . . .
19.000	187.6254	231.59	. . Q . V . . .
19.083	189.1778	225.41	. . Q . V. . .
19.167	190.6902	219.60	. . Q . V. . .
19.250	192.1509	212.09	. . Q . V. . .
19.333	193.5754	206.83	. . Q . V. . .
19.417	194.9602	201.07	. . Q . V . .
19.500	196.3109	196.13	. . Q . V . .
19.583	197.6281	191.25	. . Q . V . .
19.667	198.9145	186.79	. . Q . V . .
19.750	200.1559	180.24	. . Q . V . .
19.833	201.3651	175.58	. . Q . .V . .
19.917	202.5455	171.40	. . Q . .V . .
20.000	203.6933	166.66	. . Q . .V . .

END OF FLOODSCx ROUTING ANALYSIS

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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MP57002E.FLD
  TIME/DATE OF STUDY: 14:08 03/26/2004


**************************************************************************
  FLOW PROCESS FROM NODE   1000.00 TO NODE   1057.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   18555.699 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.730 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.160
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.110
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.660
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.070
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.580
         LOW LOSS FRACTION = 0.830
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.13
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.28
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.37
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.64
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  0.88
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  1.50

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.543
          30-MINUTE FACTOR = 0.568
           1-HOUR FACTOR = 0.581
           3-HOUR FACTOR = 0.897
           6-HOUR FACTOR = 0.953
          24-HOUR FACTOR = 0.971

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   4.817


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.460	1031.882
2	1.379	2063.421
3	2.289	2042.339
4	3.381	2449.008
5	4.749	3070.261
6	6.150	3143.278
7	7.861	3839.983
8	9.877	4525.214
9	12.254	5334.683
10	15.024	6215.473
11	18.201	7128.930
12	21.467	7330.100
13	25.351	8714.519
14	28.759	7647.745
15	31.804	6833.643
16	34.822	6772.362
17	37.523	6060.738
18	40.429	6521.720
19	43.175	6163.806
20	46.205	6799.011
21	49.191	6700.848
22	51.616	5440.976
23	53.676	4622.893
24	55.605	4330.107
25	57.495	4240.376
26	59.220	3870.495
27	60.681	3278.315
28	62.101	3187.702
29	63.459	3046.985
30	64.716	2820.380
31	65.930	2725.847
32	67.124	2677.908
33	68.155	2315.012
34	69.157	2247.812
35	70.095	2104.972
36	70.935	1885.378
37	71.767	1867.470
38	72.544	1742.384
39	73.301	1699.787
40	74.039	1655.016
41	74.718	1524.982
42	75.370	1462.097
43	75.995	1402.293
44	76.601	1359.799
45	77.182	1304.224
46	77.754	1284.090
47	78.291	1205.299
48	78.779	1094.544
49	79.260	1079.683
50	79.701	990.414
51	80.116	930.936
52	80.504	869.403
53	80.897	881.970
54	81.284	869.985
55	81.667	858.017
56	82.030	814.890
57	82.385	796.159
58	82.739	794.927
59	83.091	789.825
60	83.437	776.385
61	83.753	710.503
62	84.058	683.829

63	84.361	680.764
64	84.661	672.460
65	84.960	670.731
66	85.250	651.504
67	85.528	622.621
68	85.802	616.509
69	86.077	616.749
70	86.352	616.475
71	86.627	616.612
72	86.893	596.786
73	87.119	508.544
74	87.325	460.520
75	87.529	459.116
76	87.734	458.945
77	87.938	459.202
78	88.143	459.698
79	88.347	458.448
80	88.549	451.292
81	88.725	397.001
82	88.896	383.510
83	89.067	383.458
84	89.238	383.441
85	89.409	383.441
86	89.574	370.909
87	89.731	351.528
88	89.887	350.603
89	90.044	351.322
90	90.189	327.096
91	90.330	314.786
92	90.469	312.834
93	90.606	307.818
94	90.744	308.366
95	90.881	308.177
96	91.018	308.297
97	91.156	308.143
98	91.293	308.349
99	91.430	307.869
100	91.565	303.298
101	91.691	282.325
102	91.815	278.182
103	91.940	278.918
104	92.064	279.534
105	92.188	276.932
106	92.312	279.363
107	92.433	270.631
108	92.554	272.823
109	92.674	269.672
110	92.795	271.470
111	92.917	272.206
112	93.033	262.071
113	93.142	244.265
114	93.250	240.978
115	93.358	242.656
116	93.466	241.988
117	93.574	242.929
118	93.681	240.772
119	93.790	243.169
120	93.897	241.662
121	94.005	241.851
122	94.113	241.662
123	94.220	241.971
124	94.329	243.255
125	94.436	239.368
126	94.530	212.711
127	94.621	204.390
128	94.710	199.528
129	94.797	195.504
130	94.884	195.111

131	94.972	196.446
132	95.059	195.128
133	95.146	195.248
134	95.233	195.111
135	95.320	196.446
136	95.407	195.248
137	95.494	195.248
138	95.582	196.309
139	95.669	195.248
140	95.756	195.128
141	95.843	195.248
142	95.916	165.217
143	95.984	150.665
144	96.052	154.294
145	96.120	152.137
146	96.188	151.880
147	96.256	153.216
148	96.324	153.061
149	96.393	153.335
150	96.460	151.760

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1853.0271

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 384.4073

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================================================================================

                    2 4 - H O U R    S T O R M
                  R U N O F F    H Y D R O G R A P H

================================================================================
             HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
       (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      175.0     350.0     525.0     700.0
--------------------------------------------------------------------------------
  14.000    103.2054    208.36  .         VQ        .         .         .
  14.083    104.6725    213.02  .         V Q       .         .         .
  14.167    106.1780    218.60  .         .VQ       .         .         .
  14.250    107.7212    224.07  .         .VQ       .         .         .
  14.333    109.3048    229.95  .         .V Q      .         .         .
  14.417    110.9332    236.44  .         .V Q      .         .         .
  14.500    112.6067    242.99  .         .V Q      .         .         .
  14.583    114.3301    250.23  .         .V  Q     .         .         .
  14.667    116.1080    258.16  .         . V Q     .         .         .
  14.750    117.9454    266.79  .         . V  Q    .         .         .
  14.833    119.8480    276.26  .         . V  Q    .         .         .
  14.917    121.8217    286.58  .         . V   Q   .         .         .
  15.000    123.8675    297.04  .         . V   Q   .         .         .
  15.083    125.9942    308.81  .         .  V   Q  .         .         .
  15.167    128.1949    319.54  .         .  V    Q .         .         .
  15.250    130.4644    329.52  .         .  V    Q .         .         .
  15.333    132.8024    339.48  .         .  V     Q.         .         .
  15.417    135.1946    347.36  .         .   V    Q.        .         .
  15.500    137.6351    354.35  .         .   V     Q        .         .
  15.583    140.1232    361.28  .         .   V     Q        .         .
  15.667    142.6614    368.54  .         .   V     .Q       .         .
  15.750    145.2470    375.43  .         .    V    .Q       .         .
  15.833    147.8764    381.80  .         .    V    .Q       .         .
  15.917    150.5472    387.79  .         .    V    . Q      .         .
  16.000    153.2672    394.94  .         .    V    . Q      .         .
  16.083    156.1665    420.98  .         .     V   .   Q     .         .
  16.167    159.2274    444.45  .         .     V   .    Q    .         .
  16.250    162.3004    446.20  .         .     V   .    Q    .         .
  16.333    165.4368    455.41  .         .      V  .     Q   .         .
  16.417    168.6602    468.03  .         .      V  .     Q   .         .
  16.500    171.9244    473.97  .         .      V  .      Q  .         .
  16.583    175.3217    493.28  .         .       V .       Q .         .
  16.667    178.8560    513.19  .         .       V .        Q.         .
  16.750    182.5533    536.85  .         .       V .         Q         .
  16.833    186.4079    559.69  .         .        V.         .Q        .
  16.917    190.4191    582.42  .         .        V.         .  Q      .
  17.000    194.4798    589.62  .         .         V         .  Q      .
  17.083    198.7091    614.10  .         .         V         .    Q    .
  17.167    202.7888    592.36  .         .         .V        .  Q      .
  17.250    206.7603    576.67  .         .         .V        . Q       .
  17.333    210.7244    575.58  .         .         .V        . Q       .
  17.417    214.6141    564.78  .         .         . V       . Q       .
  17.500    218.5715    574.62  .         .         . V       . Q       .
  17.583    222.4860    568.38  .         .         .  V      . Q       .
  17.667    226.4649    577.74  .         .         .  V      .  Q      .
  17.750    230.3829    568.90  .         .         .  V      . Q       .
  17.833    234.0839    537.38  .         .         .   V     Q         .
  17.917    237.6198    513.42  .         .         .   V    Q.         .
  18.000    241.0700    500.96  .         .         .    V  Q .         .
  18.083    244.4526    491.16  .         .         .    V  Q .         .
  18.167    247.7241    475.02  .         .         .    V Q  .         .
  18.250    250.8583    455.09  .         .         .     Q   .         .
  18.333    253.9214    444.76  .         .         .    QV   .         .
  18.417    256.9113    434.14  .         .         .   Q V   .         .
  18.500    259.8135    421.40  .         .         .   Q  V  .         .
  18.583    262.6406    410.49  .         .         .  Q   V  .         .
  18.667    265.3906    399.31  .         .         .  Q    V  .         .
  18.750    268.0232    382.24  .         .         .Q     V  .         .
  18.833    270.5812    371.43  .         .         .Q      V .         .
  18.917    273.0596    359.86  .         .         Q       V .         .
  19.000    275.4522    347.41  .         .        Q.       V .         .
  19.083    277.7808    338.11  .         .        Q.       V .         .
  19.167    280.0373    327.65  .         .       Q .        V.         .
  19.250    282.2380    319.55  .         .       Q .        V.         .
  19.333    284.3826    311.40  .         .      Q  .        V.         .
  19.417    286.4633    302.12  .         .      Q  .        V.         .
  19.500    288.4900    294.26  .         .     Q   .         V         .
  19.583    290.4652    286.81  .         .     Q   .         V         .
  19.667    292.3913    279.66  .         .    Q    .         V         .
  19.750    294.2682    272.53  .         .    Q    .         V         .
  19.833    296.1029    266.40  .         .    Q    .         V         .
  19.917    297.8902    259.52  .         .   Q     .         V         .
  20.000    299.6289    252.46  .         .   Q     .         .V        .
================================================================================

  END OF FLOODSCx ROUTING ANALYSIS
```

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

TECHNICAL APPENDIX II-C
HYDROLOGIC ANALYSIS
PROPOSED CONDITION
10-YEAR EXPECTED VALUE

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
         (c) Copyright 1983-2003 Advanced Engineering Software (aes)
             Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: MP49010E.DAT
  TIME/DATE OF STUDY: 14:29 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  3.610
   2)  10.000;  2.370
   3)  15.000;  1.890
   4)  20.000;  1.540
   5)  30.000;  1.210
   6)  60.000;  0.840
   7) 120.000;  0.590
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1048.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU48010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1980.81    Tc(MIN.) =  49.77
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.61
  TOTAL AREA(ACRES) =    4407.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 33517.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1048.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     1980.81    Tc(MIN.) =  49.77
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.61
  TOTAL AREA(ACRES) =    4407.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 33517.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1048.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    445.00  DOWNSTREAM(FEET) =    400.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2427.00   CHANNEL SLOPE =  0.0185
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1980.81
  FLOW VELOCITY(FEET/SEC.) =  13.06   FLOW DEPTH(FEET) =   5.86
  TRAVEL TIME(MIN.) =   3.10   Tc(MIN.) =  52.86
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  52.86
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.051
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       38.00      0.40      1.00    40
  NATURAL FAIR COVER
  "GRASS"                    A       10.90      0.40      1.00    50
  URBAN FAIR COVER
  "TURF"                     A       42.00      0.40      1.00    44
  NATURAL FAIR COVER
  "OPEN BRUSH"               A       37.80      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A       53.60      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       70.00      0.30      1.00    63
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.37
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  252.30
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.27;30M= 0.60;1H= 0.79;3H= 1.35;6H= 1.89;24H= 3.20
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.88; LAG(HR) = 0.70; Fm(INCH/HR) = 0.25; Ybar = 0.63
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.80; 30M = 0.80; 1HR = 0.80;
  3HR = 0.97; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4659.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =     523.40
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1929.08
  TOTAL AREA(ACRES) =   4659.30       PEAK FLOW RATE(CFS) =    1980.81
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  52.86
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.928
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B       38.40      0.30      1.00    69
  URBAN FAIR COVER
  "TURF"                     B       32.90      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       37.40      0.30      1.00    66
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        2.00      0.30      1.00    72
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B        1.10      0.30      0.60    56
  NATURAL FAIR COVER
  "WOODLAND"                 B       77.20      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  189.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.27;30M= 0.59;1H= 0.79;3H= 1.35;6H= 1.89;24H= 3.19
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.88; LAG(HR) = 0.70; Fm(INCH/HR) = 0.25; Ybar = 0.64
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.79; 30M = 0.79; 1HR = 0.79;
  3HR = 0.97; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4848.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =     533.43
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   1981.33
  TOTAL AREA(ACRES) =   4848.30       PEAK FLOW RATE(CFS) =    1981.33

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  52.86
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.928
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      710.20      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        2.20      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C       89.70      0.25      1.00    79
  URBAN FAIR COVER
  "TURF"                     C       13.10      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      819.40      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       75.60      0.25      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1710.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.27;30M= 0.59;1H= 0.79;3H= 1.34;6H= 1.87;24H= 3.15
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.88; LAG(HR) = 0.70; Fm(INCH/HR) = 0.25; Ybar = 0.64
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.75; 30M = 0.75; 1HR = 0.75;
  3HR = 0.96; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   6558.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =     695.66
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2493.55
  TOTAL AREA(ACRES) =   6558.50       PEAK FLOW RATE(CFS) =    2493.55

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  52.86
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.928
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C       13.10      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C       82.20      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      145.30      0.20      1.00    81
  NATURAL POOR COVER
  "BARREN"                   D        1.00      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      367.20      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                     D      142.80      0.20      1.00    82
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  751.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.27;30M= 0.59;1H= 0.79;3H= 1.34;6H= 1.86;24H= 3.14
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
```

```
  Tc(HR) = 0.88; LAG(HR) = 0.70; Fm(INCH/HR) = 0.24; Ybar = 0.63
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.73; 30M = 0.73; 1HR = 0.73;
  3HR = 0.96; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   7310.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =     784.83
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2719.31
  TOTAL AREA(ACRES) =   7310.10       PEAK FLOW RATE(CFS) =    2719.31

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  52.86
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.928
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                D      373.60      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      D       21.60      0.20      1.00    86
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"        D       26.50      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                  D       58.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  480.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.27;30M= 0.59;1H= 0.79;3H= 1.34;6H= 1.86;24H= 3.13
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.88; LAG(HR) = 0.70; Fm(INCH/HR) = 0.24; Ybar = 0.63
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.71; 30M = 0.71; 1HR = 0.71;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   7790.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =     843.39
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2858.16
  TOTAL AREA(ACRES) =   7790.20       PEAK FLOW RATE(CFS) =    2858.16

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   7790.20  TC(MIN.) =     52.86
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.63
  PEAK FLOW RATE(CFS)   =   2858.16
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: MP50010E.DAT
  TIME/DATE OF STUDY: 14:29 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  3.610
   2)  10.000;  2.370
   3)  15.000;  1.890
   4)  20.000;  1.540
   5)  30.000;  1.210
   6)  60.000;  0.840
   7) 120.000;  0.590
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.200
        FOOTHILL                           0.100
        MOUNTAIN                           0.700
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1049.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MP49010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2858.16    Tc(MIN.) =  52.86
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.63
  TOTAL AREA(ACRES) =    7790.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1049.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2858.16    Tc(MIN.) =  52.86
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.63
  TOTAL AREA(ACRES) =    7790.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1049.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1050.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    400.00  DOWNSTREAM(FEET) =    390.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   616.00   CHANNEL SLOPE =  0.0162
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2858.16
  FLOW VELOCITY(FEET/SEC.) =  13.85   FLOW DEPTH(FEET) =   7.50
  TRAVEL TIME(MIN.) =   0.74   Tc(MIN.) =  53.61
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1050.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  53.61
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  1.043
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    A        0.30      0.40       1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        0.20      0.40       1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A        1.10      0.40       1.00    36
  NATURAL FAIR COVER
  "GRASS"                    B        2.20      0.30       1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        0.20      0.30       1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.40      0.30       1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.34
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    4.40
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.27;30M= 0.59;1H= 0.79;3H= 1.34;6H= 1.86;24H= 3.13
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.89; LAG(HR) = 0.71; Fm(INCH/HR) = 0.24; Ybar = 0.63
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.71; 30M = 0.71; 1HR = 0.71;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   7794.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =     843.41
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2851.67
  TOTAL AREA(ACRES) =   7794.60       PEAK FLOW RATE(CFS) =    2858.16
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1050.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  53.61
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.919
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       53.00      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                    C      318.80      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       33.30      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        4.80      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       41.60      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                    D       29.90      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  481.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.27;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.86;24H= 3.12
  S-GRAPH: VALLEY(DEV.)=  1.2%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN= 98.2%;FOOTHILL=  0.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.89; LAG(HR) = 0.71; Fm(INCH/HR) = 0.24; Ybar = 0.63
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8276.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =     891.59
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2961.45
  TOTAL AREA(ACRES) =   8276.00       PEAK FLOW RATE(CFS) =    2961.45

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1050.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  53.61
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.919
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        8.60      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D        1.80      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   10.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.86;24H= 3.12
  S-GRAPH: VALLEY(DEV.)=  1.2%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN= 98.2%;FOOTHILL=  0.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.89; LAG(HR) = 0.71; Fm(INCH/HR) = 0.24; Ybar = 0.63
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8286.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =     892.81
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2964.05
  TOTAL AREA(ACRES) =   8286.40       PEAK FLOW RATE(CFS) =    2964.05

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   8286.40  TC(MIN.) =     53.61
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.63
  PEAK FLOW RATE(CFS)   =   2964.05
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: MP51010E.DAT
  TIME/DATE OF STUDY: 14:29 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  3.610
   2)  10.000;  2.370
   3)  15.000;  1.890
   4)  20.000;  1.540
   5)  30.000;  1.210
   6)  60.000;  0.840
   7) 120.000;  0.590
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.300
        FOOTHILL                           0.500
        MOUNTAIN                           0.000
        VALLEY(UNDEVELOPED)/DESERT         0.200
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1050.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MP50010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2964.05    Tc(MIN.) =  53.61
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.63
  TOTAL AREA(ACRES) =    8286.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1050.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2964.05    Tc(MIN.) =  53.61
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.63
  TOTAL AREA(ACRES) =    8286.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1050.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1051.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    390.00  DOWNSTREAM(FEET) =    330.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  4501.00   CHANNEL SLOPE =  0.0133
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2964.05
  FLOW VELOCITY(FEET/SEC.) =  13.04   FLOW DEPTH(FEET) =   8.09
  TRAVEL TIME(MIN.) =   5.75   Tc(MIN.) =  59.36
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1051.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  59.36
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.984
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A        0.70      0.40       0.50    32
  NATURAL FAIR COVER
  "GRASS"                    A        1.80      0.40       1.00    50
  NATURAL FAIR COVER
  "WOODLAND"                 A        6.50      0.40       1.00    36
  NATURAL FAIR COVER
  "GRASS"                    B        3.20      0.30       1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        2.20      0.30       1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B       10.90      0.30       1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.33
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   25.30
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.86;24H= 3.12
  S-GRAPH: VALLEY(DEV.)=  1.3%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN= 97.9%;FOOTHILL=  0.7%;DESERT(UNDEV.)=  0.1%
  Tc(HR) = 0.99; LAG(HR) = 0.79; Fm(INCH/HR) = 0.24; Ybar = 0.63
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8311.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0317; Lca/L=0.4,n=.0284; Lca/L=0.5,n=.0261;Lca/L=0.6,n=.0243
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =     893.08
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2772.08
  TOTAL AREA(ACRES) =   8311.70       PEAK FLOW RATE(CFS) =    2964.05
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1051.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  59.36
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.848
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        5.60      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                    C       38.20      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        3.80      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        7.00      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       57.50      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        5.10      0.20      0.50    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  117.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.86;24H= 3.12
  S-GRAPH: VALLEY(DEV.)=  1.7%;VALLEY(UNDEV.)/DESERT=  0.3%
           MOUNTAIN= 96.5%;FOOTHILL=  1.4%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.99; LAG(HR) = 0.79; Fm(INCH/HR) = 0.24; Ybar = 0.63
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8428.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0317; Lca/L=0.4,n=.0284; Lca/L=0.5,n=.0261;Lca/L=0.6,n=.0243
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =     906.36
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2798.71
  TOTAL AREA(ACRES) =   8428.90       PEAK FLOW RATE(CFS) =    2964.05
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1051.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
```

```
============================================================================
  MAINLINE Tc(MIN) =  59.36
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.848
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   D        0.60      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D       92.50      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                     D       11.30      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       14.60      0.20      1.00    83
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D        7.80      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D       31.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  158.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.85;24H= 3.12
  S-GRAPH: VALLEY(DEV.)=  2.2%;VALLEY(UNDEV.)/DESERT=  0.7%
           MOUNTAIN= 94.8%;FOOTHILL=  2.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.99; LAG(HR) = 0.79; Fm(INCH/HR) = 0.24; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8587.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0317; Lca/L=0.4,n=.0284; Lca/L=0.5,n=.0261;Lca/L=0.6,n=.0243
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =     926.04
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2836.08
  TOTAL AREA(ACRES) =   8587.10       PEAK FLOW RATE(CFS) =    2964.05
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   8587.10  TC(MIN.) =     59.36
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.62
  PEAK FLOW RATE(CFS)   =   2964.05
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MP52010E.DAT
  TIME/DATE OF STUDY: 14:29 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  3.610
   2)  10.000;  2.370
   3)  15.000;  1.890
   4)  20.000;  1.540
   5)  30.000;  1.210
   6)  60.000;  0.840
   7) 120.000;  0.590
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.400
        FOOTHILL                           0.300
        MOUNTAIN                           0.100
        VALLEY(UNDEVELOPED)/DESERT         0.200
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1051.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MP51010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2964.05    Tc(MIN.) =  59.36
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.62
  TOTAL AREA(ACRES) =    8587.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1051.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2964.05    Tc(MIN.) =  59.36
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.62
  TOTAL AREA(ACRES) =    8587.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1051.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    330.00  DOWNSTREAM(FEET) =    300.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2333.00   CHANNEL SLOPE =  0.0129
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2964.05
  FLOW VELOCITY(FEET/SEC.) =  12.87   FLOW DEPTH(FEET) =   8.17
  TRAVEL TIME(MIN.) =   3.02   Tc(MIN.) =  62.38
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  62.38
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.956
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   A        3.80      0.40       1.00    78
  NATURAL FAIR COVER
  "GRASS"                    A        0.60      0.40       1.00    50
  URBAN FAIR COVER
  "TURF"                     A        2.90      0.40       1.00    44
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        0.40      0.40       1.00    46
  PUBLIC PARK                A        1.10      0.40       0.85    32
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       A        7.60      0.40       0.60    32
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.80
  SUBAREA AREA(ACRES) =   16.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.85;24H= 3.12
```

```
  S-GRAPH: VALLEY(DEV.)=  2.3%;VALLEY(UNDEV.)/DESERT=  0.7%
           MOUNTAIN= 94.6%;FOOTHILL=  2.4%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.04; LAG(HR) = 0.83; Fm(INCH/HR) = 0.24; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8603.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0317; Lca/L=0.4,n=.0284; Lca/L=0.5,n=.0261;Lca/L=0.6,n=.0243
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =     927.19
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2742.46
  TOTAL AREA(ACRES) =   8603.50       PEAK FLOW RATE(CFS) =    2964.05
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  62.38
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.830
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 A       10.10      0.40      1.00    36
  URBAN FAIR COVER
  "TURF"                     B        3.80      0.30      1.00    65
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.40      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        0.70      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        3.30      0.25      1.00    91
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.30      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.34
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   18.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.85;24H= 3.12
  S-GRAPH: VALLEY(DEV.)=  2.4%;VALLEY(UNDEV.)/DESERT=  0.8%
           MOUNTAIN= 94.4%;FOOTHILL=  2.4%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.04; LAG(HR) = 0.83; Fm(INCH/HR) = 0.24; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.69; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8622.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0317; Lca/L=0.4,n=.0284; Lca/L=0.5,n=.0261;Lca/L=0.6,n=.0243
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =     928.10
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2745.27
  TOTAL AREA(ACRES) =   8622.10       PEAK FLOW RATE(CFS) =    2964.05
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  62.38
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.830
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C       27.30      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.20      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       49.50      0.20      1.00    81
  NATURAL POOR COVER
  "BARREN"                   D        7.30      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D       13.50      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                     D      130.80      0.20      1.00    82
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.95
  SUBAREA AREA(ACRES) =  228.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.85;24H= 3.12
  S-GRAPH: VALLEY(DEV.)=  3.3%;VALLEY(UNDEV.)/DESERT=  1.3%
           MOUNTAIN= 92.2%;FOOTHILL=  3.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.04; LAG(HR) = 0.83; Fm(INCH/HR) = 0.24; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.69; 30M = 0.69; 1HR = 0.69;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8850.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0317; Lca/L=0.4,n=.0284; Lca/L=0.5,n=.0261;Lca/L=0.6,n=.0243
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =     956.03
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2804.45
  TOTAL AREA(ACRES) =   8850.70       PEAK FLOW RATE(CFS) =    2964.05
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  62.38
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.830
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.80      0.20      1.00    83
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D       85.50      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D       15.00      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.66
  SUBAREA AREA(ACRES) =  101.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.85;24H= 3.12
  S-GRAPH: VALLEY(DEV.)=  3.7%;VALLEY(UNDEV.)/DESERT=  1.5%
           MOUNTAIN= 91.3%;FOOTHILL=  3.5%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.04; LAG(HR) = 0.83; Fm(INCH/HR) = 0.24; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.69; 30M = 0.69; 1HR = 0.69;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8952.00
```

```
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0317; Lca/L=0.4,n=.0284; Lca/L=0.5,n=.0261;Lca/L=0.6,n=.0243
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =     970.18
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2834.24
  TOTAL AREA(ACRES) =   8952.00       PEAK FLOW RATE(CFS) =    2964.05
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   8952.00  TC(MIN.) =     62.38
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.62
  PEAK FLOW RATE(CFS)   =   2964.05
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MP53010E.DAT
  TIME/DATE OF STUDY: 14:29 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  3.610
   2)  10.000;  2.370
   3)  15.000;  1.890
   4)  20.000;  1.540
   5)  30.000;  1.210
   6)  60.000;  0.840
   7) 120.000;  0.590
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.400
        FOOTHILL                           0.300
        MOUNTAIN                           0.100
        VALLEY(UNDEVELOPED)/DESERT         0.200
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1052.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MP52010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2964.05    Tc(MIN.) =  62.38
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.62
  TOTAL AREA(ACRES) =    8952.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1052.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2964.05    Tc(MIN.) =  62.38
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.62
  TOTAL AREA(ACRES) =    8952.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1052.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    300.00  DOWNSTREAM(FEET) =    265.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  3322.00   CHANNEL SLOPE =  0.0105
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2964.05
  FLOW VELOCITY(FEET/SEC.) =  11.98   FLOW DEPTH(FEET) =   8.64
  TRAVEL TIME(MIN.) =   4.62   Tc(MIN.) =  67.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  67.00
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.918
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        1.60      0.40       1.00    40
  NATURAL POOR COVER
  "BARREN"                   A        0.90      0.40       1.00    78
  NATURAL FAIR COVER
  "GRASS"                    A       12.50      0.40       1.00    50
  URBAN FAIR COVER
  "TURF"                     A        0.90      0.40       1.00    44
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        2.90      0.40       1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A       16.90      0.40       1.00    36
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   35.70
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.85;24H= 3.12
  S-GRAPH: VALLEY(DEV.)=  3.9%;VALLEY(UNDEV.)/DESERT=  1.6%
           MOUNTAIN= 91.0%;FOOTHILL=  3.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.12; LAG(HR) = 0.89; Fm(INCH/HR) = 0.24; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.69; 30M = 0.69; 1HR = 0.69;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8987.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =     969.16
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2765.30
  TOTAL AREA(ACRES) =   8987.70       PEAK FLOW RATE(CFS) =    2964.05
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  67.00
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.811
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B       11.40      0.30      1.00    69
  URBAN FAIR COVER
  "TURF"                     B        9.30      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.30      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        4.20      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       47.20      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        7.70      0.25      0.50    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.95
  SUBAREA AREA(ACRES) =   81.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.85;24H= 3.12
  S-GRAPH: VALLEY(DEV.)=  4.2%;VALLEY(UNDEV.)/DESERT=  1.7%
           MOUNTAIN= 90.3%;FOOTHILL=  3.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.12; LAG(HR) = 0.89; Fm(INCH/HR) = 0.24; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.69; 30M = 0.69; 1HR = 0.69;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9068.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =     975.78
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2780.37
  TOTAL AREA(ACRES) =   9068.80       PEAK FLOW RATE(CFS) =    2964.05
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  67.00
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.811
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   C        8.50      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C       17.20      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       49.10      0.25      1.00    77
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C       17.90      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C       43.10      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       79.80      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =  215.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.85;24H= 3.11
  S-GRAPH: VALLEY(DEV.)=  5.0%;VALLEY(UNDEV.)/DESERT=  2.1%
           MOUNTAIN= 88.4%;FOOTHILL=  4.4%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.12; LAG(HR) = 0.89; Fm(INCH/HR) = 0.24; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.68; 30M = 0.69; 1HR = 0.69;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9284.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =     998.36
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2826.05
  TOTAL AREA(ACRES) =   9284.40       PEAK FLOW RATE(CFS) =    2964.05
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  67.00
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.811
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        3.30      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        4.90      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      105.10      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                     D      104.60      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       67.80      0.20      1.00    83
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D       12.70      0.20      0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  298.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.85;24H= 3.11
```

```
  S-GRAPH: VALLEY(DEV.)=  6.1%;VALLEY(UNDEV.)/DESERT=  2.7%
           MOUNTAIN= 86.0%;FOOTHILL=  5.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.12; LAG(HR) = 0.89; Fm(INCH/HR) = 0.24; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.68; 30M = 0.68; 1HR = 0.68;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9582.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    1035.73
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2895.86
  TOTAL AREA(ACRES) =   9582.80       PEAK FLOW RATE(CFS) =    2964.05
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  67.00
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.811
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 D       49.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   49.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.85;24H= 3.11
  S-GRAPH: VALLEY(DEV.)=  6.3%;VALLEY(UNDEV.)/DESERT=  2.8%
           MOUNTAIN= 85.6%;FOOTHILL=  5.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.12; LAG(HR) = 0.89; Fm(INCH/HR) = 0.24; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.68; 30M = 0.68; 1HR = 0.68;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9632.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    1040.92
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2906.58
  TOTAL AREA(ACRES) =   9632.20       PEAK FLOW RATE(CFS) =    2964.05
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   9632.20  TC(MIN.) =     67.00
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.62
  PEAK FLOW RATE(CFS)   =   2964.05
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MP54010E.DAT
  TIME/DATE OF STUDY: 14:29 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  3.610
   2)  10.000;  2.370
   3)  15.000;  1.890
   4)  20.000;  1.540
   5)  30.000;  1.210
   6)  60.000;  0.840
   7) 120.000;  0.590
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.400
        FOOTHILL                           0.300
        MOUNTAIN                           0.200
        VALLEY(UNDEVELOPED)/DESERT         0.100
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1053.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MP53010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2964.05    Tc(MIN.) =  67.00
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.62
  TOTAL AREA(ACRES) =    9632.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1053.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     2964.05    Tc(MIN.) =  67.00
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.62
  TOTAL AREA(ACRES) =    9632.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1053.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    265.00  DOWNSTREAM(FEET) =    245.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1390.00   CHANNEL SLOPE =  0.0144
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2964.05
  FLOW VELOCITY(FEET/SEC.) =  13.40   FLOW DEPTH(FEET) =   7.92
  TRAVEL TIME(MIN.) =   1.73   Tc(MIN.) =  68.73
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  68.73
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.904
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    A        2.30      0.40       1.00    50
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       A       14.70      0.40       0.60    32
  NATURAL FAIR COVER
  "WOODLAND"                 A        1.30      0.40       1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       36.30      0.30       1.00    63
  NATURAL POOR COVER
  "BARREN"                   B       12.50      0.30       1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B       99.20      0.30       1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.31
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.96
  SUBAREA AREA(ACRES) =  166.30
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.85;24H= 3.11
  S-GRAPH: VALLEY(DEV.)=  6.9%;VALLEY(UNDEV.)/DESERT=  2.9%
           MOUNTAIN= 84.5%;FOOTHILL=  5.7%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.15; LAG(HR) = 0.92; Fm(INCH/HR) = 0.24; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.67; 30M = 0.68; 1HR = 0.68;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9798.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    1050.55
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2867.27
  TOTAL AREA(ACRES) =   9798.50       PEAK FLOW RATE(CFS) =    2964.05
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  68.73
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.804
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  URBAN FAIR COVER
  "TURF"                     B        9.80      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       22.90      0.30      1.00    66
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B       24.70      0.30      0.60    56
  NATURAL FAIR COVER
  "WOODLAND"                 B       92.60      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      295.40      0.25      1.00    75
  NATURAL FAIR COVER
  "WOODLAND"                 C      153.30      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  598.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.85;24H= 3.10
  S-GRAPH: VALLEY(DEV.)=  8.8%;VALLEY(UNDEV.)/DESERT=  3.3%
           MOUNTAIN= 80.7%;FOOTHILL=  7.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.15; LAG(HR) = 0.92; Fm(INCH/HR) = 0.24; Ybar = 0.63
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.66; 30M = 0.67; 1HR = 0.67;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  10397.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    1095.40
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   2967.28
  TOTAL AREA(ACRES) =  10397.20       PEAK FLOW RATE(CFS) =    2967.28

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  68.73
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.804
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C      140.40      0.25      1.00    79
  URBAN FAIR COVER
  "TURF"                     C      102.40      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      312.40      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        0.90      0.25      1.00    81
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C       56.80      0.25      0.60    69
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       38.10      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =  651.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.84;24H= 3.10
  S-GRAPH: VALLEY(DEV.)= 10.6%;VALLEY(UNDEV.)/DESERT=  3.7%
           MOUNTAIN= 77.2%;FOOTHILL=  8.5%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.15; LAG(HR) = 0.92; Fm(INCH/HR) = 0.24; Ybar = 0.63
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.65; 30M = 0.66; 1HR = 0.67;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  11048.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    1159.26
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3087.61
  TOTAL AREA(ACRES) =  11048.20       PEAK FLOW RATE(CFS) =    3087.61

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  68.73
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.804
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   D       15.40      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      282.80      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                     D       80.70      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      171.90      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        0.70      0.20      1.00    86
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D      499.30      0.20      0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.81
  SUBAREA AREA(ACRES) = 1050.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.78;3H= 1.33;6H= 1.84;24H= 3.09
  S-GRAPH: VALLEY(DEV.)= 13.2%;VALLEY(UNDEV.)/DESERT=  4.3%
           MOUNTAIN= 72.2%;FOOTHILL= 10.4%;DESERT(UNDEV.)=  0.0%
```

```
  Tc(HR) = 1.15; LAG(HR) = 0.92; Fm(INCH/HR) = 0.23; Ybar = 0.61
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.64; 30M = 0.65; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12099.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    1298.71
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3329.00
  TOTAL AREA(ACRES) =  12099.00       PEAK FLOW RATE(CFS) =    3329.00

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  68.73
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.804
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  D       72.00      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   72.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.78;3H= 1.33;6H= 1.84;24H= 3.09
  S-GRAPH: VALLEY(DEV.)= 13.3%;VALLEY(UNDEV.)/DESERT=  4.3%
           MOUNTAIN= 71.9%;FOOTHILL= 10.5%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.15; LAG(HR) = 0.92; Fm(INCH/HR) = 0.23; Ybar = 0.61
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.65; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12171.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0318; Lca/L=0.4,n=.0285; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0244
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    1306.06
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3342.54
  TOTAL AREA(ACRES) =  12171.00       PEAK FLOW RATE(CFS) =    3342.54

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  12171.00  TC(MIN.) =     68.73
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.61
  PEAK FLOW RATE(CFS)   =   3342.54
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: MP55010E.DAT
  TIME/DATE OF STUDY: 14:29 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  3.610
   2)  10.000;  2.370
   3)  15.000;  1.890
   4)  20.000;  1.540
   5)  30.000;  1.210
   6)  60.000;  0.840
   7) 120.000;  0.590
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.200
        FOOTHILL                           0.400
        MOUNTAIN                           0.000
        VALLEY(UNDEVELOPED)/DESERT         0.400
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1054.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MP54010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3342.54    Tc(MIN.) =  68.73
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.61
  TOTAL AREA(ACRES) =   12171.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1054.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3342.54    Tc(MIN.) =  68.73
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.61
  TOTAL AREA(ACRES) =   12171.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1054.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    245.00  DOWNSTREAM(FEET) =    215.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2724.00   CHANNEL SLOPE =  0.0110
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3342.54
  FLOW VELOCITY(FEET/SEC.) =  12.34   FLOW DEPTH(FEET) =   8.17
  TRAVEL TIME(MIN.) =   3.68   Tc(MIN.) =  72.41
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  72.41
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.878
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    A        6.80      0.40       1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        1.80      0.40       1.00    46
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       A        0.40      0.40       0.60    32
  NATURAL FAIR COVER
  "WOODLAND"                 A        5.50      0.40       1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        5.80      0.30       1.00    63
  NATURAL POOR COVER
  "BARREN"                   B        6.90      0.30       1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.35
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   27.20
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.78;3H= 1.33;6H= 1.84;24H= 3.09
  S-GRAPH: VALLEY(DEV.)= 13.3%;VALLEY(UNDEV.)/DESERT=  4.4%
           MOUNTAIN= 71.7%;FOOTHILL= 10.5%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.21; LAG(HR) = 0.97; Fm(INCH/HR) = 0.23; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.65; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12198.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0319; Lca/L=0.4,n=.0286; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0245
  TIME OF PEAK FLOW(HR) = 16.67  RUNOFF VOLUME(AF) =    1304.86
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3248.54
  TOTAL AREA(ACRES) =  12198.20       PEAK FLOW RATE(CFS) =    3342.54
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  72.41
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.788
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B       22.60      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        7.90      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        9.50      0.30      1.00    60
  NATURAL FAIR COVER
  "WOODLAND"                 C       23.30      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       71.90      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        0.40      0.25      1.00    91
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  135.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.78;3H= 1.33;6H= 1.84;24H= 3.09
  S-GRAPH: VALLEY(DEV.)= 13.4%;VALLEY(UNDEV.)/DESERT=  4.8%
           MOUNTAIN= 70.9%;FOOTHILL= 10.9%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.21; LAG(HR) = 0.97; Fm(INCH/HR) = 0.23; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.65; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12333.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0319; Lca/L=0.4,n=.0286; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0245
  TIME OF PEAK FLOW(HR) = 16.67  RUNOFF VOLUME(AF) =    1314.68
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3267.61
  TOTAL AREA(ACRES) =  12333.80       PEAK FLOW RATE(CFS) =    3342.54
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
```

```
============================================================================
  MAINLINE Tc(MIN) =  72.41
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.788
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C       14.60      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       66.50      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        0.20      0.25      1.00    81
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        0.30      0.25      0.60    69
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        3.50      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        1.20      0.20      0.50    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   86.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.78;3H= 1.33;6H= 1.84;24H= 3.09
  S-GRAPH: VALLEY(DEV.)= 13.5%;VALLEY(UNDEV.)/DESERT=  5.0%
           MOUNTAIN= 70.4%;FOOTHILL= 11.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.21; LAG(HR) = 0.97; Fm(INCH/HR) = 0.23; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.64; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12420.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0319; Lca/L=0.4,n=.0286; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0245
  TIME OF PEAK FLOW(HR) = 16.67  RUNOFF VOLUME(AF) =    1322.73
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3281.57
  TOTAL AREA(ACRES) =  12420.10       PEAK FLOW RATE(CFS) =    3342.54
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  72.41
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.788
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   D        0.20      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D       33.50      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        9.50      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        0.20      0.20      1.00    86
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D       50.10      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D        8.90      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.80
  SUBAREA AREA(ACRES) =  102.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.78;3H= 1.33;6H= 1.84;24H= 3.09
```

```
  S-GRAPH: VALLEY(DEV.)= 13.5%;VALLEY(UNDEV.)/DESERT=  5.3%
           MOUNTAIN= 69.9%;FOOTHILL= 11.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.21; LAG(HR) = 0.97; Fm(INCH/HR) = 0.23; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.64; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12522.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0319; Lca/L=0.4,n=.0286; Lca/L=0.5,n=.0262;Lca/L=0.6,n=.0245
  TIME OF PEAK FLOW(HR) = 16.67  RUNOFF VOLUME(AF) =    1336.08
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3303.95
  TOTAL AREA(ACRES) =  12522.50       PEAK FLOW RATE(CFS) =    3342.54
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  12522.50  TC(MIN.) =     72.41
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.62
  PEAK FLOW RATE(CFS)   =   3342.54
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MP56010E.DAT
  TIME/DATE OF STUDY: 14:29 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  3.610
   2)  10.000;  2.370
   3)  15.000;  1.890
   4)  20.000;  1.540
   5)  30.000;  1.210
   6)  60.000;  0.840
   7) 120.000;  0.590
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.300
        FOOTHILL                           0.300
        MOUNTAIN                           0.000
        VALLEY(UNDEVELOPED)/DESERT         0.400
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1055.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MP55010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3342.54    Tc(MIN.) =  72.41
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.62
  TOTAL AREA(ACRES) =   12522.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1055.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3342.54    Tc(MIN.) =  72.41
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.62
  TOTAL AREA(ACRES) =   12522.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1055.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    215.00  DOWNSTREAM(FEET) =    185.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2880.00   CHANNEL SLOPE =  0.0104
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3342.54
  FLOW VELOCITY(FEET/SEC.) =  12.10   FLOW DEPTH(FEET) =   8.30
  TRAVEL TIME(MIN.) =   3.97   Tc(MIN.) =  76.38
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  76.38
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.851
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    A        1.80      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        1.10      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A        9.30      0.40      1.00    36
  NATURAL POOR COVER
  "BARREN"                   B        1.80      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B       14.80      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.20      0.30      1.00    66
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.34
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   30.00
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.78;3H= 1.33;6H= 1.84;24H= 3.09
  S-GRAPH: VALLEY(DEV.)= 13.6%;VALLEY(UNDEV.)/DESERT=  5.4%
           MOUNTAIN= 69.7%;FOOTHILL= 11.4%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.27; LAG(HR) = 1.02; Fm(INCH/HR) = 0.23; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.64; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  12552.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0320; Lca/L=0.4,n=.0287; Lca/L=0.5,n=.0263;Lca/L=0.6,n=.0246
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1342.11
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3059.52
  TOTAL AREA(ACRES) =  12552.50       PEAK FLOW RATE(CFS) =    3342.54
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  76.38
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.772
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 B        5.10      0.30      1.00    60
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        8.50      0.25      0.50    69
  NATURAL POOR COVER
  "BARREN"                   C        2.40      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C        1.30      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.20      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        3.10      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.79
  SUBAREA AREA(ACRES) =   20.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.78;3H= 1.33;6H= 1.84;24H= 3.09
  S-GRAPH: VALLEY(DEV.)= 13.6%;VALLEY(UNDEV.)/DESERT=  5.4%
           MOUNTAIN= 69.6%;FOOTHILL= 11.4%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.27; LAG(HR) = 1.02; Fm(INCH/HR) = 0.23; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.64; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  12573.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0320; Lca/L=0.4,n=.0287; Lca/L=0.5,n=.0263;Lca/L=0.6,n=.0246
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1344.37
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3063.71
  TOTAL AREA(ACRES) =  12573.10       PEAK FLOW RATE(CFS) =    3342.54
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
```

```
============================================================================
  MAINLINE Tc(MIN) =  76.38
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.772
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D      128.00      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D       32.60      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D       74.30      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                     D        0.80      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       21.80      0.20      1.00    83
  COMMERCIAL                 D        2.70      0.20      0.10    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.74
  SUBAREA AREA(ACRES) =  260.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.78;3H= 1.33;6H= 1.84;24H= 3.09
  S-GRAPH: VALLEY(DEV.)= 13.9%;VALLEY(UNDEV.)/DESERT=  6.1%
           MOUNTAIN= 68.2%;FOOTHILL= 11.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.27; LAG(HR) = 1.02; Fm(INCH/HR) = 0.23; Ybar = 0.61
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.62; 30M = 0.64; 1HR = 0.64;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  12833.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0320; Lca/L=0.4,n=.0287; Lca/L=0.5,n=.0263;Lca/L=0.6,n=.0246
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1382.35
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3128.23
  TOTAL AREA(ACRES) =  12833.30       PEAK FLOW RATE(CFS) =    3342.54
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03

****************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  76.38
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.772
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        0.70      0.20      1.00    86
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D       42.80      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D       13.80      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.70
  SUBAREA AREA(ACRES) =   57.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.78;3H= 1.33;6H= 1.84;24H= 3.09
  S-GRAPH: VALLEY(DEV.)= 14.0%;VALLEY(UNDEV.)/DESERT=  6.3%
           MOUNTAIN= 67.9%;FOOTHILL= 11.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.27; LAG(HR) = 1.02; Fm(INCH/HR) = 0.23; Ybar = 0.61
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.62; 30M = 0.64; 1HR = 0.64;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  12890.60
```

```
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0320; Lca/L=0.4,n=.0287; Lca/L=0.5,n=.0263;Lca/L=0.6,n=.0246
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1389.89
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3141.95
  TOTAL AREA(ACRES) =  12890.60       PEAK FLOW RATE(CFS) =    3342.54
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.26; 30M = 0.59; 1HR = 0.78; 3HR = 1.31; 6HR = 1.81; 24HR = 3.03
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  12890.60  TC(MIN.) =     76.38
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.61
  PEAK FLOW RATE(CFS)   =   3342.54
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MP57010E.DAT
  TIME/DATE OF STUDY: 14:29 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  3.610
   2)  10.000;  2.370
   3)  15.000;  1.890
   4)  20.000;  1.540
   5)  30.000;  1.210
   6)  60.000;  0.840
   7) 120.000;  0.590
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.200
        FOOTHILL                           0.100
        MOUNTAIN                           0.600
        VALLEY(UNDEVELOPED)/DESERT         0.100
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1056.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MP56010E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3342.54    Tc(MIN.) =  76.38
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.61
  TOTAL AREA(ACRES) =   12890.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1056.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3342.54    Tc(MIN.) =  76.38
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.61
  TOTAL AREA(ACRES) =   12890.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1056.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    185.00  DOWNSTREAM(FEET) =    165.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2367.00   CHANNEL SLOPE =  0.0084
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3342.54
  FLOW VELOCITY(FEET/SEC.) =  10.99   FLOW DEPTH(FEET) =   8.00
  TRAVEL TIME(MIN.) =   3.59   Tc(MIN.) =  79.96
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 56077.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  79.96
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.829
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       38.90      0.40       1.00    40
  NATURAL FAIR COVER
  "GRASS"                    A        2.00      0.40       1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A       40.30      0.40       1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A       74.70      0.40       1.00    36
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       25.40      0.30       1.00    66
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       18.50      0.30       1.00    63
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.38
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  199.80
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.78;3H= 1.33;6H= 1.84;24H= 3.09
  S-GRAPH: VALLEY(DEV.)= 14.1%;VALLEY(UNDEV.)/DESERT=  6.3%
           MOUNTAIN= 67.8%;FOOTHILL= 11.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.33; LAG(HR) = 1.07; Fm(INCH/HR) = 0.23; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.62; 30M = 0.63; 1HR = 0.64;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  13090.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 56077.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0322; Lca/L=0.4,n=.0289; Lca/L=0.5,n=.0265;Lca/L=0.6,n=.0247
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1395.75
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3115.65
  TOTAL AREA(ACRES) =  13090.40       PEAK FLOW RATE(CFS) =    3342.54
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.28; 30M = 0.60; 1HR = 0.80; 3HR = 1.39; 6HR = 1.96; 24HR = 3.33

****************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  79.96
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.757
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B       18.90      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B      105.00      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      540.80      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        1.40      0.25      0.50    69
  NATURAL FAIR COVER
  "GRASS"                    C      106.10      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      236.60      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1008.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.26;30M= 0.59;1H= 0.79;3H= 1.33;6H= 1.85;24H= 3.11
  S-GRAPH: VALLEY(DEV.)= 14.5%;VALLEY(UNDEV.)/DESERT=  6.6%
           MOUNTAIN= 67.2%;FOOTHILL= 11.7%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.33; LAG(HR) = 1.07; Fm(INCH/HR) = 0.23; Ybar = 0.62
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.60; 30M = 0.62; 1HR = 0.63;
  3HR = 0.92; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  14099.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 56077.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0322; Lca/L=0.4,n=.0289; Lca/L=0.5,n=.0265;Lca/L=0.6,n=.0247
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1491.55
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3274.98
  TOTAL AREA(ACRES) =  14099.20       PEAK FLOW RATE(CFS) =    3342.54
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.28; 30M = 0.60; 1HR = 0.80; 3HR = 1.39; 6HR = 1.96; 24HR = 3.33

****************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  79.96
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.757
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C      145.90      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C       35.40      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D     1590.50      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D     1749.20      0.20      1.00    83
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D       48.30      0.20      0.50    75
  NATURAL FAIR COVER
  "GRASS"                    D      198.30      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) = 3767.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.27;30M= 0.59;1H= 0.79;3H= 1.34;6H= 1.87;24H= 3.16
  S-GRAPH: VALLEY(DEV.)= 15.7%;VALLEY(UNDEV.)/DESERT=  7.3%
           MOUNTAIN= 65.7%;FOOTHILL= 11.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.33; LAG(HR) = 1.07; Fm(INCH/HR) = 0.23; Ybar = 0.60
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.55; 30M = 0.58; 1HR = 0.59;
  3HR = 0.90; 6HR = 0.95; 24HR= 0.97
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  17866.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 56077.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0322; Lca/L=0.4,n=.0289; Lca/L=0.5,n=.0265;Lca/L=0.6,n=.0247
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1981.44
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4010.69
  TOTAL AREA(ACRES) =  17866.80       PEAK FLOW RATE(CFS) =    4010.69

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.28; 30M = 0.60; 1HR = 0.80; 3HR = 1.39; 6HR = 1.96; 24HR = 3.33

****************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  79.96
  *  10 YEAR RAINFALL INTENSITY(INCH/HR) =  0.757
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  URBAN FAIR COVER
  "TURF"                     D        1.70      0.20      1.00    82
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       22.00      0.20      1.00    86
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D      398.00      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D      267.20      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.77
  SUBAREA AREA(ACRES) =  688.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.27;30M= 0.59;1H= 0.79;3H= 1.35;6H= 1.88;24H= 3.16
  S-GRAPH: VALLEY(DEV.)= 15.8%;VALLEY(UNDEV.)/DESERT=  7.4%
           MOUNTAIN= 65.5%;FOOTHILL= 11.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.33; LAG(HR) = 1.07; Fm(INCH/HR) = 0.22; Ybar = 0.59
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.54; 30M = 0.57; 1HR = 0.58;
```

```
  3HR = 0.90; 6HR = 0.95; 24HR= 0.97
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =  18555.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 56077.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0322; Lca/L=0.4,n=.0289; Lca/L=0.5,n=.0265;Lca/L=0.6,n=.0247
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    2077.36
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4154.54
  TOTAL AREA(ACRES) =  18555.70       PEAK FLOW RATE(CFS) =    4154.54

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.28; 30M = 0.60; 1HR = 0.80; 3HR = 1.39; 6HR = 1.96; 24HR = 3.33
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  18555.70  TC(MIN.) =     79.96
  AREA-AVERAGED Fm(INCH/HR)=  0.22   Ybar =  0.59
  PEAK FLOW RATE(CFS)   =   4154.54
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

TECHNICAL APPENDIX II-C
HYDROLOGIC ANALYSIS
PROPOSED CONDITION
100-YEAR EXPECTED VALUE

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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             Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MP49100E.DAT
  TIME/DATE OF STUDY: 14:43 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.440
   2)  10.000;  3.530
   3)  15.000;  2.790
   4)  20.000;  2.320
   5)  30.000;  1.830
   6)  60.000;  1.260
   7) 120.000;  0.890
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1048.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU48100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3556.21    Tc(MIN.) =  44.28
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.49
  TOTAL AREA(ACRES) =    4407.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 33517.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1048.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     3556.21    Tc(MIN.) =  44.28
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.49
  TOTAL AREA(ACRES) =    4407.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 33517.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1048.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    445.00  DOWNSTREAM(FEET) =    400.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2427.00   CHANNEL SLOPE =  0.0185
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3556.21
  FLOW VELOCITY(FEET/SEC.) =  15.46   FLOW DEPTH(FEET) =   8.17
  TRAVEL TIME(MIN.) =   2.62   Tc(MIN.) =  46.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  46.90
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.716
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       38.00      0.40      1.00    40
  NATURAL FAIR COVER
  "GRASS"                    A       10.90      0.40      1.00    50
  URBAN FAIR COVER
  "TURF"                     A       42.00      0.40      1.00    44
  NATURAL FAIR COVER
  "OPEN BRUSH"               A       37.80      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A       53.60      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       70.00      0.30      1.00    63
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.37
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  252.30
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.42;30M= 0.88;1H= 1.17;3H= 2.01;6H= 2.84;24H= 4.76
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.78; LAG(HR) = 0.63; Fm(INCH/HR) = 0.25; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.80; 30M = 0.80; 1HR = 0.80;
  3HR = 0.97; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4659.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0282; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0232;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =     998.76
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3548.77
  TOTAL AREA(ACRES) =   4659.30       PEAK FLOW RATE(CFS) =    3556.21
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  46.90
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.509
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B       38.40      0.30      1.00    69
  URBAN FAIR COVER
  "TURF"                     B       32.90      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       37.40      0.30      1.00    66
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        2.00      0.30      1.00    72
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B        1.10      0.30      0.60    56
  NATURAL FAIR COVER
  "WOODLAND"                 B       77.20      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  189.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.17;3H= 2.01;6H= 2.83;24H= 4.75
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.78; LAG(HR) = 0.63; Fm(INCH/HR) = 0.25; Ybar = 0.52
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.79; 30M = 0.79; 1HR = 0.79;
  3HR = 0.97; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4848.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0282; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0232;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    1023.83
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3654.43
  TOTAL AREA(ACRES) =   4848.30       PEAK FLOW RATE(CFS) =    3654.43

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  46.90
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.509
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      710.20      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        2.20      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C       89.70      0.25      1.00    79
  URBAN FAIR COVER
  "TURF"                     C       13.10      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      819.40      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       75.60      0.25      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1710.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.17;3H= 1.99;6H= 2.80;24H= 4.68
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.78; LAG(HR) = 0.63; Fm(INCH/HR) = 0.25; Ybar = 0.52
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.75; 30M = 0.75; 1HR = 0.75;
  3HR = 0.96; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   6558.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0282; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0232;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    1351.48
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4625.87
  TOTAL AREA(ACRES) =   6558.50       PEAK FLOW RATE(CFS) =    4625.87

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  46.90
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.509
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C       13.10      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C       82.20      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      145.30      0.20      1.00    81
  NATURAL POOR COVER
  "BARREN"                   D        1.00      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      367.20      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                     D      142.80      0.20      1.00    82
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  751.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.98;6H= 2.79;24H= 4.66
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
```

```
  Tc(HR) = 0.78; LAG(HR) = 0.63; Fm(INCH/HR) = 0.24; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.73; 30M = 0.73; 1HR = 0.73;
  3HR = 0.96; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   7310.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0282; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0232;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    1519.68
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5040.46
  TOTAL AREA(ACRES) =   7310.10       PEAK FLOW RATE(CFS) =    5040.46

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  46.90
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.509
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                D      373.60      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      D       21.60      0.20      1.00    86
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"        D       26.50      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                  D       58.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  480.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.98;6H= 2.79;24H= 4.65
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.78; LAG(HR) = 0.63; Fm(INCH/HR) = 0.24; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.71; 30M = 0.71; 1HR = 0.71;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   7790.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0282; Lca/L=0.4,n=.0253; Lca/L=0.5,n=.0232;Lca/L=0.6,n=.0217
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    1629.66
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5294.81
  TOTAL AREA(ACRES) =   7790.20       PEAK FLOW RATE(CFS) =    5294.81

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   7790.20  TC(MIN.) =     46.90
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.51
  PEAK FLOW RATE(CFS)   =   5294.81
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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             Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                         Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MP50100E.DAT
  TIME/DATE OF STUDY: 14:43 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.440
   2)  10.000;  3.530
   3)  15.000;  2.790
   4)  20.000;  2.320
   5)  30.000;  1.830
   6)  60.000;  1.260
   7) 120.000;  0.890
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.200
        FOOTHILL                           0.100
        MOUNTAIN                           0.700
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1049.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MP49100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5294.81    Tc(MIN.) =  46.90
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.51
  TOTAL AREA(ACRES) =    7790.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1049.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5294.81    Tc(MIN.) =  46.90
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.51
  TOTAL AREA(ACRES) =    7790.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1049.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1050.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    400.00  DOWNSTREAM(FEET) =    390.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   616.00   CHANNEL SLOPE =  0.0162
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   5294.81
  FLOW VELOCITY(FEET/SEC.) =  16.43   FLOW DEPTH(FEET) =  10.55
  TRAVEL TIME(MIN.) =   0.62   Tc(MIN.) =  47.52
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1050.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  47.52
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.703
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    A        0.30      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        0.20      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A        1.10      0.40      1.00    36
  NATURAL FAIR COVER
  "GRASS"                    B        2.20      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        0.20      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.40      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.34
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    4.40
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.98;6H= 2.79;24H= 4.65
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.79; LAG(HR) = 0.63; Fm(INCH/HR) = 0.24; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.71; 30M = 0.71; 1HR = 0.71;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   7794.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0282; Lca/L=0.4,n=.0252; Lca/L=0.5,n=.0232;Lca/L=0.6,n=.0216
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    1629.86
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5245.12
  TOTAL AREA(ACRES) =   7794.60       PEAK FLOW RATE(CFS) =    5294.81
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1050.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  47.52
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.497
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       53.00      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                    C      318.80      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       33.30      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        4.80      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       41.60      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                    D       29.90      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  481.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.98;6H= 2.78;24H= 4.64
  S-GRAPH: VALLEY(DEV.)=  1.2%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN= 98.2%;FOOTHILL=  0.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.79; LAG(HR) = 0.63; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8276.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0282; Lca/L=0.4,n=.0252; Lca/L=0.5,n=.0232;Lca/L=0.6,n=.0216
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    1726.83
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5455.25
  TOTAL AREA(ACRES) =   8276.00       PEAK FLOW RATE(CFS) =    5455.25

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1050.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  47.52
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.497
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        8.60      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D        1.80      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   10.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.98;6H= 2.78;24H= 4.64
  S-GRAPH: VALLEY(DEV.)=  1.2%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN= 98.2%;FOOTHILL=  0.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.79; LAG(HR) = 0.63; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8286.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0282; Lca/L=0.4,n=.0252; Lca/L=0.5,n=.0232;Lca/L=0.6,n=.0216
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    1729.18
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5460.03
  TOTAL AREA(ACRES) =   8286.40       PEAK FLOW RATE(CFS) =    5460.03

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   8286.40  TC(MIN.) =     47.52
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.50
  PEAK FLOW RATE(CFS)   =   5460.03
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MP51100E.DAT
  TIME/DATE OF STUDY: 14:43 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.440
   2)  10.000;  3.530
   3)  15.000;  2.790
   4)  20.000;  2.320
   5)  30.000;  1.830
   6)  60.000;  1.260
   7) 120.000;  0.890
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.300
        FOOTHILL                           0.500
        MOUNTAIN                           0.000
        VALLEY(UNDEVELOPED)/DESERT         0.200
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1050.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MP50100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5460.03    Tc(MIN.) =  47.52
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.50
  TOTAL AREA(ACRES) =    8286.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1050.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5460.03    Tc(MIN.) =  47.52
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.50
  TOTAL AREA(ACRES) =    8286.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1050.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1051.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    390.00  DOWNSTREAM(FEET) =    330.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  4501.00   CHANNEL SLOPE =  0.0133
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   5460.03
  FLOW VELOCITY(FEET/SEC.) =  15.42   FLOW DEPTH(FEET) =  11.31
  TRAVEL TIME(MIN.) =   4.87   Tc(MIN.) =  52.39
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1051.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  52.39
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.610
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A        0.70      0.40       0.50    32
  NATURAL FAIR COVER
  "GRASS"                    A        1.80      0.40       1.00    50
  NATURAL FAIR COVER
  "WOODLAND"                 A        6.50      0.40       1.00    36
  NATURAL FAIR COVER
  "GRASS"                    B        3.20      0.30       1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        2.20      0.30       1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B       10.90      0.30       1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.33
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   25.30
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.98;6H= 2.78;24H= 4.64
  S-GRAPH: VALLEY(DEV.)=  1.3%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN= 97.9%;FOOTHILL=  0.7%;DESERT(UNDEV.)=  0.1%
  Tc(HR) = 0.87; LAG(HR) = 0.70; Fm(INCH/HR) = 0.24; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8311.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0280; Lca/L=0.4,n=.0251; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0215
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    1730.73
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5143.40
  TOTAL AREA(ACRES) =   8311.70       PEAK FLOW RATE(CFS) =    5460.03
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1051.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  52.39
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.405
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        5.60      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                    C       38.20      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        3.80      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        7.00      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       57.50      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        5.10      0.20      0.50    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  117.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.98;6H= 2.78;24H= 4.64
  S-GRAPH: VALLEY(DEV.)=  1.7%;VALLEY(UNDEV.)/DESERT=  0.3%
           MOUNTAIN= 96.5%;FOOTHILL=  1.4%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.87; LAG(HR) = 0.70; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8428.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0280; Lca/L=0.4,n=.0251; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0215
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    1756.43
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5200.04
  TOTAL AREA(ACRES) =   8428.90       PEAK FLOW RATE(CFS) =    5460.03
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1051.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  52.39
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.405
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   D        0.60      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D       92.50      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                     D       11.30      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       14.60      0.20      1.00    83
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D        7.80      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D       31.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  158.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.98;6H= 2.78;24H= 4.63
  S-GRAPH: VALLEY(DEV.)=  2.2%;VALLEY(UNDEV.)/DESERT=  0.7%
           MOUNTAIN= 94.8%;FOOTHILL=  2.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.87; LAG(HR) = 0.70; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8587.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0280; Lca/L=0.4,n=.0251; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0215
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    1792.73
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5276.50
  TOTAL AREA(ACRES) =   8587.10       PEAK FLOW RATE(CFS) =    5460.03
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   8587.10  TC(MIN.) =     52.39
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.50
  PEAK FLOW RATE(CFS)   =   5460.03
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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             Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                         Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MP52100E.DAT
  TIME/DATE OF STUDY: 14:43 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.440
   2)  10.000;  3.530
   3)  15.000;  2.790
   4)  20.000;  2.320
   5)  30.000;  1.830
   6)  60.000;  1.260
   7) 120.000;  0.890
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====== =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.400
        FOOTHILL                           0.300
        MOUNTAIN                           0.100
        VALLEY(UNDEVELOPED)/DESERT         0.200
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1051.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MP51100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5460.03    Tc(MIN.) =  52.39
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.50
  TOTAL AREA(ACRES) =    8587.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1051.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5460.03    Tc(MIN.) =  52.39
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.50
  TOTAL AREA(ACRES) =    8587.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1051.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    330.00  DOWNSTREAM(FEET) =    300.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2333.00   CHANNEL SLOPE =  0.0129
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   5460.03
  FLOW VELOCITY(FEET/SEC.) =  15.21   FLOW DEPTH(FEET) =  11.42
  TRAVEL TIME(MIN.) =   2.56   Tc(MIN.) =  54.94
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  54.94
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.567
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   A        3.80      0.40      1.00    78
  NATURAL FAIR COVER
  "GRASS"                    A        0.60      0.40      1.00    50
  URBAN FAIR COVER
  "TURF"                     A        2.90      0.40      1.00    44
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        0.40      0.40      1.00    46
  PUBLIC PARK                A        1.10      0.40      0.85    32
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       A        7.60      0.40      0.60    32
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.80
  SUBAREA AREA(ACRES) =   16.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.98;6H= 2.78;24H= 4.63
```

```
  S-GRAPH: VALLEY(DEV.)=  2.3%;VALLEY(UNDEV.)/DESERT=  0.7%
           MOUNTAIN= 94.6%;FOOTHILL=  2.4%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.92; LAG(HR) = 0.73; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8603.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0214
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    1794.94
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5213.44
  TOTAL AREA(ACRES) =   8603.50       PEAK FLOW RATE(CFS) =    5460.03
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  54.94
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.356
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 A       10.10      0.40      1.00    36
  URBAN FAIR COVER
  "TURF"                     B        3.80      0.30      1.00    65
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.40      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        0.70      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        3.30      0.25      1.00    91
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.30      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.34
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   18.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.98;6H= 2.78;24H= 4.63
  S-GRAPH: VALLEY(DEV.)=  2.4%;VALLEY(UNDEV.)/DESERT=  0.8%
           MOUNTAIN= 94.4%;FOOTHILL=  2.4%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.92; LAG(HR) = 0.73; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.69; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8622.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0214
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    1796.98
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5219.68
  TOTAL AREA(ACRES) =   8622.10       PEAK FLOW RATE(CFS) =    5460.03
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  54.94
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.356
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C       27.30      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.20      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       49.50      0.20      1.00    81
  NATURAL POOR COVER
  "BARREN"                   D        7.30      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D       13.50      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                     D      130.80      0.20      1.00    82
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.95
  SUBAREA AREA(ACRES) =  228.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.98;6H= 2.78;24H= 4.63
  S-GRAPH: VALLEY(DEV.)=  3.3%;VALLEY(UNDEV.)/DESERT=  1.3%
           MOUNTAIN= 92.2%;FOOTHILL=  3.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.92; LAG(HR) = 0.73; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.69; 30M = 0.69; 1HR = 0.69;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8850.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0214
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    1848.84
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5327.25
  TOTAL AREA(ACRES) =   8850.70       PEAK FLOW RATE(CFS) =    5460.03
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  54.94
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.356
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.80      0.20      1.00    83
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D       85.50      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D       15.00      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.66
  SUBAREA AREA(ACRES) =  101.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.98;6H= 2.78;24H= 4.63
  S-GRAPH: VALLEY(DEV.)=  3.7%;VALLEY(UNDEV.)/DESERT=  1.5%
           MOUNTAIN= 91.3%;FOOTHILL=  3.5%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.92; LAG(HR) = 0.73; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.69; 30M = 0.69; 1HR = 0.69;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8952.00
```

```
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0214
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    1874.09
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5379.02
  TOTAL AREA(ACRES) =   8952.00       PEAK FLOW RATE(CFS) =    5460.03
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   8952.00  TC(MIN.) =     54.94
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.50
  PEAK FLOW RATE(CFS)   =   5460.03
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MP53100E.DAT
  TIME/DATE OF STUDY: 14:43 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.440
   2)  10.000;  3.530
   3)  15.000;  2.790
   4)  20.000;  2.320
   5)  30.000;  1.830
   6)  60.000;  1.260
   7) 120.000;  0.890
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.400
        FOOTHILL                           0.300
        MOUNTAIN                           0.100
        VALLEY(UNDEVELOPED)/DESERT         0.200
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1052.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MP52100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5460.03    Tc(MIN.) =  54.94
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.50
  TOTAL AREA(ACRES) =    8952.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1052.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5460.03    Tc(MIN.) =  54.94
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.50
  TOTAL AREA(ACRES) =    8952.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1052.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    300.00  DOWNSTREAM(FEET) =    265.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  3322.00   CHANNEL SLOPE =  0.0105
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   5460.03
  FLOW VELOCITY(FEET/SEC.) =  14.14   FLOW DEPTH(FEET) =  12.05
  TRAVEL TIME(MIN.) =   3.92   Tc(MIN.) =  58.86
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  58.86
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.506
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        1.60      0.40      1.00    40
  NATURAL POOR COVER
  "BARREN"                   A        0.90      0.40      1.00    78
  NATURAL FAIR COVER
  "GRASS"                    A       12.50      0.40      1.00    50
  URBAN FAIR COVER
  "TURF"                     A        0.90      0.40      1.00    44
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        2.90      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A       16.90      0.40      1.00    36
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   35.70
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.98;6H= 2.78;24H= 4.63
  S-GRAPH: VALLEY(DEV.)=  3.9%;VALLEY(UNDEV.)/DESERT=  1.6%
           MOUNTAIN= 91.0%;FOOTHILL=  3.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.98; LAG(HR) = 0.78; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.69; 30M = 0.69; 1HR = 0.69;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8987.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0251; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0215
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    1876.14
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5131.46
  TOTAL AREA(ACRES) =   8987.70       PEAK FLOW RATE(CFS) =    5460.03
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

 ****************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) =  58.86
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.282
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B       11.40      0.30      1.00    69
  URBAN FAIR COVER
  "TURF"                     B        9.30      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.30      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        4.20      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       47.20      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        7.70      0.25      0.50    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.95
  SUBAREA AREA(ACRES) =   81.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.98;6H= 2.78;24H= 4.63
  S-GRAPH: VALLEY(DEV.)=  4.2%;VALLEY(UNDEV.)/DESERT=  1.7%
           MOUNTAIN= 90.3%;FOOTHILL=  3.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.98; LAG(HR) = 0.78; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.69; 30M = 0.69; 1HR = 0.69;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9068.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0251; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0215
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    1890.31
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5162.30
  TOTAL AREA(ACRES) =   9068.80       PEAK FLOW RATE(CFS) =    5460.03
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

 ****************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
```

```
 ============================================================================
  MAINLINE Tc(MIN) =  58.86
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.282
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   C        8.50      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C       17.20      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       49.10      0.25      1.00    77
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C       17.90      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C       43.10      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       79.80      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =  215.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.98;6H= 2.78;24H= 4.62
  S-GRAPH: VALLEY(DEV.)=  5.0%;VALLEY(UNDEV.)/DESERT=  2.1%
           MOUNTAIN= 88.4%;FOOTHILL=  4.4%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.98; LAG(HR) = 0.78; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.68; 30M = 0.69; 1HR = 0.69;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9284.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0251; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0215
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    1934.47
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5250.46
  TOTAL AREA(ACRES) =   9284.40       PEAK FLOW RATE(CFS) =    5460.03
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

 ****************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) =  58.86
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.282
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        3.30      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        4.90      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      105.10      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                     D      104.60      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       67.80      0.20      1.00    83
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D       12.70      0.20      0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  298.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.97;6H= 2.77;24H= 4.62
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  S-GRAPH: VALLEY(DEV.)=  6.1%;VALLEY(UNDEV.)/DESERT=  2.7%
           MOUNTAIN= 86.0%;FOOTHILL=  5.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.98; LAG(HR) = 0.78; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.68; 30M = 0.68; 1HR = 0.68;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9582.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0251; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0215
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    2003.25
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5379.29
  TOTAL AREA(ACRES) =   9582.80       PEAK FLOW RATE(CFS) =    5460.03
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  58.86
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.282
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 D       49.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   49.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.97;6H= 2.77;24H= 4.62
  S-GRAPH: VALLEY(DEV.)=  6.3%;VALLEY(UNDEV.)/DESERT=  2.8%
           MOUNTAIN= 85.6%;FOOTHILL=  5.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.98; LAG(HR) = 0.78; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.68; 30M = 0.68; 1HR = 0.68;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9632.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0251; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0215
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    2013.58
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5399.82
  TOTAL AREA(ACRES) =   9632.20       PEAK FLOW RATE(CFS) =    5460.03
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   9632.20  TC(MIN.) =     58.86
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.50
  PEAK FLOW RATE(CFS)   =   5460.03
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
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************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: MP54100E.DAT
  TIME/DATE OF STUDY: 14:43 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.440
   2)  10.000;  3.530
   3)  15.000;  2.790
   4)  20.000;  2.320
   5)  30.000;  1.830
   6)  60.000;  1.260
   7) 120.000;  0.890
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.400
        FOOTHILL                           0.300
        MOUNTAIN                           0.200
        VALLEY(UNDEVELOPED)/DESERT         0.100
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1053.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MP53100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5460.03    Tc(MIN.) =  58.86
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.50
  TOTAL AREA(ACRES) =    9632.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1053.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5460.03    Tc(MIN.) =  58.86
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.50
  TOTAL AREA(ACRES) =    9632.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1053.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    265.00  DOWNSTREAM(FEET) =    245.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1390.00   CHANNEL SLOPE =  0.0144
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   5460.03
  FLOW VELOCITY(FEET/SEC.) =  15.85   FLOW DEPTH(FEET) =  11.08
  TRAVEL TIME(MIN.) =   1.46   Tc(MIN.) =  60.32
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  60.32
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.485
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    A        2.30      0.40       1.00    50
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       A       14.70      0.40       0.60    32
  NATURAL FAIR COVER
  "WOODLAND"                 A        1.30      0.40       1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       36.30      0.30       1.00    63
  NATURAL POOR COVER
  "BARREN"                   B       12.50      0.30       1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B       99.20      0.30       1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.31
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.96
  SUBAREA AREA(ACRES) =  166.30
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.97;6H= 2.77;24H= 4.62
  S-GRAPH: VALLEY(DEV.)=  6.9%;VALLEY(UNDEV.)/DESERT=  2.9%
           MOUNTAIN= 84.5%;FOOTHILL=  5.7%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.01; LAG(HR) = 0.80; Fm(INCH/HR) = 0.24; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.67; 30M = 0.68; 1HR = 0.68;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9798.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0214
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    2038.16
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5348.38
  TOTAL AREA(ACRES) =   9798.50       PEAK FLOW RATE(CFS) =    5460.03
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

********************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  60.32
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.258
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  URBAN FAIR COVER
  "TURF"                     B        9.80      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       22.90      0.30      1.00    66
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B       24.70      0.30      0.60    56
  NATURAL FAIR COVER
  "WOODLAND"                 B       92.60      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      295.40      0.25      1.00    75
  NATURAL FAIR COVER
  "WOODLAND"                 C      153.30      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  598.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.87;1H= 1.16;3H= 1.97;6H= 2.77;24H= 4.61
  S-GRAPH: VALLEY(DEV.)=  8.8%;VALLEY(UNDEV.)/DESERT=  3.3%
           MOUNTAIN= 80.7%;FOOTHILL=  7.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.01; LAG(HR) = 0.80; Fm(INCH/HR) = 0.24; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.66; 30M = 0.67; 1HR = 0.67;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  10397.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0214
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    2138.22
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5559.55
  TOTAL AREA(ACRES) =  10397.20       PEAK FLOW RATE(CFS) =    5559.55

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

********************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
```

```
  MAINLINE Tc(MIN) =  60.32
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.258
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C      140.40      0.25      1.00    79
  URBAN FAIR COVER
  "TURF"                     C      102.40      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      312.40      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        0.90      0.25      1.00    81
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C       56.80      0.25      0.60    69
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       38.10      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =  651.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.87;1H= 1.16;3H= 1.97;6H= 2.76;24H= 4.60
  S-GRAPH: VALLEY(DEV.)= 10.6%;VALLEY(UNDEV.)/DESERT=  3.7%
           MOUNTAIN= 77.2%;FOOTHILL=  8.5%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.01; LAG(HR) = 0.80; Fm(INCH/HR) = 0.24; Ybar = 0.51
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.65; 30M = 0.66; 1HR = 0.67;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  11048.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0214
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    2265.89
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5798.07
  TOTAL AREA(ACRES) =  11048.20       PEAK FLOW RATE(CFS) =    5798.07

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

********************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  60.32
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.258
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   D       15.40      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      282.80      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                     D       80.70      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      171.90      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        0.70      0.20      1.00    86
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D      499.30      0.20      0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.81
  SUBAREA AREA(ACRES) = 1050.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.87;1H= 1.16;3H= 1.97;6H= 2.76;24H= 4.59
  S-GRAPH: VALLEY(DEV.)= 13.2%;VALLEY(UNDEV.)/DESERT=  4.3%
           MOUNTAIN= 72.2%;FOOTHILL= 10.4%;DESERT(UNDEV.)=  0.0%
```

```
  Tc(HR) = 1.01; LAG(HR) = 0.80; Fm(INCH/HR) = 0.23; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.64; 30M = 0.65; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12099.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0214
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    2518.14
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6250.35
  TOTAL AREA(ACRES) =  12099.00       PEAK FLOW RATE(CFS) =    6250.35

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  60.32
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.258
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  D       72.00      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   72.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.87;1H= 1.16;3H= 1.97;6H= 2.76;24H= 4.59
  S-GRAPH: VALLEY(DEV.)= 13.3%;VALLEY(UNDEV.)/DESERT=  4.3%
           MOUNTAIN= 71.9%;FOOTHILL= 10.5%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.01; LAG(HR) = 0.80; Fm(INCH/HR) = 0.23; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.65; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12171.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0214
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    2532.97
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6278.78
  TOTAL AREA(ACRES) =  12171.00       PEAK FLOW RATE(CFS) =    6278.78

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  12171.00  TC(MIN.) =     60.32
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.50
  PEAK FLOW RATE(CFS)   =   6278.78
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
        (c) Copyright 1983-2003 Advanced Engineering Software (aes)
            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: MP55100E.DAT
  TIME/DATE OF STUDY: 14:43 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.440
   2)  10.000;  3.530
   3)  15.000;  2.790
   4)  20.000;  2.320
   5)  30.000;  1.830
   6)  60.000;  1.260
   7) 120.000;  0.890
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.200
        FOOTHILL                           0.400
        MOUNTAIN                           0.000
        VALLEY(UNDEVELOPED)/DESERT         0.400
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1054.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MP54100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     6278.78    Tc(MIN.) =  60.32
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.50
  TOTAL AREA(ACRES) =   12171.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1054.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     6278.78    Tc(MIN.) =  60.32
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.50
  TOTAL AREA(ACRES) =   12171.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1054.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    245.00  DOWNSTREAM(FEET) =    215.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2724.00   CHANNEL SLOPE =  0.0110
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   6278.78
  FLOW VELOCITY(FEET/SEC.) =  14.75   FLOW DEPTH(FEET) =  11.62
  TRAVEL TIME(MIN.) =   3.08   Tc(MIN.) =  63.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  63.40
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.443
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    A        6.80      0.40       1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        1.80      0.40       1.00    46
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       A        0.40      0.40       0.60    32
  NATURAL FAIR COVER
  "WOODLAND"                 A        5.50      0.40       1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        5.80      0.30       1.00    63
  NATURAL POOR COVER
  "BARREN"                   B        6.90      0.30       1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.35
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   27.20
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.41;30M= 0.87;1H= 1.16;3H= 1.97;6H= 2.76;24H= 4.59
  S-GRAPH: VALLEY(DEV.)= 13.3%;VALLEY(UNDEV.)/DESERT=  4.4%
           MOUNTAIN= 71.7%;FOOTHILL= 10.5%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.06; LAG(HR) = 0.85; Fm(INCH/HR) = 0.23; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.65; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12198.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0214
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    2536.03
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6228.88
  TOTAL AREA(ACRES) =  12198.20       PEAK FLOW RATE(CFS) =    6278.78
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  63.40
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.239
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B       22.60      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        7.90      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        9.50      0.30      1.00    60
  NATURAL FAIR COVER
  "WOODLAND"                 C       23.30      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       71.90      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        0.40      0.25      1.00    91
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  135.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.87;1H= 1.16;3H= 1.97;6H= 2.76;24H= 4.59
  S-GRAPH: VALLEY(DEV.)= 13.4%;VALLEY(UNDEV.)/DESERT=  4.8%
           MOUNTAIN= 70.9%;FOOTHILL= 10.9%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.06; LAG(HR) = 0.85; Fm(INCH/HR) = 0.23; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.65; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12333.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0214
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    2558.28
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6271.01
  TOTAL AREA(ACRES) =  12333.80       PEAK FLOW RATE(CFS) =    6278.78
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
```

```
============================================================================
  MAINLINE Tc(MIN) =  63.40
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.239
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C       14.60      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       66.50      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        0.20      0.25      1.00    81
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        0.30      0.25      0.60    69
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        3.50      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        1.20      0.20      0.50    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   86.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.87;1H= 1.16;3H= 1.97;6H= 2.76;24H= 4.59
  S-GRAPH: VALLEY(DEV.)= 13.5%;VALLEY(UNDEV.)/DESERT=  5.0%
           MOUNTAIN= 70.4%;FOOTHILL= 11.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.06; LAG(HR) = 0.85; Fm(INCH/HR) = 0.23; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.64; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12420.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0214
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    2574.72
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6299.67
  TOTAL AREA(ACRES) =  12420.10       PEAK FLOW RATE(CFS) =    6299.67

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

****************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  63.40
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.239
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   D        0.20      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D       33.50      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        9.50      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        0.20      0.20      1.00    86
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D       50.10      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D        8.90      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.80
  SUBAREA AREA(ACRES) =  102.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.87;1H= 1.16;3H= 1.97;6H= 2.76;24H= 4.59
  S-GRAPH: VALLEY(DEV.)= 13.5%;VALLEY(UNDEV.)/DESERT=  5.3%
```

```
          MOUNTAIN= 69.9%;FOOTHILL= 11.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.06; LAG(HR) = 0.85; Fm(INCH/HR) = 0.23; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.64; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12522.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0214
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    2599.06
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6340.46
  TOTAL AREA(ACRES) =  12522.50       PEAK FLOW RATE(CFS) =    6340.46

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  12522.50  TC(MIN.) =     63.40
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.50
  PEAK FLOW RATE(CFS)   =   6340.46
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MP56100E.DAT
  TIME/DATE OF STUDY: 14:43 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  5.440
   2)  10.000;  3.530
   3)  15.000;  2.790
   4)  20.000;  2.320
   5)  30.000;  1.830
   6)  60.000;  1.260
   7) 120.000;  0.890
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.300
        FOOTHILL                           0.300
        MOUNTAIN                           0.000
        VALLEY(UNDEVELOPED)/DESERT         0.400
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1055.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MP55100E.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     6340.46    Tc(MIN.) =  63.40
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.50
  TOTAL AREA(ACRES) =   12522.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1055.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     6340.46    Tc(MIN.) =  63.40
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.50
  TOTAL AREA(ACRES) =   12522.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1055.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    215.00  DOWNSTREAM(FEET) =    185.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2880.00   CHANNEL SLOPE =  0.0104
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   6340.46
  FLOW VELOCITY(FEET/SEC.) =  14.49   FLOW DEPTH(FEET) =  11.87
  TRAVEL TIME(MIN.) =   3.31   Tc(MIN.) =  66.71
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  66.71
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.402
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    A        1.80      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        1.10      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A        9.30      0.40      1.00    36
  NATURAL POOR COVER
  "BARREN"                   B        1.80      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B       14.80      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.20      0.30      1.00    66
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.34
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   30.00
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.41;30M= 0.87;1H= 1.16;3H= 1.97;6H= 2.76;24H= 4.59
  S-GRAPH: VALLEY(DEV.)= 13.6%;VALLEY(UNDEV.)/DESERT=  5.4%
           MOUNTAIN= 69.7%;FOOTHILL= 11.4%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.11; LAG(HR) = 0.89; Fm(INCH/HR) = 0.23; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.64; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12552.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0215
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    2600.35
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6188.52
  TOTAL AREA(ACRES) =  12552.50       PEAK FLOW RATE(CFS) =    6340.46
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

 ****************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) =  66.71
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.219
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 B        5.10      0.30      1.00    60
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        8.50      0.25      0.50    69
  NATURAL POOR COVER
  "BARREN"                   C        2.40      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C        1.30      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.20      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        3.10      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.79
  SUBAREA AREA(ACRES) =   20.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.87;1H= 1.16;3H= 1.97;6H= 2.76;24H= 4.59
  S-GRAPH: VALLEY(DEV.)= 13.6%;VALLEY(UNDEV.)/DESERT=  5.4%
           MOUNTAIN= 69.6%;FOOTHILL= 11.4%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.11; LAG(HR) = 0.89; Fm(INCH/HR) = 0.23; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.64; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12573.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0215
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    2604.62
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6195.67
  TOTAL AREA(ACRES) =  12573.10       PEAK FLOW RATE(CFS) =    6340.46
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

 ****************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
```

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 ============================================================================
  MAINLINE Tc(MIN) =  66.71
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.219
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D      128.00      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D       32.60      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D       74.30      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                     D        0.80      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       21.80      0.20      1.00    83
  COMMERCIAL                 D        2.70      0.20      0.10    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.74
  SUBAREA AREA(ACRES) =  260.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.87;1H= 1.16;3H= 1.97;6H= 2.76;24H= 4.59
  S-GRAPH: VALLEY(DEV.)= 13.9%;VALLEY(UNDEV.)/DESERT=  6.1%
           MOUNTAIN= 68.2%;FOOTHILL= 11.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.11; LAG(HR) = 0.89; Fm(INCH/HR) = 0.23; Ybar = 0.49
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.62; 30M = 0.64; 1HR = 0.64;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12833.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0215
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    2670.75
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6298.89
  TOTAL AREA(ACRES) =  12833.30       PEAK FLOW RATE(CFS) =    6340.46
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49

 ****************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) =  66.71
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.219
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        0.70      0.20      1.00    86
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D       42.80      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D       13.80      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.70
  SUBAREA AREA(ACRES) =   57.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.87;1H= 1.16;3H= 1.97;6H= 2.76;24H= 4.59
  S-GRAPH: VALLEY(DEV.)= 14.0%;VALLEY(UNDEV.)/DESERT=  6.3%
           MOUNTAIN= 67.9%;FOOTHILL= 11.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.11; LAG(HR) = 0.89; Fm(INCH/HR) = 0.23; Ybar = 0.49
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.62; 30M = 0.64; 1HR = 0.64;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12890.60
```

```
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0279; Lca/L=0.4,n=.0250; Lca/L=0.5,n=.0230;Lca/L=0.6,n=.0215
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    2684.51
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6321.32
  TOTAL AREA(ACRES) =  12890.60       PEAK FLOW RATE(CFS) =    6340.46
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.40; 30M = 0.87; 1HR = 1.15; 3HR = 1.94; 6HR = 2.71; 24HR = 4.49
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  12890.60  TC(MIN.) =     66.71
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.49
  PEAK FLOW RATE(CFS)   =   6340.46
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
 ************************************************************************
             RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
            (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
          (c) Copyright 1983-2003 Advanced Engineering Software (aes)
              Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                          Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

 ------------------------------------------------------------------------
   FILE NAME: MP57100E.DAT
   TIME/DATE OF STUDY: 14:43 03/26/2004
 ========================================================================
   USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
 ========================================================================
                     --*TIME-OF-CONCENTRATION MODEL*--

   USER SPECIFIED STORM EVENT(YEAR) =  100.00
   SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
   SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
   *USER-DEFINED TABLED RAINFALL USED*
   NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
    1)   5.000;  5.440
    2)  10.000;  3.530
    3)  15.000;  2.790
    4)  20.000;  2.320
    5)  30.000;  1.830
    6)  60.000;  1.260
    7) 120.000;  0.890
   *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

   *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
      HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
      WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
 NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
 ===  =====  =========  =================  ======  =====  ====  =====  =======
   1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

   GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
     1. Relative Flow-Depth =  0.00 FEET
        as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
     2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
   *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
    OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
   *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

   UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
     WATERSHED LAG = 0.80 * Tc
           S-GRAPH TYPE                PERCENTAGE(DECIMAL)
         VALLEY(DEVELOPED)                  0.200
         FOOTHILL                           0.100
         MOUNTAIN                           0.600
         VALLEY(UNDEVELOPED)/DESERT         0.100
         DESERT(UNDEVELOPED)                0.000
     PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
     SIERRA MADRE DEPTH-AREA FACTORS USED.
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


 ************************************************************************
   FLOW PROCESS FROM NODE   1056.00 TO NODE   1056.00 IS CODE = 15.1
 ------------------------------------------------------------------------
   >>>>>DEFINE MEMORY BANK # 1 <<<<<
 ========================================================================
   PEAK FLOWRATE TABLE FILE NAME: MP56100E.DNA
   MEMORY BANK #  1 DEFINED AS FOLLOWS:
   PEAK FLOW RATE(CFS) =     6340.46    Tc(MIN.) =  66.71
   AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.49
   TOTAL AREA(ACRES) =   12890.60
   LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.

 ************************************************************************
   FLOW PROCESS FROM NODE   1056.00 TO NODE   1056.00 IS CODE = 14.0
 ------------------------------------------------------------------------
   >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
 ========================================================================

   MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
   PEAK FLOW RATE(CFS) =     6340.46    Tc(MIN.) =  66.71
   AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.49
   TOTAL AREA(ACRES) =   12890.60
   LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.

 ************************************************************************
   FLOW PROCESS FROM NODE   1056.00 TO NODE   1056.00 IS CODE =  12
 ------------------------------------------------------------------------
   >>>>>CLEAR MEMORY BANK # 1 <<<<<
 ========================================================================

 ************************************************************************
   FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  51
 ------------------------------------------------------------------------
   >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
   >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
 ========================================================================
   ELEVATION DATA: UPSTREAM(FEET) =    185.00  DOWNSTREAM(FEET) =    165.00
   CHANNEL LENGTH THRU SUBAREA(FEET) =  2367.00   CHANNEL SLOPE =  0.0084
   CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
   MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
   CHANNEL FLOW THRU SUBAREA(CFS) =   6340.46
   FLOW VELOCITY(FEET/SEC.) =  13.25   FLOW DEPTH(FEET) =  11.52
   TRAVEL TIME(MIN.) =   2.98   Tc(MIN.) =  69.69
   LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 56077.00 FEET.

 ************************************************************************
   FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  81
 ------------------------------------------------------------------------
   >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ========================================================================
   MAINLINE Tc(MIN) =  69.69
   * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.367
   SUBAREA LOSS RATE DATA(AMC  II):
    DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
   NATURAL FAIR COVER
   "CHAPARRAL,BROADLEAF"      A       38.90      0.40      1.00    40
   NATURAL FAIR COVER
   "GRASS"                    A        2.00      0.40      1.00    50
   NATURAL FAIR COVER
   "OPEN BRUSH"               A       40.30      0.40      1.00    46
   NATURAL FAIR COVER
   "WOODLAND"                 A       74.70      0.40      1.00    36
   NATURAL FAIR COVER
   "OPEN BRUSH"               B       25.40      0.30      1.00    66
   NATURAL FAIR COVER
   "CHAPARRAL,BROADLEAF"      B       18.50      0.30      1.00    63
   SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.38
   SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
   SUBAREA AREA(ACRES) =  199.80
   UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.41;30M= 0.87;1H= 1.16;3H= 1.97;6H= 2.76;24H= 4.59
  S-GRAPH: VALLEY(DEV.)= 14.1%;VALLEY(UNDEV.)/DESERT=  6.3%
           MOUNTAIN= 67.8%;FOOTHILL= 11.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.16; LAG(HR) = 0.93; Fm(INCH/HR) = 0.23; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.62; 30M = 0.63; 1HR = 0.64;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  13090.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 56077.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0281; Lca/L=0.4,n=.0252; Lca/L=0.5,n=.0231;Lca/L=0.6,n=.0216
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    2699.04
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6153.52
  TOTAL AREA(ACRES) =  13090.40       PEAK FLOW RATE(CFS) =    6340.46
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.43; 30M = 0.89; 1HR = 1.19; 3HR = 2.07; 6HR = 2.94; 24HR = 4.96

****************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  69.69
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B       18.90      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B      105.00      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      540.80      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        1.40      0.25      0.50    69
  NATURAL FAIR COVER
  "GRASS"                    C      106.10      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      236.60      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1008.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.16;3H= 1.97;6H= 2.77;24H= 4.62
  S-GRAPH: VALLEY(DEV.)= 14.5%;VALLEY(UNDEV.)/DESERT=  6.6%
           MOUNTAIN= 67.2%;FOOTHILL= 11.7%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.16; LAG(HR) = 0.93; Fm(INCH/HR) = 0.23; Ybar = 0.50
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.60; 30M = 0.62; 1HR = 0.63;
  3HR = 0.92; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  14099.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 56077.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0281; Lca/L=0.4,n=.0252; Lca/L=0.5,n=.0231;Lca/L=0.6,n=.0216
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    2904.03
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6499.97
  TOTAL AREA(ACRES) =  14099.20       PEAK FLOW RATE(CFS) =    6499.97

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.43; 30M = 0.89; 1HR = 1.19; 3HR = 2.07; 6HR = 2.94; 24HR = 4.96

****************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  69.69
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C      145.90      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C       35.40      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D     1590.50      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D     1749.20      0.20      1.00    83
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D       48.30      0.20      0.50    75
  NATURAL FAIR COVER
  "GRASS"                    D      198.30      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) = 3767.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.17;3H= 1.99;6H= 2.81;24H= 4.69
  S-GRAPH: VALLEY(DEV.)= 15.7%;VALLEY(UNDEV.)/DESERT=  7.3%
           MOUNTAIN= 65.7%;FOOTHILL= 11.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.16; LAG(HR) = 0.93; Fm(INCH/HR) = 0.23; Ybar = 0.48
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.55; 30M = 0.58; 1HR = 0.59;
  3HR = 0.90; 6HR = 0.95; 24HR= 0.97
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  17866.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 56077.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0281; Lca/L=0.4,n=.0252; Lca/L=0.5,n=.0231;Lca/L=0.6,n=.0216
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    3832.43
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7890.70
  TOTAL AREA(ACRES) =  17866.80       PEAK FLOW RATE(CFS) =    7890.70

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.43; 30M = 0.89; 1HR = 1.19; 3HR = 2.07; 6HR = 2.94; 24HR = 4.96

****************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  69.69
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  URBAN FAIR COVER
  "TURF"                     D        1.70      0.20      1.00    82
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       22.00      0.20      1.00    86
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D      398.00      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D      267.20      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.77
  SUBAREA AREA(ACRES) =  688.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.41;30M= 0.88;1H= 1.17;3H= 2.00;6H= 2.81;24H= 4.70
  S-GRAPH: VALLEY(DEV.)= 15.8%;VALLEY(UNDEV.)/DESERT=  7.4%
           MOUNTAIN= 65.5%;FOOTHILL= 11.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.16; LAG(HR) = 0.93; Fm(INCH/HR) = 0.22; Ybar = 0.48
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.54; 30M = 0.57; 1HR = 0.58;
  3HR = 0.90; 6HR = 0.95; 24HR= 0.97
```

```
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  18555.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 56077.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0281; Lca/L=0.4,n=.0252; Lca/L=0.5,n=.0231;Lca/L=0.6,n=.0216
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    4008.93
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8152.32
  TOTAL AREA(ACRES) =  18555.70       PEAK FLOW RATE(CFS) =    8152.32

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.43; 30M = 0.89; 1HR = 1.19; 3HR = 2.07; 6HR = 2.94; 24HR = 4.96
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  18555.70  TC(MIN.) =     69.69
  AREA-AVERAGED Fm(INCH/HR)=  0.22   Ybar =  0.48
  PEAK FLOW RATE(CFS)   =   8152.32
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

TECHNICAL APPENDIX II-C
HYDROLOGIC ANALYSIS
PROPOSED CONDITION
100-YEAR HIGH CONFIDENCE

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
        (c) Copyright 1983-2003 Advanced Engineering Software (aes)
            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MP49100H.DAT
  TIME/DATE OF STUDY: 15:44 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.030
   2)  10.000;  4.570
   3)  15.000;  3.560
   4)  20.000;  2.970
   5)  30.000;  2.340
   6)  60.000;  1.590
   7) 120.000;  1.120
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.000
        FOOTHILL                           0.000
        MOUNTAIN                           1.000
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1048.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MU48100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     4822.07    Tc(MIN.) =  41.59
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.43
  TOTAL AREA(ACRES) =    4407.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 33517.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1048.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     4822.07    Tc(MIN.) =  41.59
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.43
  TOTAL AREA(ACRES) =    4407.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1048.00 = 33517.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1048.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    445.00  DOWNSTREAM(FEET) =    400.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2427.00   CHANNEL SLOPE =  0.0185
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   4822.07
  FLOW VELOCITY(FEET/SEC.) =  16.81   FLOW DEPTH(FEET) =   9.67
  TRAVEL TIME(MIN.) =   2.41   Tc(MIN.) =  43.99
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  43.99
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.780
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       38.00      0.40      1.00    40
  NATURAL FAIR COVER
  "GRASS"                    A       10.90      0.40      1.00    50
  URBAN FAIR COVER
  "TURF"                     A       42.00      0.40      1.00    44
  NATURAL FAIR COVER
  "OPEN BRUSH"               A       37.80      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A       53.60      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       70.00      0.30      1.00    63
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.37
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  252.30
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.54;30M= 1.11;1H= 1.48;3H= 2.52;6H= 3.54;24H= 5.98
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.73; LAG(HR) = 0.59; Fm(INCH/HR) = 0.25; Ybar = 0.45
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.80; 30M = 0.80; 1HR = 0.80;
  3HR = 0.97; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4659.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0265; Lca/L=0.4,n=.0237; Lca/L=0.5,n=.0218;Lca/L=0.6,n=.0203
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    1408.72
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4925.13
  TOTAL AREA(ACRES) =   4659.30       PEAK FLOW RATE(CFS) =    4925.13

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  43.99
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.990
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B       38.40      0.30      1.00    69
  URBAN FAIR COVER
  "TURF"                     B       32.90      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       37.40      0.30      1.00    66
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        2.00      0.30      1.00    72
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B        1.10      0.30      0.60    56
  NATURAL FAIR COVER
  "WOODLAND"                 B       77.20      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  189.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.54;30M= 1.11;1H= 1.48;3H= 2.52;6H= 3.53;24H= 5.97
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.73; LAG(HR) = 0.59; Fm(INCH/HR) = 0.25; Ybar = 0.46
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.79; 30M = 0.79; 1HR = 0.79;
  3HR = 0.97; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4848.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0265; Lca/L=0.4,n=.0237; Lca/L=0.5,n=.0218;Lca/L=0.6,n=.0203
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    1448.03
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   5077.45
  TOTAL AREA(ACRES) =   4848.30       PEAK FLOW RATE(CFS) =    5077.45

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  43.99
```

```
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.990
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      710.20      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        2.20      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C       89.70      0.25      1.00    79
  URBAN FAIR COVER
  "TURF"                     C       13.10      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      819.40      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       75.60      0.25      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1710.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.50;6H= 3.49;24H= 5.88
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.73; LAG(HR) = 0.59; Fm(INCH/HR) = 0.25; Ybar = 0.46
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.75; 30M = 0.75; 1HR = 0.75;
  3HR = 0.96; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   6558.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0265; Lca/L=0.4,n=.0237; Lca/L=0.5,n=.0218;Lca/L=0.6,n=.0203
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    1917.75
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   6442.27
  TOTAL AREA(ACRES) =   6558.50       PEAK FLOW RATE(CFS) =    6442.27

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  43.99
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.990
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C       13.10      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C       82.20      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D      145.30      0.20      1.00    81
  NATURAL POOR COVER
  "BARREN"                   D        1.00      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      367.20      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                     D      142.80      0.20      1.00    82
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  751.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.49;6H= 3.47;24H= 5.85
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.73; LAG(HR) = 0.59; Fm(INCH/HR) = 0.24; Ybar = 0.45
```

```
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.73; 30M = 0.73; 1HR = 0.73;
  3HR = 0.96; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   7310.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0265; Lca/L=0.4,n=.0237; Lca/L=0.5,n=.0218;Lca/L=0.6,n=.0203
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    2150.43
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7014.82
  TOTAL AREA(ACRES) =   7310.10       PEAK FLOW RATE(CFS) =    7014.82

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1048.00 TO NODE   1049.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  43.99
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.990
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      373.60      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       21.60      0.20      1.00    86
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D       26.50      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D       58.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  480.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.49;6H= 3.47;24H= 5.84
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.73; LAG(HR) = 0.59; Fm(INCH/HR) = 0.24; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.71; 30M = 0.71; 1HR = 0.71;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   7790.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0265; Lca/L=0.4,n=.0237; Lca/L=0.5,n=.0218;Lca/L=0.6,n=.0203
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    2301.81
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7366.03
  TOTAL AREA(ACRES) =   7790.20       PEAK FLOW RATE(CFS) =    7366.03

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   7790.20  TC(MIN.) =     43.99
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.44
  PEAK FLOW RATE(CFS)   =   7366.03
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: MP50100H.DAT
  TIME/DATE OF STUDY: 15:44 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.030
   2)  10.000;  4.570
   3)  15.000;  3.560
   4)  20.000;  2.970
   5)  30.000;  2.340
   6)  60.000;  1.590
   7) 120.000;  1.120
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.200
        FOOTHILL                           0.100
        MOUNTAIN                           0.700
        VALLEY(UNDEVELOPED)/DESERT         0.000
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1049.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MP49100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     7366.03    Tc(MIN.) =  43.99
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.44
  TOTAL AREA(ACRES) =    7790.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1049.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     7366.03    Tc(MIN.) =  43.99
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.44
  TOTAL AREA(ACRES) =    7790.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1049.00 = 35944.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1049.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1050.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    400.00  DOWNSTREAM(FEET) =    390.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   616.00   CHANNEL SLOPE =  0.0162
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   7366.03
  FLOW VELOCITY(FEET/SEC.) =  17.95   FLOW DEPTH(FEET) =  12.59
  TRAVEL TIME(MIN.) =   0.57   Tc(MIN.) =  44.57
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1050.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  44.57
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.767
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    A        0.30      0.40       1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        0.20      0.40       1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A        1.10      0.40       1.00    36
  NATURAL FAIR COVER
  "GRASS"                    B        2.20      0.30       1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        0.20      0.30       1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.40      0.30       1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.34
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    4.40
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.49;6H= 3.47;24H= 5.84
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN=100.0%;FOOTHILL=  0.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.74; LAG(HR) = 0.59; Fm(INCH/HR) = 0.24; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.71; 30M = 0.71; 1HR = 0.71;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   7794.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0264; Lca/L=0.4,n=.0237; Lca/L=0.5,n=.0217;Lca/L=0.6,n=.0203
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    2302.19
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7321.90
  TOTAL AREA(ACRES) =   7794.60       PEAK FLOW RATE(CFS) =    7366.03
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1050.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  44.57
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.976
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       53.00      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                    C      318.80      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       33.30      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        4.80      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       41.60      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                    D       29.90      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  481.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.48;6H= 3.46;24H= 5.83
  S-GRAPH: VALLEY(DEV.)=  1.2%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN= 98.2%;FOOTHILL=  0.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.74; LAG(HR) = 0.59; Fm(INCH/HR) = 0.24; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8276.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0264; Lca/L=0.4,n=.0237; Lca/L=0.5,n=.0217;Lca/L=0.6,n=.0203
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    2439.18
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7622.91
  TOTAL AREA(ACRES) =   8276.00       PEAK FLOW RATE(CFS) =    7622.91

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1049.00 TO NODE   1050.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  44.57
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.976
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        8.60      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D        1.80      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   10.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.48;6H= 3.46;24H= 5.83
  S-GRAPH: VALLEY(DEV.)=  1.2%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN= 98.2%;FOOTHILL=  0.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.74; LAG(HR) = 0.59; Fm(INCH/HR) = 0.24; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8286.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0264; Lca/L=0.4,n=.0237; Lca/L=0.5,n=.0217;Lca/L=0.6,n=.0203
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    2442.40
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7629.62
  TOTAL AREA(ACRES) =   8286.40       PEAK FLOW RATE(CFS) =    7629.62

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   8286.40  TC(MIN.) =     44.57
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.44
  PEAK FLOW RATE(CFS)   =   7629.62
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                         Analysis prepared by:

                          Huitt - Zollars, Inc.
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                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MP51100H.DAT
  TIME/DATE OF STUDY: 15:44 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.030
   2)  10.000;  4.570
   3)  15.000;  3.560
   4)  20.000;  2.970
   5)  30.000;  2.340
   6)  60.000;  1.590
   7) 120.000;  1.120
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.300
        FOOTHILL                           0.500
        MOUNTAIN                           0.000
        VALLEY(UNDEVELOPED)/DESERT         0.200
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1050.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MP50100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     7629.62    Tc(MIN.) =  44.57
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.44
  TOTAL AREA(ACRES) =    8286.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1050.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     7629.62    Tc(MIN.) =  44.57
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.44
  TOTAL AREA(ACRES) =    8286.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1050.00 = 36560.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1050.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1051.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    390.00  DOWNSTREAM(FEET) =    330.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  4501.00   CHANNEL SLOPE =  0.0133
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   7629.62
  FLOW VELOCITY(FEET/SEC.) =  16.84   FLOW DEPTH(FEET) =  13.52
  TRAVEL TIME(MIN.) =   4.45   Tc(MIN.) =  49.02
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1051.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  49.02
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.673
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A        0.70      0.40       0.50    32
  NATURAL FAIR COVER
  "GRASS"                    A        1.80      0.40       1.00    50
  NATURAL FAIR COVER
  "WOODLAND"                 A        6.50      0.40       1.00    36
  NATURAL FAIR COVER
  "GRASS"                    B        3.20      0.30       1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        2.20      0.30       1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B       10.90      0.30       1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.33
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   25.30
  UNIT-HYDROGRAPH DATA:
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```
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.48;6H= 3.46;24H= 5.83
  S-GRAPH: VALLEY(DEV.)=  1.3%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN= 97.9%;FOOTHILL=  0.7%;DESERT(UNDEV.)=  0.1%
  Tc(HR) = 0.82; LAG(HR) = 0.65; Fm(INCH/HR) = 0.24; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8311.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0262; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0201
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    2445.06
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7149.41
  TOTAL AREA(ACRES) =   8311.70       PEAK FLOW RATE(CFS) =    7629.62
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1051.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  49.02
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.864
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        5.60      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                    C       38.20      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        3.80      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        7.00      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       57.50      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        5.10      0.20      0.50    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  117.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.48;6H= 3.46;24H= 5.82
  S-GRAPH: VALLEY(DEV.)=  1.7%;VALLEY(UNDEV.)/DESERT=  0.3%
           MOUNTAIN= 96.5%;FOOTHILL=  1.4%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.82; LAG(HR) = 0.65; Fm(INCH/HR) = 0.24; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8428.90
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0262; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0201
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    2481.03
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7221.00
  TOTAL AREA(ACRES) =   8428.90       PEAK FLOW RATE(CFS) =    7629.62
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1050.00 TO NODE   1051.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  49.02
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.864
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   D        0.60      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D       92.50      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                     D       11.30      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       14.60      0.20      1.00    83
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D        7.80      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D       31.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  158.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.48;6H= 3.46;24H= 5.82
  S-GRAPH: VALLEY(DEV.)=  2.2%;VALLEY(UNDEV.)/DESERT=  0.7%
           MOUNTAIN= 94.8%;FOOTHILL=  2.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.82; LAG(HR) = 0.65; Fm(INCH/HR) = 0.24; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8587.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0262; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0201
  TIME OF PEAK FLOW(HR) = 16.42  RUNOFF VOLUME(AF) =    2530.90
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7316.55
  TOTAL AREA(ACRES) =   8587.10       PEAK FLOW RATE(CFS) =    7629.62
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   8587.10  TC(MIN.) =     49.02
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.44
  PEAK FLOW RATE(CFS)   =   7629.62
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
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**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: MP52100H.DAT
  TIME/DATE OF STUDY: 15:44 03/26/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.030
   2)  10.000;  4.570
   3)  15.000;  3.560
   4)  20.000;  2.970
   5)  30.000;  2.340
   6)  60.000;  1.590
   7) 120.000;  1.120
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.400
        FOOTHILL                           0.300
        MOUNTAIN                           0.100
        VALLEY(UNDEVELOPED)/DESERT         0.200
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1051.00 IS CODE = 15.1
--------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
==========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MP51100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     7629.62    Tc(MIN.) =  49.02
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.44
  TOTAL AREA(ACRES) =    8587.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1051.00 IS CODE = 14.0
--------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
==========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     7629.62    Tc(MIN.) =  49.02
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.44
  TOTAL AREA(ACRES) =    8587.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1051.00 = 41061.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1051.00 IS CODE =  12
--------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
==========================================================================

**************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  51
--------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    330.00  DOWNSTREAM(FEET) =    300.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2333.00   CHANNEL SLOPE =  0.0129
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   7629.62
  FLOW VELOCITY(FEET/SEC.) =  16.62   FLOW DEPTH(FEET) =  13.64
  TRAVEL TIME(MIN.) =   2.34   Tc(MIN.) =  51.36
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  51.36
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.629
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   A        3.80      0.40       1.00    78
  NATURAL FAIR COVER
  "GRASS"                    A        0.60      0.40       1.00    50
  URBAN FAIR COVER
  "TURF"                     A        2.90      0.40       1.00    44
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        0.40      0.40       1.00    46
  PUBLIC PARK                A        1.10      0.40       0.85    32
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       A        7.60      0.40       0.60    32
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.80
  SUBAREA AREA(ACRES) =   16.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.48;6H= 3.46;24H= 5.82
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  S-GRAPH: VALLEY(DEV.)=  2.3%;VALLEY(UNDEV.)/DESERT=  0.7%
           MOUNTAIN= 94.6%;FOOTHILL=  2.4%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.86; LAG(HR) = 0.68; Fm(INCH/HR) = 0.24; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.70; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8603.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    2534.11
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7113.11
  TOTAL AREA(ACRES) =   8603.50       PEAK FLOW RATE(CFS) =    7629.62
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  51.36
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.806
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 A       10.10      0.40      1.00    36
  URBAN FAIR COVER
  "TURF"                     B        3.80      0.30      1.00    65
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.40      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        0.70      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        3.30      0.25      1.00    91
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.30      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.34
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   18.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.48;6H= 3.46;24H= 5.82
  S-GRAPH: VALLEY(DEV.)=  2.4%;VALLEY(UNDEV.)/DESERT=  0.8%
           MOUNTAIN= 94.4%;FOOTHILL=  2.4%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.86; LAG(HR) = 0.68; Fm(INCH/HR) = 0.24; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.69; 30M = 0.70; 1HR = 0.70;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8622.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    2537.26
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7122.96
  TOTAL AREA(ACRES) =   8622.10       PEAK FLOW RATE(CFS) =    7629.62
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  51.36
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.806
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C       27.30      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.20      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       49.50      0.20      1.00    81
  NATURAL POOR COVER
  "BARREN"                   D        7.30      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D       13.50      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                     D      130.80      0.20      1.00    82
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.95
  SUBAREA AREA(ACRES) =  228.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.48;6H= 3.45;24H= 5.81
  S-GRAPH: VALLEY(DEV.)=  3.3%;VALLEY(UNDEV.)/DESERT=  1.3%
           MOUNTAIN= 92.2%;FOOTHILL=  3.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.86; LAG(HR) = 0.68; Fm(INCH/HR) = 0.24; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.69; 30M = 0.69; 1HR = 0.69;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8850.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    2608.56
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7276.67
  TOTAL AREA(ACRES) =   8850.70       PEAK FLOW RATE(CFS) =    7629.62
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1051.00 TO NODE   1052.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  51.36
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.806
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.80      0.20      1.00    83
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D       85.50      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D       15.00      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.66
  SUBAREA AREA(ACRES) =  101.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.48;6H= 3.45;24H= 5.81
  S-GRAPH: VALLEY(DEV.)=  3.7%;VALLEY(UNDEV.)/DESERT=  1.5%
           MOUNTAIN= 91.3%;FOOTHILL=  3.5%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.86; LAG(HR) = 0.68; Fm(INCH/HR) = 0.24; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.69; 30M = 0.69; 1HR = 0.69;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8952.00
```

```
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    2642.45
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7349.17
  TOTAL AREA(ACRES) =   8952.00       PEAK FLOW RATE(CFS) =    7629.62
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   8952.00  TC(MIN.) =     51.36
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.43
  PEAK FLOW RATE(CFS)   =   7629.62
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: MP53100H.DAT
  TIME/DATE OF STUDY: 15:44 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.030
   2)  10.000;  4.570
   3)  15.000;  3.560
   4)  20.000;  2.970
   5)  30.000;  2.340
   6)  60.000;  1.590
   7) 120.000;  1.120
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.400
        FOOTHILL                           0.300
        MOUNTAIN                           0.100
        VALLEY(UNDEVELOPED)/DESERT         0.200
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1052.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MP52100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     7629.62    Tc(MIN.) =  51.36
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.43
  TOTAL AREA(ACRES) =    8952.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1052.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     7629.62    Tc(MIN.) =  51.36
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.43
  TOTAL AREA(ACRES) =    8952.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1052.00 = 43394.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1052.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    300.00  DOWNSTREAM(FEET) =    265.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  3322.00   CHANNEL SLOPE =  0.0105
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   7629.62
  FLOW VELOCITY(FEET/SEC.) =  15.44   FLOW DEPTH(FEET) =  14.38
  TRAVEL TIME(MIN.) =   3.59   Tc(MIN.) =  54.95
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  54.95
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.567
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        1.60      0.40      1.00    40
  NATURAL POOR COVER
  "BARREN"                   A        0.90      0.40      1.00    78
  NATURAL FAIR COVER
  "GRASS"                    A       12.50      0.40      1.00    50
  URBAN FAIR COVER
  "TURF"                     A        0.90      0.40      1.00    44
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        2.90      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A       16.90      0.40      1.00    36
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   35.70
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.48;6H= 3.45;24H= 5.81
  S-GRAPH: VALLEY(DEV.)=  3.9%;VALLEY(UNDEV.)/DESERT=  1.6%
           MOUNTAIN= 91.0%;FOOTHILL=  3.6%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.92; LAG(HR) = 0.73; Fm(INCH/HR) = 0.24; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.69; 30M = 0.69; 1HR = 0.69;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   8987.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    2646.25
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7247.79
  TOTAL AREA(ACRES) =   8987.70       PEAK FLOW RATE(CFS) =    7629.62
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  54.95
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.716
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B       11.40      0.30      1.00    69
  URBAN FAIR COVER
  "TURF"                     B        9.30      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.30      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        4.20      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       47.20      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        7.70      0.25      0.50    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.95
  SUBAREA AREA(ACRES) =   81.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.48;6H= 3.45;24H= 5.81
  S-GRAPH: VALLEY(DEV.)=  4.2%;VALLEY(UNDEV.)/DESERT=  1.7%
           MOUNTAIN= 90.3%;FOOTHILL=  3.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.92; LAG(HR) = 0.73; Fm(INCH/HR) = 0.24; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.69; 30M = 0.69; 1HR = 0.69;
  3HR = 0.95; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9068.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    2666.77
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7293.38
  TOTAL AREA(ACRES) =   9068.80       PEAK FLOW RATE(CFS) =    7629.62
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  54.95
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.716
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   C        8.50      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C       17.20      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       49.10      0.25      1.00    77
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C       17.90      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C       43.10      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       79.80      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =  215.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.48;6H= 3.45;24H= 5.81
  S-GRAPH: VALLEY(DEV.)=  5.0%;VALLEY(UNDEV.)/DESERT=  2.1%
           MOUNTAIN= 88.4%;FOOTHILL=  4.4%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.92; LAG(HR) = 0.73; Fm(INCH/HR) = 0.24; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.68; 30M = 0.69; 1HR = 0.69;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9284.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    2728.75
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7420.66
  TOTAL AREA(ACRES) =   9284.40       PEAK FLOW RATE(CFS) =    7629.62
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  54.95
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.716
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        3.30      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        4.90      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      105.10      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                     D      104.60      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       67.80      0.20      1.00    83
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D       12.70      0.20      0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  298.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.48;6H= 3.45;24H= 5.80
```

```
  S-GRAPH: VALLEY(DEV.)=  6.1%;VALLEY(UNDEV.)/DESERT=  2.7%
           MOUNTAIN= 86.0%;FOOTHILL=  5.2%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.92; LAG(HR) = 0.73; Fm(INCH/HR) = 0.24; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.68; 30M = 0.68; 1HR = 0.68;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9582.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    2823.08
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7603.15
  TOTAL AREA(ACRES) =   9582.80       PEAK FLOW RATE(CFS) =    7629.62
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1052.00 TO NODE   1053.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  54.95
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.716
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 D       49.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   49.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.48;6H= 3.45;24H= 5.80
  S-GRAPH: VALLEY(DEV.)=  6.3%;VALLEY(UNDEV.)/DESERT=  2.8%
           MOUNTAIN= 85.6%;FOOTHILL=  5.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.92; LAG(HR) = 0.73; Fm(INCH/HR) = 0.24; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.68; 30M = 0.68; 1HR = 0.68;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9632.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    2837.53
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7632.59
  TOTAL AREA(ACRES) =   9632.20       PEAK FLOW RATE(CFS) =    7632.59

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   9632.20  TC(MIN.) =     54.95
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.43
  PEAK FLOW RATE(CFS)   =   7632.59
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: MP54100H.DAT
  TIME/DATE OF STUDY: 15:44 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.030
   2)  10.000;  4.570
   3)  15.000;  3.560
   4)  20.000;  2.970
   5)  30.000;  2.340
   6)  60.000;  1.590
   7) 120.000;  1.120
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.400
        FOOTHILL                           0.300
        MOUNTAIN                           0.200
        VALLEY(UNDEVELOPED)/DESERT         0.100
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1053.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MP53100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     7632.59    Tc(MIN.) =  54.95
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.43
  TOTAL AREA(ACRES) =    9632.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1053.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     7632.59    Tc(MIN.) =  54.95
  AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.43
  TOTAL AREA(ACRES) =    9632.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1053.00 = 46716.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1053.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    265.00  DOWNSTREAM(FEET) =    245.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1390.00   CHANNEL SLOPE =  0.0144
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   7632.59
  FLOW VELOCITY(FEET/SEC.) =  17.33   FLOW DEPTH(FEET) =  13.25
  TRAVEL TIME(MIN.) =   1.34   Tc(MIN.) =  56.28
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  56.28
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.545
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    A        2.30      0.40      1.00    50
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       A       14.70      0.40      0.60    32
  NATURAL FAIR COVER
  "WOODLAND"                 A        1.30      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       36.30      0.30      1.00    63
  NATURAL POOR COVER
  "BARREN"                   B       12.50      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B       99.20      0.30      1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.31
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.96
  SUBAREA AREA(ACRES) =  166.30
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.47;6H= 3.44;24H= 5.80
  S-GRAPH: VALLEY(DEV.)=  6.9%;VALLEY(UNDEV.)/DESERT=  2.9%
           MOUNTAIN= 84.5%;FOOTHILL=  5.7%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.94; LAG(HR) = 0.75; Fm(INCH/HR) = 0.24; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.67; 30M = 0.68; 1HR = 0.68;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   9798.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    2874.23
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7608.94
  TOTAL AREA(ACRES) =   9798.50       PEAK FLOW RATE(CFS) =    7632.59
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  56.28
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.683
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  URBAN FAIR COVER
  "TURF"                     B        9.80      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       22.90      0.30      1.00    66
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B       24.70      0.30      0.60    56
  NATURAL FAIR COVER
  "WOODLAND"                 B       92.60      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      295.40      0.25      1.00    75
  NATURAL FAIR COVER
  "WOODLAND"                 C      153.30      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  598.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.47;6H= 3.44;24H= 5.79
  S-GRAPH: VALLEY(DEV.)=  8.8%;VALLEY(UNDEV.)/DESERT=  3.3%
           MOUNTAIN= 80.7%;FOOTHILL=  7.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.94; LAG(HR) = 0.75; Fm(INCH/HR) = 0.24; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.66; 30M = 0.67; 1HR = 0.67;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  10397.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    3020.45
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   7922.35
  TOTAL AREA(ACRES) =  10397.20       PEAK FLOW RATE(CFS) =    7922.35

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  56.28
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.683
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C      140.40      0.25      1.00    79
  URBAN FAIR COVER
  "TURF"                     C      102.40      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      312.40      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        0.90      0.25      1.00    81
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C       56.80      0.25      0.60    69
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       38.10      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =  651.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.47;6H= 3.43;24H= 5.78
  S-GRAPH: VALLEY(DEV.)= 10.6%;VALLEY(UNDEV.)/DESERT=  3.7%
           MOUNTAIN= 77.2%;FOOTHILL=  8.5%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.94; LAG(HR) = 0.75; Fm(INCH/HR) = 0.24; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.65; 30M = 0.66; 1HR = 0.67;
  3HR = 0.94; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  11048.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    3201.26
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8268.40
  TOTAL AREA(ACRES) =  11048.20       PEAK FLOW RATE(CFS) =    8268.40

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  56.28
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.683
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   D       15.40      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D      282.80      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                     D       80.70      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D      171.90      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        0.70      0.20      1.00    86
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D      499.30      0.20      0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.81
  SUBAREA AREA(ACRES) = 1050.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.47;6H= 3.43;24H= 5.77
  S-GRAPH: VALLEY(DEV.)= 13.2%;VALLEY(UNDEV.)/DESERT=  4.3%
           MOUNTAIN= 72.2%;FOOTHILL= 10.4%;DESERT(UNDEV.)=  0.0%
```

```
  Tc(HR) = 0.94; LAG(HR) = 0.75; Fm(INCH/HR) = 0.23; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.64; 30M = 0.65; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12099.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    3542.91
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8874.55
  TOTAL AREA(ACRES) =  12099.00       PEAK FLOW RATE(CFS) =    8874.55

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

******************************************************************************
  FLOW PROCESS FROM NODE   1053.00 TO NODE   1054.00 IS CODE =  81
------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==============================================================================
  MAINLINE Tc(MIN) =  56.28
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.683
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  D       72.00      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   72.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.47;6H= 3.43;24H= 5.76
  S-GRAPH: VALLEY(DEV.)= 13.3%;VALLEY(UNDEV.)/DESERT=  4.3%
           MOUNTAIN= 71.9%;FOOTHILL= 10.5%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.94; LAG(HR) = 0.75; Fm(INCH/HR) = 0.23; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.65; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12171.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    3563.69
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8912.34
  TOTAL AREA(ACRES) =  12171.00       PEAK FLOW RATE(CFS) =    8912.34

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
==============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  12171.00  TC(MIN.) =     56.28
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.43
  PEAK FLOW RATE(CFS)   =   8912.34
==============================================================================
==============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                         Analysis prepared by:

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                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: MP55100H.DAT
  TIME/DATE OF STUDY: 15:44 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.030
   2)  10.000;  4.570
   3)  15.000;  3.560
   4)  20.000;  2.970
   5)  30.000;  2.340
   6)  60.000;  1.590
   7) 120.000;  1.120
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.200
        FOOTHILL                           0.400
        MOUNTAIN                           0.000
        VALLEY(UNDEVELOPED)/DESERT         0.400
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1054.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MP54100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     8912.34    Tc(MIN.) =  56.28
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.43
  TOTAL AREA(ACRES) =   12171.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1054.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     8912.34    Tc(MIN.) =  56.28
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.43
  TOTAL AREA(ACRES) =   12171.00
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1054.00 = 48106.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1054.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    245.00  DOWNSTREAM(FEET) =    215.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2724.00   CHANNEL SLOPE =  0.0110
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   8912.34
  FLOW VELOCITY(FEET/SEC.) =  16.22   FLOW DEPTH(FEET) =  14.07
  TRAVEL TIME(MIN.) =   2.80   Tc(MIN.) =  59.08
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  59.08
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.503
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    A        6.80      0.40       1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        1.80      0.40       1.00    46
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       A        0.40      0.40       0.60    32
  NATURAL FAIR COVER
  "WOODLAND"                 A        5.50      0.40       1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        5.80      0.30       1.00    63
  NATURAL POOR COVER
  "BARREN"                   B        6.90      0.30       1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.35
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   27.20
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.47;6H= 3.43;24H= 5.76
  S-GRAPH: VALLEY(DEV.)= 13.3%;VALLEY(UNDEV.)/DESERT=  4.4%
           MOUNTAIN= 71.7%;FOOTHILL= 10.5%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.98; LAG(HR) = 0.79; Fm(INCH/HR) = 0.23; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.65; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12198.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    3568.46
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8596.23
  TOTAL AREA(ACRES) =  12198.20       PEAK FLOW RATE(CFS) =    8912.34
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  59.08
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.613
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B       22.60      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        7.90      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        9.50      0.30      1.00    60
  NATURAL FAIR COVER
  "WOODLAND"                 C       23.30      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       71.90      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        0.40      0.25      1.00    91
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  135.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.47;6H= 3.43;24H= 5.76
  S-GRAPH: VALLEY(DEV.)= 13.4%;VALLEY(UNDEV.)/DESERT=  4.8%
           MOUNTAIN= 70.9%;FOOTHILL= 10.9%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.98; LAG(HR) = 0.79; Fm(INCH/HR) = 0.23; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.65; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.97; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12333.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    3601.16
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8653.54
  TOTAL AREA(ACRES) =  12333.80       PEAK FLOW RATE(CFS) =    8912.34
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  59.08
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.613
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C       14.60      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       66.50      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        0.20      0.25      1.00    81
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        0.30      0.25      0.60    69
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        3.50      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        1.20      0.20      0.50    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   86.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.47;6H= 3.43;24H= 5.76
  S-GRAPH: VALLEY(DEV.)= 13.5%;VALLEY(UNDEV.)/DESERT=  5.0%
           MOUNTAIN= 70.4%;FOOTHILL= 11.1%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.98; LAG(HR) = 0.79; Fm(INCH/HR) = 0.23; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.64; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12420.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    3624.62
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8691.90
  TOTAL AREA(ACRES) =  12420.10       PEAK FLOW RATE(CFS) =    8912.34
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1054.00 TO NODE   1055.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  59.08
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.613
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   D        0.20      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D       33.50      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        9.50      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        0.20      0.20      1.00    86
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D       50.10      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D        8.90      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.80
  SUBAREA AREA(ACRES) =  102.40
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.47;6H= 3.43;24H= 5.76
```

```
  S-GRAPH: VALLEY(DEV.)= 13.5%;VALLEY(UNDEV.)/DESERT=  5.3%
           MOUNTAIN= 69.9%;FOOTHILL= 11.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.98; LAG(HR) = 0.79; Fm(INCH/HR) = 0.23; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.64; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12522.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.50  RUNOFF VOLUME(AF) =    3657.63
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8744.48
  TOTAL AREA(ACRES) =  12522.50       PEAK FLOW RATE(CFS) =    8912.34
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  12522.50  TC(MIN.) =     59.08
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.43
  PEAK FLOW RATE(CFS)   =   8912.34
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
        (c) Copyright 1983-2003 Advanced Engineering Software (aes)
            Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: MP56100H.DAT
  TIME/DATE OF STUDY: 15:44 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.030
   2)  10.000;  4.570
   3)  15.000;  3.560
   4)  20.000;  2.970
   5)  30.000;  2.340
   6)  60.000;  1.590
   7) 120.000;  1.120
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.300
        FOOTHILL                           0.300
        MOUNTAIN                           0.000
        VALLEY(UNDEVELOPED)/DESERT         0.400
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1055.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MP55100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     8912.34    Tc(MIN.) =  59.08
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.43
  TOTAL AREA(ACRES) =   12522.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1055.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     8912.34    Tc(MIN.) =  59.08
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.43
  TOTAL AREA(ACRES) =   12522.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1055.00 = 50830.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1055.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    215.00  DOWNSTREAM(FEET) =    185.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2880.00   CHANNEL SLOPE =  0.0104
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   8912.34
  FLOW VELOCITY(FEET/SEC.) =  15.89   FLOW DEPTH(FEET) =  14.28
  TRAVEL TIME(MIN.) =   3.02   Tc(MIN.) =  62.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  62.10
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.461
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    A        1.80      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        1.10      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A        9.30      0.40      1.00    36
  NATURAL POOR COVER
  "BARREN"                   B        1.80      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B       14.80      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.20      0.30      1.00    66
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.34
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   30.00
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.46;6H= 3.43;24H= 5.76
  S-GRAPH: VALLEY(DEV.)= 13.6%;VALLEY(UNDEV.)/DESERT=  5.4%
           MOUNTAIN= 69.7%;FOOTHILL= 11.4%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.04; LAG(HR) = 0.83; Fm(INCH/HR) = 0.23; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.64; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12552.50
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    3662.73
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8632.18
  TOTAL AREA(ACRES) =  12552.50       PEAK FLOW RATE(CFS) =    8912.34
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  62.10
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.574
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 B        5.10      0.30      1.00    60
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        8.50      0.25      0.50    69
  NATURAL POOR COVER
  "BARREN"                   C        2.40      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C        1.30      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.20      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        3.10      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.79
  SUBAREA AREA(ACRES) =   20.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.46;6H= 3.43;24H= 5.76
  S-GRAPH: VALLEY(DEV.)= 13.6%;VALLEY(UNDEV.)/DESERT=  5.4%
           MOUNTAIN= 69.6%;FOOTHILL= 11.4%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.04; LAG(HR) = 0.83; Fm(INCH/HR) = 0.23; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.63; 30M = 0.64; 1HR = 0.65;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12573.10
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    3668.64
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8642.62
  TOTAL AREA(ACRES) =  12573.10       PEAK FLOW RATE(CFS) =    8912.34
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
```

```
============================================================================
  MAINLINE Tc(MIN) =  62.10
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.574
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D      128.00      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D       32.60      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D       74.30      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                     D        0.80      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       21.80      0.20      1.00    83
  COMMERCIAL                 D        2.70      0.20      0.10    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.74
  SUBAREA AREA(ACRES) =  260.20
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.46;6H= 3.42;24H= 5.76
  S-GRAPH: VALLEY(DEV.)= 13.9%;VALLEY(UNDEV.)/DESERT=  6.1%
           MOUNTAIN= 68.2%;FOOTHILL= 11.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.04; LAG(HR) = 0.83; Fm(INCH/HR) = 0.23; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.62; 30M = 0.64; 1HR = 0.64;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12833.30
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    3757.11
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8787.64
  TOTAL AREA(ACRES) =  12833.30       PEAK FLOW RATE(CFS) =    8912.34
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63

****************************************************************************
  FLOW PROCESS FROM NODE   1055.00 TO NODE   1056.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  62.10
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.574
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        0.70      0.20      1.00    86
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D       42.80      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D       13.80      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.70
  SUBAREA AREA(ACRES) =   57.30
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.46;6H= 3.42;24H= 5.76
  S-GRAPH: VALLEY(DEV.)= 14.0%;VALLEY(UNDEV.)/DESERT=  6.3%
           MOUNTAIN= 67.9%;FOOTHILL= 11.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.04; LAG(HR) = 0.83; Fm(INCH/HR) = 0.23; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.62; 30M = 0.64; 1HR = 0.64;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  12890.60
```

```
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0260; Lca/L=0.4,n=.0233; Lca/L=0.5,n=.0214;Lca/L=0.6,n=.0200
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    3775.66
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8819.28
  TOTAL AREA(ACRES) =  12890.60       PEAK FLOW RATE(CFS) =    8912.34
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.52; 30M = 1.09; 1HR = 1.45; 3HR = 2.43; 6HR = 3.36; 24HR = 5.63
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  12890.60  TC(MIN.) =     62.10
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.43
  PEAK FLOW RATE(CFS)   =   8912.34
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

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************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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             Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                        Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

------------------------------------------------------------------------
  FILE NAME: MP57100H.DAT
  TIME/DATE OF STUDY: 15:44 03/26/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *USER-DEFINED TABLED RAINFALL USED*
  NUMBER OF [TIME,INTENSITY] DATA PAIRS =  7
   1)   5.000;  7.030
   2)  10.000;  4.570
   3)  15.000;  3.560
   4)  20.000;  2.970
   5)  30.000;  2.340
   6)  60.000;  1.590
   7) 120.000;  1.120
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                  0.200
        FOOTHILL                           0.100
        MOUNTAIN                           0.600
        VALLEY(UNDEVELOPED)/DESERT         0.100
        DESERT(UNDEVELOPED)                0.000
    PRECIPITATION DATA ENTERED ON SUBAREA BASIS.
    SIERRA MADRE DEPTH-AREA FACTORS USED.
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1056.00 IS CODE = 15.1
------------------------------------------------------------------------
  >>>>>DEFINE MEMORY BANK # 1 <<<<<
========================================================================
  PEAK FLOWRATE TABLE FILE NAME: MP56100H.DNA
  MEMORY BANK #  1 DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     8912.34    Tc(MIN.) =  62.10
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.43
  TOTAL AREA(ACRES) =   12890.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1056.00 IS CODE = 14.0
------------------------------------------------------------------------
  >>>>>MEMORY BANK #  1 COPIED ONTO MAIN-STREAM MEMORY<<<<<
========================================================================

  MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     8912.34    Tc(MIN.) =  62.10
  AREA-AVERAGED Fm(INCH/HR) =  0.23    Ybar = 0.43
  TOTAL AREA(ACRES) =   12890.60
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1056.00 = 53710.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1056.00 IS CODE =  12
------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    185.00  DOWNSTREAM(FEET) =    165.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2367.00   CHANNEL SLOPE =  0.0084
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   8912.34
  FLOW VELOCITY(FEET/SEC.) =  14.58   FLOW DEPTH(FEET) =  13.92
  TRAVEL TIME(MIN.) =   2.71   Tc(MIN.) =  64.81
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 56077.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  64.81
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.425
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A       38.90      0.40      1.00    40
  NATURAL FAIR COVER
  "GRASS"                    A        2.00      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A       40.30      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                 A       74.70      0.40      1.00    36
  NATURAL FAIR COVER
  "OPEN BRUSH"               B       25.40      0.30      1.00    66
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B       18.50      0.30      1.00    63
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.38
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  199.80
  UNIT-HYDROGRAPH DATA:
```

```
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.47;6H= 3.43;24H= 5.76
  S-GRAPH: VALLEY(DEV.)= 14.1%;VALLEY(UNDEV.)/DESERT=  6.3%
           MOUNTAIN= 67.8%;FOOTHILL= 11.8%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.08; LAG(HR) = 0.86; Fm(INCH/HR) = 0.23; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.62; 30M = 0.63; 1HR = 0.64;
  3HR = 0.93; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  13090.40
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 56077.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0201
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    3806.87
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   8769.19
  TOTAL AREA(ACRES) =  13090.40       PEAK FLOW RATE(CFS) =    8912.34
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.55; 30M = 1.12; 1HR = 1.50; 3HR = 2.60; 6HR = 3.67; 24HR = 6.25

****************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  64.81
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.552
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B       18.90      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B      105.00      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C      540.80      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        1.40      0.25      0.50    69
  NATURAL FAIR COVER
  "GRASS"                    C      106.10      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C      236.60      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) = 1008.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.46;3H= 2.48;6H= 3.44;24H= 5.80
  S-GRAPH: VALLEY(DEV.)= 14.5%;VALLEY(UNDEV.)/DESERT=  6.6%
           MOUNTAIN= 67.2%;FOOTHILL= 11.7%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.08; LAG(HR) = 0.86; Fm(INCH/HR) = 0.23; Ybar = 0.44
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.60; 30M = 0.62; 1HR = 0.63;
  3HR = 0.92; 6HR = 0.96; 24HR= 0.98
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  14099.20
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 56077.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0201
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    4103.19
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   9272.71
  TOTAL AREA(ACRES) =  14099.20       PEAK FLOW RATE(CFS) =    9272.71

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.55; 30M = 1.12; 1HR = 1.50; 3HR = 2.60; 6HR = 3.67; 24HR = 6.25

****************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  64.81
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.552
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C      145.90      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C       35.40      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D     1590.50      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D     1749.20      0.20      1.00    83
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D       48.30      0.20      0.50    75
  NATURAL FAIR COVER
  "GRASS"                    D      198.30      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) = 3767.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.50;6H= 3.49;24H= 5.89
  S-GRAPH: VALLEY(DEV.)= 15.7%;VALLEY(UNDEV.)/DESERT=  7.3%
           MOUNTAIN= 65.7%;FOOTHILL= 11.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.08; LAG(HR) = 0.86; Fm(INCH/HR) = 0.23; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.55; 30M = 0.58; 1HR = 0.59;
  3HR = 0.90; 6HR = 0.95; 24HR= 0.97
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  17866.80
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 56077.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0201
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    5391.98
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  11224.26
  TOTAL AREA(ACRES) =  17866.80       PEAK FLOW RATE(CFS) =   11224.26

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.55; 30M = 1.12; 1HR = 1.50; 3HR = 2.60; 6HR = 3.67; 24HR = 6.25

****************************************************************************
  FLOW PROCESS FROM NODE   1056.00 TO NODE   1057.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  64.81
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.552
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  URBAN FAIR COVER
  "TURF"                     D        1.70      0.20      1.00    82
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       22.00      0.20      1.00    86
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D      398.00      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D      267.20      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.77
  SUBAREA AREA(ACRES) =  688.90
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.53;30M= 1.10;1H= 1.47;3H= 2.51;6H= 3.50;24H= 5.91
  S-GRAPH: VALLEY(DEV.)= 15.8%;VALLEY(UNDEV.)/DESERT=  7.4%
           MOUNTAIN= 65.5%;FOOTHILL= 11.3%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.08; LAG(HR) = 0.86; Fm(INCH/HR) = 0.22; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.54; 30M = 0.57; 1HR = 0.58;
  3HR = 0.90; 6HR = 0.95; 24HR= 0.97
```

```
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =  18555.70
  LONGEST FLOWPATH FROM NODE   1000.00 TO NODE   1057.00 = 56077.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0261; Lca/L=0.4,n=.0234; Lca/L=0.5,n=.0215;Lca/L=0.6,n=.0201
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    5633.41
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =  11585.06
  TOTAL AREA(ACRES) =  18555.70       PEAK FLOW RATE(CFS) =   11585.06

  SUBAREA AREA-AVERAGED RAINFALL DEPTH(INCH):
  5M = 0.55; 30M = 1.12; 1HR = 1.50; 3HR = 2.60; 6HR = 3.67; 24HR = 6.25
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =  18555.70  TC(MIN.) =     64.81
  AREA-AVERAGED Fm(INCH/HR)=  0.22   Ybar =  0.41
  PEAK FLOW RATE(CFS)   =  11585.06
================================================================================
================================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

N

0 1,000 2,000 4,000 Feet

1057 1056 1055 1054 1053 1052 1051 1050 1049 1048 1047 1046 1045 1044 1043 1042 1041 1040 1039 1038 1037 1036 1035 1034 1033 1032 1031 1030 1029 1028 1027 1026 1025 1024 1023 1022 1021 1020 1005 1004 1003 1002 1001 1000 1011 1012 1013 1014 1015 1016 1017

Legend

- RANCHO MISSION VIEJO BOUNDARY
- 2000' CONTOUR
- FLOW LINE

DATE: MARCH 15, 2004

H:/10075501/PH801/RMV WATERSHED/EX/SAN MATEO EXHIBIT.MXD

HYDROLOGIC MAP FOR EXISTING CONDITION

SAN MATEO CREEK CHANNEL

HUITT~ZOLLARS
(714) 734-5100
430 EXCHANGE, SUITE 200
IRVINE, CA 92602

N

0 1,000 2,000 4,000 Feet

1000 1001 1002 1003 1004 1005 1011 1012 1013 1014 1015 1016 1017 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1041 1042 1043 1044 1045 1046 1047 1048 1049 1050 1051 1052 1053 1054 1055 1056 1057

Legend

- RANCHO MISSION VIEJO BOUNDARY
- 2000' CONTOUR
- FLOW LINE

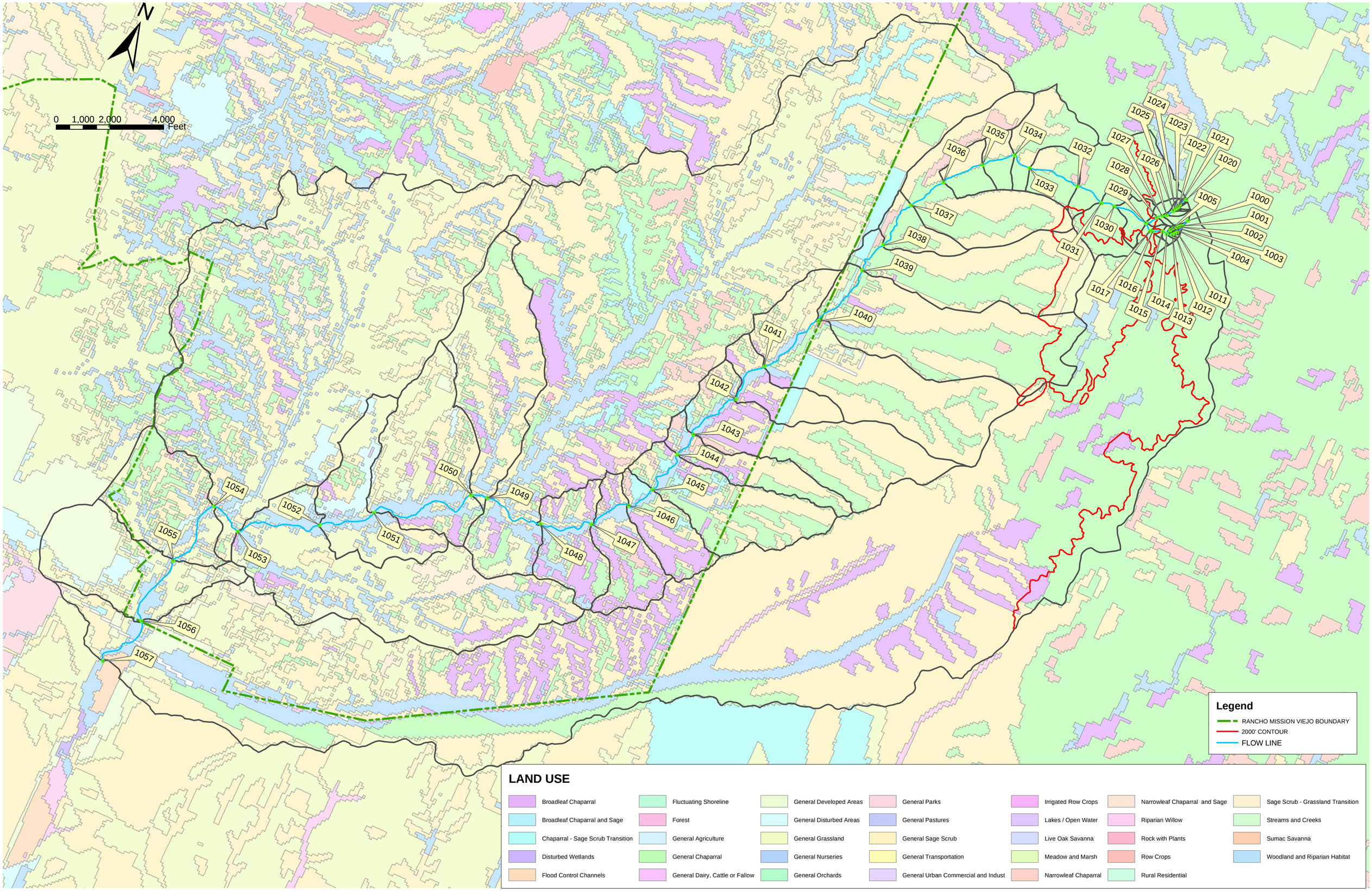
DATE: MARCH 31, 2004

H:/10075501/PH801/RMV WATERSHED/EX/SAN MATEO PROPOSED EXHIBIT.MXD

HYDROLOGIC MAP FOR PROPOSED CONDITION

SAN MATEO CREEK CHANNEL

HUITT~ZOLLARS
(714) 734-5100
430 EXCHANGE, SUITE 200
IRVINE, CA 92602



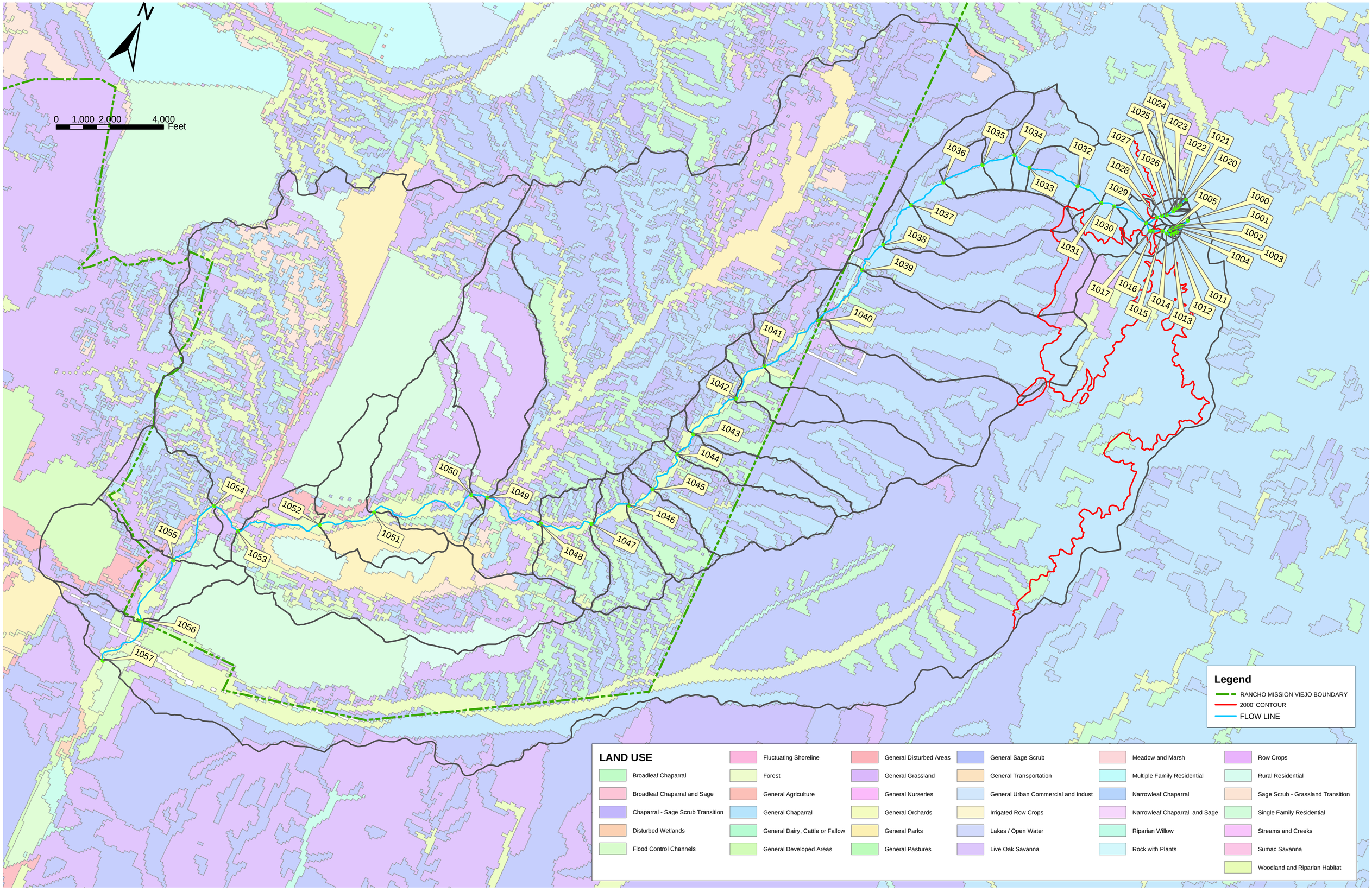
DATE: MARCH 15, 2004

H:/10075501/PH801/RMV WATERSHED/EX/SAN MATEO LANDUSE EXISTING.MXD

HYDROLOGIC MAP FOR EXISTING CONDITION

SAN MATEO CREEK CHANNEL

HUITT~ZOLLARS
(714) 734-5100
430 EXCHANGE, SUITE 200
IRVINE, CA 92602



DATE: MARCH 15, 2004

H:/10075501/PH801/RMV WATERSHED/EX/SAN MATEO LANDUSE PROPOSED.MXD

HYDROLOGIC MAP FOR PROPOSED CONDITION

SAN MATEO CREEK CHANNEL

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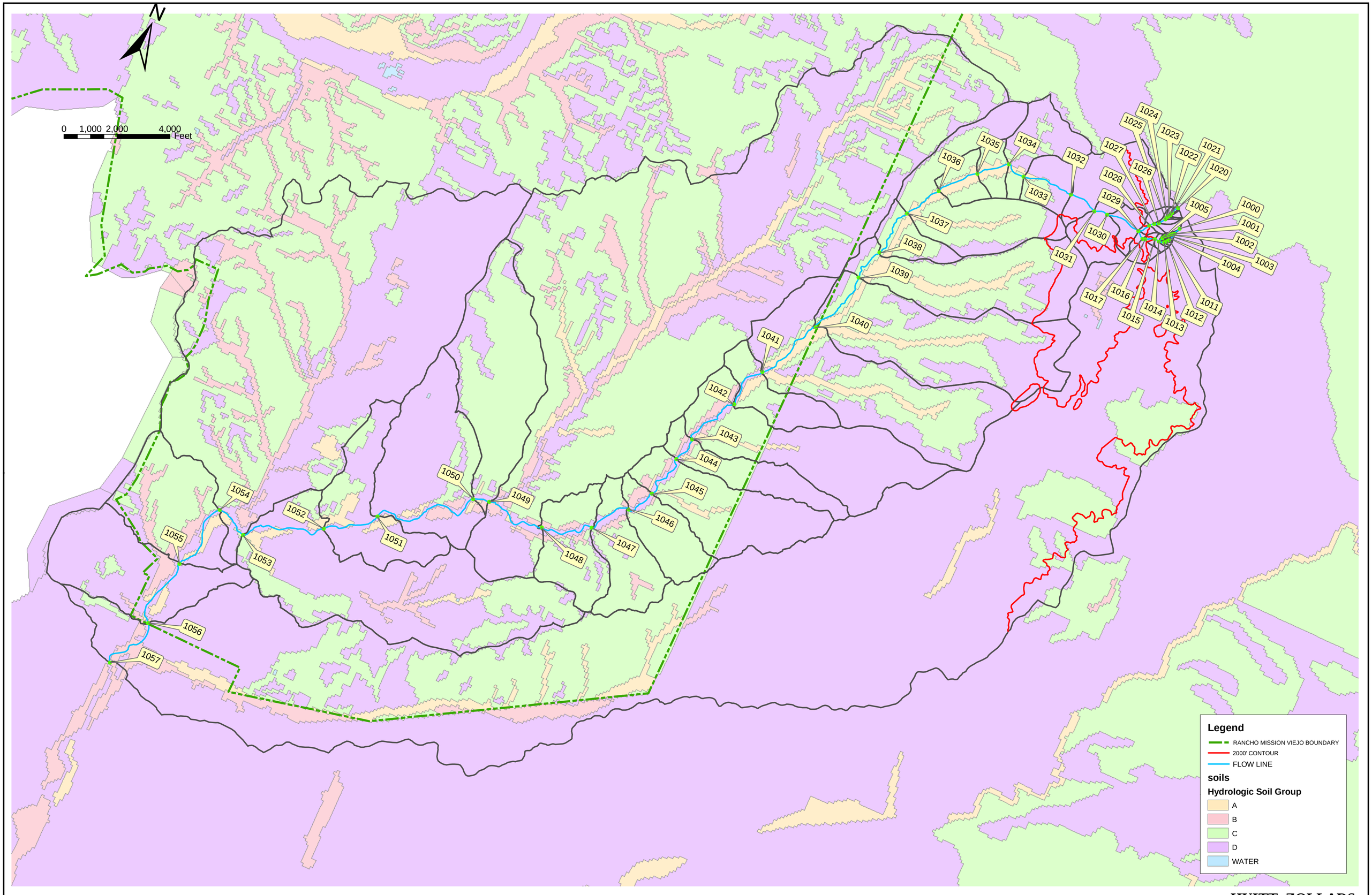
430 EXCHANGE, SUITE 200
IRVINE, CA 92602



DATE: MARCH 15, 2004

H:/10075501/PH801/RMV WATERSHED/EX/SAN MATEO SOILTYPE EXISTING.MXD

HYDROLOGIC ANALYSIS OF

SAN MATEO CREEK CHANNEL

HUITT~ZOLLARS
(714) 734-5100
430 EXCHANGE, SUITE 200
IRVINE, CA 92602

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

HYDROLOGIC REPORT

TO

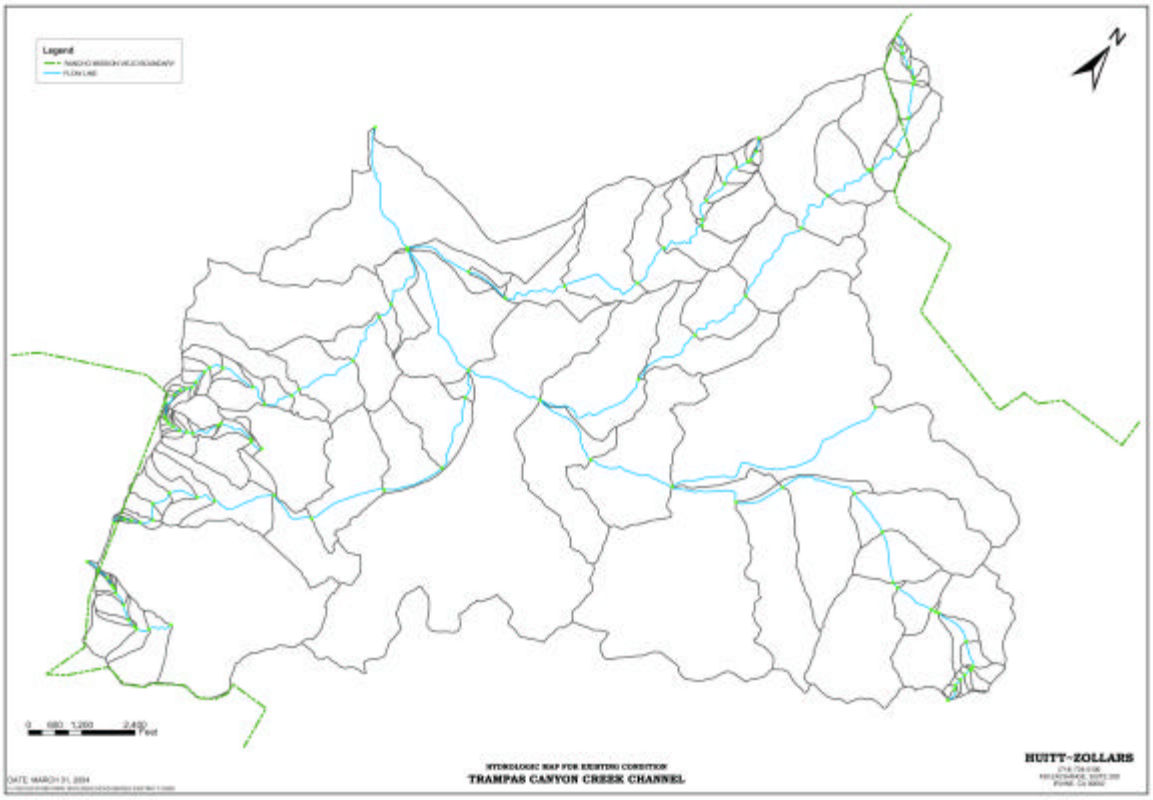
THE BASELINE HYDROLOGIC CONDITIONS

TRAMPAS CANYON

PREPARED FOR

RANCHO MISSION VIEJO

APRIL 2, 2004



VOLUME III

HUITT-ZOLLARS

430 Exchange, Suite 200 6 Irvine, CA 92602 6 714.734.5100 6 FAX 714.734.5155

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HYDROLOGY MAP - PROPOSED

TECHNICAL APPENDIX III-A – HYDROLOGIC ANALYSIS – EXISTING CONDITION

TECHNICAL APPENDIX III-B – HYDROLOGIC ANALYSIS – PROPOSED CONDITION

INTRODUCTION

A Hydrology Report for the Trampas Canyon of the San Juan Creek system has been completed to the confluence with San Juan Creek. The watershed will be significantly altered by proposed development. In the existing condition, two reservoirs without outlets intercept flows in the canyon prior to San Juan Creek. Therefore, at the confluence with San Juan Creek, Trampas Canyon only conveys flows from approximately 327 acres in the existing condition. In the proposed condition, two reservoirs will be eliminated and Trampas Canyon will convey flows from approximately 823 acres to a proposed reservoir near San Juan Creek. The watershed elevations range from approximately 240 feet above sea level at the downstream confluence to approximately 1,110 feet above sea level at the headwaters.

A 100-Year High Confidence analysis was prepared. The hydrologic analysis was completed in accordance with the 1986 Orange County Hydrology Manual and 1995 Orange County Hydrology Manual Addendum No. 1. The application of the procedures outlined in these two documents and the assumptions used to develop hydrologic parameters are described in this report.

MODEL OVERVIEW

Rational method models were completed for both the existing and proposed condition models. Additionally, to determine the volume requirements for the proposed reservoir, a multi-day hydrograph analysis was also prepared for the proposed condition.

To model the 100-Year High Confidence analysis, both the Advanced Engineering Software RATSCx and FLOODSCx programs were utilized. The RATSCx program was used to develop the rational method analysis and the FLOODSCx program was used to develop the multi-day hydrographs analysis. The hydrograph was based on data calculated both from the rational method analysis and from other tabulations of rainfall and land use / soil type combinations. The time of concentration (Tc) from the rational method was used to calculate the basin lag at the hydrograph location. A five day storm pattern was developed for the multi-day analysis based on the guidelines from the Orange County Hydrology Manual.

Since in the existing condition, Trampas Canyon only conveys flows form approximately 327 acres, only a rational method study was completed for the canyon.

In the proposed condition, Trampas Canyon conveys flows from approximately 823 acres. Additionally, a reservoir is proposed to intercept all flows in the canyon prior to reaching San Juan Creek. Therefore, both a rational method analysis, for parameter, and a multi-day hydrograph analysis were prepared for the proposed condition. Since no outlet is proposed for the reservoir, flood routing through a basin was not required. Rather, the reservoir will be designed to intercept the entire storm runoff volume for the multi-day event.

ASSUMPTIONS

Base Maps and Topographic Data

The base map for the existing condition model was created using aerial topography with 2-foot, 5-foot and 10-foot contours. The base map for the proposed condition utilized mass grade topographic information that was spliced into existing aerial topography for each of the proposed development bubbles.

Rainfall

100-Year High Confidence rainfall intensities and depths were derived from the Orange County Hydrology Manual. The Non-Mountainous rainfall zone, for areas below the 2000' elevation was utilized.

Land Use

As part of the Philip Williams & Associates (PWA) report titled, "Baseline Hydrologic Conditions – San Juan & Upper San Mateo Watersheds," dated May 30, 2001, PWA developed "Land Use Sub-Categories" for the HEC-1 model. Based on descriptions of these sub-categories, the land uses were mapped to hydrologic land uses for input into the models according to Table 1. PWA prepared land use mapping for both the existing and several proposed development conditions. For the proposed condition hydrologic analysis, only one, the Ranch Plan Alternative (B4G), land use plan was evaluated.

Hydrologic Soils

Hydrologic soils were assigned based on the Orange County Hydrology Manual.

Antecedent Moisture Condition

As outlined in the Orange County Hydrology Manual Addendum No. 1, Antecedent Moisture Condition (AMC) II was used for all analyses.

Depth Area Adjustments

As outlined in the Orange County Hydrology Manual, Sierra Madre depth area adjustments were chosen for all calculations.

LAND USE MAPPING

Land Use Sub-Category	Hydrologic Land Use
General Transportation	Commercial
General Urban Commercial	Commercial
Multiple Family Residential	11 Dwellings/Acre
General Developed Areas	5-7 Dwellings/Acre
Single Family Residential	3-4 Dwellings/Acre
Fluctuating Shoreline	Public Park
Lakes/Open Water	Public Park
General Disturbed Areas	Barren (Poor)
Broadleaf Chaparral	Chaparral, Broadleaf (Fair)
Broadleaf Chaparral and Sage	Chaparral, Broadleaf (Fair)
Chaparral – Sage Scrub	Chaparral, Broadleaf (Fair)
General Chaparral	Chaparral, Broadleaf (Fair)
Rural Residential	Chaparral, Broadleaf (Fair)
Narrowleaf Chaparral	Chaparral, Narrowleaf (Fair)
General Grassland	Grass (Fair)
Live Oak Savanna	Grass (Fair)
Sumac Savanna	Grass (Fair)
Disturbed Wetlands	Meadows or Cienegas (Fair)
Meadow and Marsh	Meadows or Cienegas (Good)
Flood Control Channels	Open Brush (Fair)
General Sage Scrub	Open Brush (Fair)
Riparian Willow	Open Brush (Fair)
Rock with Plants	Open Brush (Fair)
Sage Scrub- Grassland	Open Brush (Fair)
Streams and Creeks	Open Brush (Fair)
Forest	Woodland (Fair)
Woodland and Riparian	Woodland (Fair)
General Agriculture	Fallow (Poor)
General Nurseries	Orchards, Evergreen (Fair)
General Orchards	Orchards, Evergreen (Fair)
General Pastures	Pasture, Dryland (Fair)
Irrigated Row Crops	Pasture, Dryland (Fair)
Row Crops	Pasture, Dryland (Fair)
General Parks	Turf (Fair)

Table 1 – Land Use Mapping

S-Graphs

S-Graph proportions were assigned based on a review of topographic and land use data, as well as aerial photography. Generally, the rugged terrain in the upper portions of the watershed was assigned to a "Mountain" S-Graph, while the lower portions were assigned "Foothill" and "Valley" S-Graphs. For the proposed condition analysis, development bubble areas were assumed to change from "Valley – Undeveloped" to "Valley – Developed".

Channel Geometry

Channel geometry was determined based on estimated cross-sections taken from the topographic data at several locations. Channel sizes were incrementally increased as the model moved downstream. Channels were sized to convey the 100-Year High Confidence peak flow rates without overtopping. Additionally, the 100-Year High Confidence analysis was used as the determining factor in insuring that travel times for individual reaches met the County criteria outlined in the Hydrology Manual on pages D-12 and D-15.

Sub-Areas

In general, sub-areas were developed so that the sub-area sizes gradually increased as the study progressed downstream. Concentration nodes were located at major confluences or other points of significance. Generally these concentration nodes defined the subareas rather than the subarea size defining a concentration node.

CONCLUSIONS

Hydrologic Results

The results of the hydrologic analyses of Trampas Canyon at San Juan Creek are presented in Table 2.

Impact of Proposed Development

Although two reservoirs are proposed to be removed from Trampas Canyon, another proposed reservoir will intercept and store all flows from within the canyon. Therefore, flows reaching San Juan Creek from Trampas Canyon will be reduced from their existing level to zero.

HYDROLOGIC SUMMARY – 100-YEAR – HIGH CONFIDENCE

Existing Condition

Node	Location	Total Area (ac)	Total Area (sq. mi.)	Tc (min)	Rational Flow Rate (cfs)	Hydrograph Flow Rate (cfs)	Multi-Day Volume (ac-ft)
1354	San Juan Creek	327	0.53	27.14	618		

Proposed Condition

Node	Location	Total Area (ac)	Total Area (sq. mi.)	Tc (min)	Rational Flow Rate (cfs)	Hydrograph Flow Rate (cfs)	Multi-Day Volume (ac-ft)
1375	San Juan Creek	823	1.29	25.63	1,435	1,324	320

Table 2 – Hydrologic Summary – 100-Year-High Confidence

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

TECHNICAL APPENDIX III-A
HYDROLOGIC ANALYSIS
EXISTING CONDITION
100-YEAR HIGH CONFIDENCE

```
******************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
         (c) Copyright 1983-2003 Advanced Engineering Software (aes)
             Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

 ************************* DESCRIPTION OF STUDY *************************
* AREA 13 - EXISTING                                                    *
* 100-YEAR HIGH CONFIDENCE                                              *
* AREAS DRAINING TO SAN JUAN CREEK                                      *
 ************************************************************************

  FILE NAME: CE13100H.DAT
  TIME/DATE OF STUDY: 10:10 05/29/2004
==============================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==============================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *DATA BANK RAINFALL USED*
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                  PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                    0.020
        FOOTHILL                             0.080
        MOUNTAIN                             0.040
        VALLEY(UNDEVELOPED)/DESERT           0.860
        DESERT(UNDEVELOPED)                  0.000
    SIERRA MADRE DEPTH-AREA FACTORS USED.
                     AREA-AVERAGED
        DURATION    RAINFALL(INCH)
        5-MINUTES         0.52
       30-MINUTES         1.09
        1-HOUR            1.45
        3-HOUR            2.43
        6-HOUR            3.36
       24-HOUR            5.63
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


******************************************************************************
  FLOW PROCESS FROM NODE   1300.00 TO NODE   1301.00 IS CODE =  21
------------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
==============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   327.00
  ELEVATION DATA: UPSTREAM(FEET) =    927.00  DOWNSTREAM(FEET) =    750.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    8.090
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.696
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.50      0.25      1.00    75    8.09
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.20      0.20      1.00    83    8.09
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      2.81
  TOTAL AREA(ACRES) =      0.70   PEAK FLOW RATE(CFS) =      2.81

******************************************************************************
  FLOW PROCESS FROM NODE   1301.00 TO NODE   1302.00 IS CODE =  51
------------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    750.00  DOWNSTREAM(FEET) =    715.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    99.00   CHANNEL SLOPE =  0.3535
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      2.81
  FLOW VELOCITY(FEET/SEC.) =   7.67   FLOW DEPTH(FEET) =   0.29
  TRAVEL TIME(MIN.) =   0.22   Tc(MIN.) =   8.30
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1302.00 =   426.00 FEET.

******************************************************************************
  FLOW PROCESS FROM NODE   1301.00 TO NODE   1302.00 IS CODE =  81
------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==============================================================================
  MAINLINE Tc(MIN) =   8.30
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.662
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.20      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        0.80      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.20      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.20      SUBAREA RUNOFF(CFS) =    4.81
  EFFECTIVE AREA(ACRES) =      1.90   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.90       PEAK FLOW RATE(CFS) =       7.60

******************************************************************************
  FLOW PROCESS FROM NODE   1302.00 TO NODE   1303.00 IS CODE =  51
------------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    715.00  DOWNSTREAM(FEET) =    665.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   168.00   CHANNEL SLOPE =  0.2976
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      7.60
  FLOW VELOCITY(FEET/SEC.) =   9.53   FLOW DEPTH(FEET) =   0.52
  TRAVEL TIME(MIN.) =   0.29   Tc(MIN.) =   8.60
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1303.00 =   594.00 FEET.

******************************************************************************
  FLOW PROCESS FROM NODE   1302.00 TO NODE   1303.00 IS CODE =  81
------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==============================================================================
  MAINLINE Tc(MIN) =   8.60
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.575
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.10      0.25      1.00    75
```

```
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.10      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        0.50      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.50      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =     1.20      SUBAREA RUNOFF(CFS) =     4.72
  EFFECTIVE AREA(ACRES) =      3.10   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      3.10       PEAK FLOW RATE(CFS) =      12.16

****************************************************************************
  FLOW PROCESS FROM NODE   1303.00 TO NODE   1304.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    665.00  DOWNSTREAM(FEET) =    635.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   145.00   CHANNEL SLOPE =  0.2069
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     12.16
  FLOW VELOCITY(FEET/SEC.) =   9.40   FLOW DEPTH(FEET) =   0.74
  TRAVEL TIME(MIN.) =   0.26   Tc(MIN.) =   8.86
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1304.00 =   739.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1303.00 TO NODE   1304.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   8.86
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.499
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.10      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.80      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        0.20      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        1.00      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =     2.20      SUBAREA RUNOFF(CFS) =     8.47
  EFFECTIVE AREA(ACRES) =      5.30   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      5.30       PEAK FLOW RATE(CFS) =      20.42

****************************************************************************
  FLOW PROCESS FROM NODE   1304.00 TO NODE   1305.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    635.00  DOWNSTREAM(FEET) =    605.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   176.00   CHANNEL SLOPE =  0.1705
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     20.42
  FLOW VELOCITY(FEET/SEC.) =   9.74   FLOW DEPTH(FEET) =   0.76
  TRAVEL TIME(MIN.) =   0.30   Tc(MIN.) =   9.16
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1305.00 =   915.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1304.00 TO NODE   1305.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.16
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.409
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
```

```
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.20      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        0.50      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.90      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.20      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =     1.80      SUBAREA RUNOFF(CFS) =     6.81
  EFFECTIVE AREA(ACRES) =      7.10   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      7.10       PEAK FLOW RATE(CFS) =      26.81

****************************************************************************
  FLOW PROCESS FROM NODE   1305.00 TO NODE   1306.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    605.00  DOWNSTREAM(FEET) =    603.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    31.00   CHANNEL SLOPE =  0.0645
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     26.81
  FLOW VELOCITY(FEET/SEC.) =   7.36   FLOW DEPTH(FEET) =   1.15
  TRAVEL TIME(MIN.) =   0.07   Tc(MIN.) =   9.23
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1306.00 =   946.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1305.00 TO NODE   1306.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.23
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.389
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.40      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.50      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        1.60      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.30      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =     2.80      SUBAREA RUNOFF(CFS) =    10.51
  EFFECTIVE AREA(ACRES) =      9.90   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      9.90       PEAK FLOW RATE(CFS) =      37.19

****************************************************************************
  FLOW PROCESS FROM NODE   1306.00 TO NODE   1307.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    603.00  DOWNSTREAM(FEET) =    600.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    68.00   CHANNEL SLOPE =  0.0441
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     37.19
  FLOW VELOCITY(FEET/SEC.) =   6.98   FLOW DEPTH(FEET) =   1.52
  TRAVEL TIME(MIN.) =   0.16   Tc(MIN.) =   9.39
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1307.00 =  1014.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1306.00 TO NODE   1307.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.39
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.341
  SUBAREA LOSS RATE DATA(AMC  II):
```

```
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.40      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.50      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        3.40      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D        0.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    4.40      SUBAREA RUNOFF(CFS) =   16.38
  EFFECTIVE AREA(ACRES) =     14.30   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     14.30       PEAK FLOW RATE(CFS) =      53.14

****************************************************************************
  FLOW PROCESS FROM NODE   1307.00 TO NODE   1308.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    600.00  DOWNSTREAM(FEET) =    550.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   598.00   CHANNEL SLOPE =  0.0836
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     53.14
  FLOW VELOCITY(FEET/SEC.) =   9.71   FLOW DEPTH(FEET) =   1.54
  TRAVEL TIME(MIN.) =   1.03   Tc(MIN.) =  10.42
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1308.00 =  1612.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1307.00 TO NODE   1308.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.42
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.077
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.60      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.40      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        3.80      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D        1.00      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    6.80      SUBAREA RUNOFF(CFS) =   23.70
  EFFECTIVE AREA(ACRES) =     21.10   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     21.10       PEAK FLOW RATE(CFS) =      73.44

****************************************************************************
  FLOW PROCESS FROM NODE   1308.00 TO NODE   1309.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    550.00  DOWNSTREAM(FEET) =    490.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   952.00   CHANNEL SLOPE =  0.0630
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     73.44
  FLOW VELOCITY(FEET/SEC.) =   9.49   FLOW DEPTH(FEET) =   1.96
  TRAVEL TIME(MIN.) =   1.67   Tc(MIN.) =  12.09
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1309.00 =  2564.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1308.00 TO NODE   1309.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.09
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.742
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.10      0.30      1.00    63
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        0.10      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.20      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        0.10      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.80      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        4.70      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    6.00      SUBAREA RUNOFF(CFS) =   19.05
  EFFECTIVE AREA(ACRES) =     27.10   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     27.10       PEAK FLOW RATE(CFS) =      86.15

****************************************************************************
  FLOW PROCESS FROM NODE   1308.00 TO NODE   1309.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.09
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.742
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        3.50      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D        1.60      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    5.10      SUBAREA RUNOFF(CFS) =   16.26
  EFFECTIVE AREA(ACRES) =     32.20   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     32.20       PEAK FLOW RATE(CFS) =     102.41

****************************************************************************
  FLOW PROCESS FROM NODE   1309.00 TO NODE   1310.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    490.00  DOWNSTREAM(FEET) =    485.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    83.00   CHANNEL SLOPE =  0.0602
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    102.41
  FLOW VELOCITY(FEET/SEC.) =  10.11   FLOW DEPTH(FEET) =   2.02
  TRAVEL TIME(MIN.) =   0.14   Tc(MIN.) =  12.22
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1310.00 =  2647.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1309.00 TO NODE   1310.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.22
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.715
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        1.80      0.30      1.00    63
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.20      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        8.00      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        8.90      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        2.40      0.25      1.00    73
  NATURAL FAIR COVER
```

```
  "CHAPARRAL,BROADLEAF"      D       22.50      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   43.80      SUBAREA RUNOFF(CFS) =  137.51
  EFFECTIVE AREA(ACRES) =     76.00   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     76.00       PEAK FLOW RATE(CFS) =     239.13

****************************************************************************
  FLOW PROCESS FROM NODE   1309.00 TO NODE   1310.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.22
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.715
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        2.10      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D        2.20      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    4.30      SUBAREA RUNOFF(CFS) =   13.60
  EFFECTIVE AREA(ACRES) =     80.30   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     80.30       PEAK FLOW RATE(CFS) =     252.73

****************************************************************************
  FLOW PROCESS FROM NODE   1310.00 TO NODE   1311.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    485.00  DOWNSTREAM(FEET) =    480.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   108.00   CHANNEL SLOPE =  0.0463
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    252.73
  FLOW VELOCITY(FEET/SEC.) =  11.48   FLOW DEPTH(FEET) =   3.10
  TRAVEL TIME(MIN.) =   0.16   Tc(MIN.) =  12.38
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1311.00 =  2755.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1310.00 TO NODE   1311.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.38
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.684
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     B        0.20      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.40      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.10      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C       12.10      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.60      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        2.60      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   16.00      SUBAREA RUNOFF(CFS) =   49.41
  EFFECTIVE AREA(ACRES) =     96.30   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     96.30       PEAK FLOW RATE(CFS) =     299.88

****************************************************************************
  FLOW PROCESS FROM NODE   1310.00 TO NODE   1311.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.38
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.684
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D       14.50      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        6.90      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D        2.30      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   23.70      SUBAREA RUNOFF(CFS) =   74.31
  EFFECTIVE AREA(ACRES) =    120.00   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    120.00       PEAK FLOW RATE(CFS) =     374.18

****************************************************************************
  FLOW PROCESS FROM NODE   1311.00 TO NODE   1312.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    480.00  DOWNSTREAM(FEET) =    445.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   925.00   CHANNEL SLOPE =  0.0378
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    374.18
  FLOW VELOCITY(FEET/SEC.) =  11.78   FLOW DEPTH(FEET) =   3.98
  TRAVEL TIME(MIN.) =   1.31   Tc(MIN.) =  13.69
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1312.00 =  3680.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1311.00 TO NODE   1312.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  13.69
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.489
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     B        2.70      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.60      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.40      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        8.70      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C        0.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        3.90      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   16.70      SUBAREA RUNOFF(CFS) =   48.51
  EFFECTIVE AREA(ACRES) =    136.70   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    136.70       PEAK FLOW RATE(CFS) =     401.63

****************************************************************************
  FLOW PROCESS FROM NODE   1311.00 TO NODE   1312.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  13.69
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.489
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  C        3.00      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        0.60      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        4.10      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
```

```
  SUBAREA AREA(ACRES) =    7.70      SUBAREA RUNOFF(CFS) =   22.66
  EFFECTIVE AREA(ACRES) =    144.40   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    144.40       PEAK FLOW RATE(CFS) =     424.29

****************************************************************************
  FLOW PROCESS FROM NODE   1312.00 TO NODE   1313.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    445.00  DOWNSTREAM(FEET) =    440.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   154.00   CHANNEL SLOPE =  0.0325
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    424.29
  FLOW VELOCITY(FEET/SEC.) =  11.46   FLOW DEPTH(FEET) =   4.08
  TRAVEL TIME(MIN.) =   0.22   Tc(MIN.) =  13.91
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1313.00 =  3834.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1312.00 TO NODE   1313.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  13.91
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.456
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        0.20      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                     B        0.90      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        1.60      0.30      1.00    66
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C       31.60      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C        2.20      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       11.70      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   48.20      SUBAREA RUNOFF(CFS) =  138.97
  EFFECTIVE AREA(ACRES) =    192.60   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    192.60       PEAK FLOW RATE(CFS) =     559.06

****************************************************************************
  FLOW PROCESS FROM NODE   1312.00 TO NODE   1313.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  13.91
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.456
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  C        1.10      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D       31.80      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                     D        0.20      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D       17.60      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D        7.30      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   58.00      SUBAREA RUNOFF(CFS) =  169.93
  EFFECTIVE AREA(ACRES) =    250.60   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    250.60       PEAK FLOW RATE(CFS) =     729.00

****************************************************************************
  FLOW PROCESS FROM NODE   1313.00 TO NODE   1314.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    440.00  DOWNSTREAM(FEET) =    400.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1175.00   CHANNEL SLOPE =  0.0340
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    729.00
  FLOW VELOCITY(FEET/SEC.) =  13.37   FLOW DEPTH(FEET) =   4.97
  TRAVEL TIME(MIN.) =   1.47   Tc(MIN.) =  15.38
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1314.00 =  5009.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1313.00 TO NODE   1314.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  15.38
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.258
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        0.40      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                     B        6.50      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        1.30      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                  B        1.10      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        8.30      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        2.80      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   20.40      SUBAREA RUNOFF(CFS) =   54.80
  EFFECTIVE AREA(ACRES) =    271.00   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    271.00       PEAK FLOW RATE(CFS) =     738.95

****************************************************************************
  FLOW PROCESS FROM NODE   1313.00 TO NODE   1314.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  15.38
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.258
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  C        2.50      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        4.80      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        7.90      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   15.20      SUBAREA RUNOFF(CFS) =   41.71
  EFFECTIVE AREA(ACRES) =    286.20   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    286.20       PEAK FLOW RATE(CFS) =     780.66

****************************************************************************
  FLOW PROCESS FROM NODE   1314.00 TO NODE   1315.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    400.00  DOWNSTREAM(FEET) =    370.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1086.00   CHANNEL SLOPE =  0.0276
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    780.66
  FLOW VELOCITY(FEET/SEC.) =  12.58   FLOW DEPTH(FEET) =   5.43
  TRAVEL TIME(MIN.) =   1.44   Tc(MIN.) =  16.82
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1315.00 =  6095.00 FEET.
```

```
****************************************************************************
  FLOW PROCESS FROM NODE   1314.00 TO NODE   1315.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.82
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.096
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        4.80      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                     B       10.30      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        3.10      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        0.40      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B        1.10      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C       14.90      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   34.60      SUBAREA RUNOFF(CFS) =   87.75
  EFFECTIVE AREA(ACRES) =    320.80   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    320.80       PEAK FLOW RATE(CFS) =     826.90

****************************************************************************
  FLOW PROCESS FROM NODE   1314.00 TO NODE   1315.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.82
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.096
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     C        0.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        6.40      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        4.20      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D       27.90      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                     D        1.10      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        8.40      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   48.40      SUBAREA RUNOFF(CFS) =  125.67
  EFFECTIVE AREA(ACRES) =    369.20   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    369.20       PEAK FLOW RATE(CFS) =     952.58

****************************************************************************
  FLOW PROCESS FROM NODE   1315.00 TO NODE   1316.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    370.00  DOWNSTREAM(FEET) =    332.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1839.00   CHANNEL SLOPE =  0.0207
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    952.58
  FLOW VELOCITY(FEET/SEC.) =  11.85   FLOW DEPTH(FEET) =   6.12
  TRAVEL TIME(MIN.) =   2.59   Tc(MIN.) =  19.40
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1316.00 =  7934.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1315.00 TO NODE   1316.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.40
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.852
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        A        0.90      0.40      0.50    32
  COMMERCIAL                  A        0.10      0.40      0.10    32
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           A        8.90      0.40      1.00    49
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        1.50      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                     B        5.20      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        7.40      0.30      1.00    66
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.34
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =   24.00      SUBAREA RUNOFF(CFS) =   54.44
  EFFECTIVE AREA(ACRES) =    393.20   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    393.20       PEAK FLOW RATE(CFS) =     952.58
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1315.00 TO NODE   1316.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.40
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.852
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B       13.60      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B        1.10      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C       14.00      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C        0.50      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       30.00      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        4.10      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   63.30      SUBAREA RUNOFF(CFS) =  147.60
  EFFECTIVE AREA(ACRES) =    456.50   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    456.50       PEAK FLOW RATE(CFS) =    1073.57

****************************************************************************
  FLOW PROCESS FROM NODE   1315.00 TO NODE   1316.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.40
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.852
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        1.40      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.40      SUBAREA RUNOFF(CFS) =    3.34
  EFFECTIVE AREA(ACRES) =    457.90   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    457.90       PEAK FLOW RATE(CFS) =    1076.91

****************************************************************************
  FLOW PROCESS FROM NODE   1316.00 TO NODE   1317.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    332.00  DOWNSTREAM(FEET) =    324.00
```

```
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1155.00   CHANNEL SLOPE =  0.0069
  CHANNEL BASE(FEET) =    9.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   9.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1076.91
  FLOW VELOCITY(FEET/SEC.) =   8.11   FLOW DEPTH(FEET) =   7.87
  TRAVEL TIME(MIN.) =   2.37   Tc(MIN.) =  21.78
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1317.00 =  9089.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1316.00 TO NODE   1317.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  21.78
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.665
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    A        0.20      0.40      1.00    50
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A        6.10      0.40      1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A        1.20      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.20      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                    B        3.40      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        3.60      0.30      1.00    66
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.35
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   14.70      SUBAREA RUNOFF(CFS) =   30.61
  EFFECTIVE AREA(ACRES) =    472.60   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    472.60       PEAK FLOW RATE(CFS) =    1076.91
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1316.00 TO NODE   1317.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  21.78
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.665
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B        4.80      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.20      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       36.40      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                    C        5.70      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       31.30      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        1.30      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   79.70      SUBAREA RUNOFF(CFS) =  173.00
  EFFECTIVE AREA(ACRES) =    552.30   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    552.30       PEAK FLOW RATE(CFS) =    1203.23

****************************************************************************
  FLOW PROCESS FROM NODE   1316.00 TO NODE   1317.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  21.78
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.665
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C        5.40      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.00      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                    D        2.50      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        1.50      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D        0.50      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                 D        2.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   13.30      SUBAREA RUNOFF(CFS) =   29.26
  EFFECTIVE AREA(ACRES) =    565.60   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    565.60       PEAK FLOW RATE(CFS) =    1232.49

****************************************************************************
  FLOW PROCESS FROM NODE   1317.00 TO NODE   1318.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    324.00  DOWNSTREAM(FEET) =    275.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1680.00   CHANNEL SLOPE =  0.0292
  CHANNEL BASE(FEET) =    9.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   9.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1232.49
  FLOW VELOCITY(FEET/SEC.) =  14.30   FLOW DEPTH(FEET) =   5.82
  TRAVEL TIME(MIN.) =   1.96   Tc(MIN.) =  23.74
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1318.00 = 10769.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1317.00 TO NODE   1318.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  23.74
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.536
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        0.20      0.40      1.00    40
  COMMERCIAL                 A        0.20      0.40      0.10    32
  NATURAL FAIR COVER
  "WOODLAND"                 A        0.90      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.40      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                    B        4.90      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        8.20      0.30      1.00    66
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.31
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   14.80      SUBAREA RUNOFF(CFS) =   29.73
  EFFECTIVE AREA(ACRES) =    580.40   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    580.40       PEAK FLOW RATE(CFS) =    1232.49
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1317.00 TO NODE   1318.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  23.74
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.536
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 B        1.20      0.30      0.10    56
  NATURAL FAIR COVER
  "WOODLAND"                 B        2.90      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       59.80      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                    C       25.90      0.25      1.00    79
```

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  NATURAL FAIR COVER
  "OPEN BRUSH"                C       49.90      0.25      1.00    77
  COMMERCIAL                  C        0.40      0.25      0.10    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  140.10      SUBAREA RUNOFF(CFS) =  288.42
  EFFECTIVE AREA(ACRES) =    720.50   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    720.50       PEAK FLOW RATE(CFS) =    1484.95

****************************************************************************
  FLOW PROCESS FROM NODE   1317.00 TO NODE   1318.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  23.74
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.536
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  C       26.80      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D       16.80      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                     D       25.80      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D       66.60      0.20      1.00    83
  COMMERCIAL                  D        2.60      0.20      0.10    75
  PUBLIC PARK                 D        2.30      0.20      0.85    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  140.90      SUBAREA RUNOFF(CFS) =  295.49
  EFFECTIVE AREA(ACRES) =    861.40   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.99
  TOTAL AREA(ACRES) =    861.40       PEAK FLOW RATE(CFS) =    1780.45

****************************************************************************
  FLOW PROCESS FROM NODE   1317.00 TO NODE   1318.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  23.74
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.536
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        0.30      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                  D       14.80      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   15.10      SUBAREA RUNOFF(CFS) =   31.74
  EFFECTIVE AREA(ACRES) =    876.50   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.99
  TOTAL AREA(ACRES) =    876.50       PEAK FLOW RATE(CFS) =    1812.19

****************************************************************************
  FLOW PROCESS FROM NODE   1318.00 TO NODE   1318.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  23.74
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.536
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        A        0.80      0.40      0.50    32
  NATURAL FAIR COVER
  "GRASS"                     A        1.10      0.40      1.00    50
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                  A        0.90      0.40      1.00    44
  URBAN FAIR COVER
  "TURF"                      A       18.90      0.40      1.00    44
  NATURAL FAIR COVER
  "OPEN BRUSH"                A        0.50      0.40      1.00    46
  COMMERCIAL                  A        1.10      0.40      0.10    32
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.94
  SUBAREA AREA(ACRES) =   23.30      SUBAREA RUNOFF(CFS) =   45.29
  EFFECTIVE AREA(ACRES) =    899.80   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.99
  TOTAL AREA(ACRES) =    899.80       PEAK FLOW RATE(CFS) =    1857.48

****************************************************************************
  FLOW PROCESS FROM NODE   1318.00 TO NODE   1318.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  23.74
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.536
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           A        0.30      0.40      1.00    49
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       A        0.40      0.40      1.00    40
  NATURAL FAIR COVER
  "WOODLAND"                  A        6.20      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B       12.50      0.30      1.00    63
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        B        0.50      0.30      0.50    56
  NATURAL FAIR COVER
  "GRASS"                     B       31.00      0.30      1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.31
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   50.90      SUBAREA RUNOFF(CFS) =  101.87
  EFFECTIVE AREA(ACRES) =    950.70   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.99
  TOTAL AREA(ACRES) =    950.70       PEAK FLOW RATE(CFS) =    1959.35

****************************************************************************
  FLOW PROCESS FROM NODE   1318.00 TO NODE   1318.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  23.74
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.536
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                  B        2.30      0.30      1.00    65
  URBAN FAIR COVER
  "TURF"                      B       18.50      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        4.00      0.30      1.00    66
  COMMERCIAL                  B        4.40      0.30      0.10    56
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        0.30      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B        6.10      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.89
  SUBAREA AREA(ACRES) =   35.60      SUBAREA RUNOFF(CFS) =   72.71
  EFFECTIVE AREA(ACRES) =    986.30   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.99
  TOTAL AREA(ACRES) =    986.30       PEAK FLOW RATE(CFS) =    2032.06

****************************************************************************
  FLOW PROCESS FROM NODE   1318.00 TO NODE   1318.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  23.74
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.536
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C       41.20      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        C        0.40      0.25      0.50    69
  NATURAL FAIR COVER
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  "GRASS"                    C       39.20      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       46.40      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        7.30      0.25      1.00    79
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        4.00      0.25      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  138.50      SUBAREA RUNOFF(CFS) =  284.98
  EFFECTIVE AREA(ACRES) =   1124.80   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.99
  TOTAL AREA(ACRES) =   1124.80       PEAK FLOW RATE(CFS) =    2317.04

****************************************************************************
  FLOW PROCESS FROM NODE   1318.00 TO NODE   1318.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  23.74
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.536
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C        9.80      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        9.70      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        5.20      0.20      0.50    75
  NATURAL FAIR COVER
  "GRASS"                    D       68.00      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                     D        5.60      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       63.10      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  161.40      SUBAREA RUNOFF(CFS) =  339.34
  EFFECTIVE AREA(ACRES) =   1286.20   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.99
  TOTAL AREA(ACRES) =   1286.20       PEAK FLOW RATE(CFS) =    2656.38

****************************************************************************
  FLOW PROCESS FROM NODE   1318.00 TO NODE   1318.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  23.74
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.536
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 D        1.80      0.20      0.10    75
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D       14.90      0.20      1.00    84
  PUBLIC PARK                D        5.60      0.20      0.85    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        1.50      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D       24.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.95
  SUBAREA AREA(ACRES) =   48.20      SUBAREA RUNOFF(CFS) =  101.77
  EFFECTIVE AREA(ACRES) =   1334.40   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.99
  TOTAL AREA(ACRES) =   1334.40       PEAK FLOW RATE(CFS) =    2758.15

****************************************************************************
  FLOW PROCESS FROM NODE   1318.00 TO NODE   1319.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    275.00  DOWNSTREAM(FEET) =    260.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2012.00   CHANNEL SLOPE =  0.0075
  CHANNEL BASE(FEET) =   60.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.025   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2758.15
  FLOW VELOCITY(FEET/SEC.) =  11.20   FLOW DEPTH(FEET) =   3.66
  TRAVEL TIME(MIN.) =   2.99   Tc(MIN.) =  26.73
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1319.00 = 12781.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1318.00 TO NODE   1319.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  26.73
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.370
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A        8.60      0.40      0.50    32
  NATURAL POOR COVER
  "BARREN"                   A        0.10      0.40      1.00    78
  NATURAL FAIR COVER
  "GRASS"                    A        8.50      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        0.20      0.40      1.00    46
  COMMERCIAL                 A        0.90      0.40      0.10    32
  NATURAL FAIR COVER
  "WOODLAND"                 A        4.00      0.40      1.00    36
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.77
  SUBAREA AREA(ACRES) =   22.30      SUBAREA RUNOFF(CFS) =   41.38
  EFFECTIVE AREA(ACRES) =   1356.70   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =   1356.70       PEAK FLOW RATE(CFS) =    2758.15
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1318.00 TO NODE   1319.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  26.73
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.370
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B        3.90      0.30      0.50    56
  NATURAL FAIR COVER
  "GRASS"                    B       10.90      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        2.50      0.30      1.00    66
  COMMERCIAL                 B        0.30      0.30      0.10    56
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.20      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       11.60      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.92
  SUBAREA AREA(ACRES) =   29.40      SUBAREA RUNOFF(CFS) =   55.90
  EFFECTIVE AREA(ACRES) =   1386.10   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =   1386.10       PEAK FLOW RATE(CFS) =    2758.15
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1318.00 TO NODE   1319.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  26.73
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.370
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        3.90      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        5.90      0.25      1.00    77
  COMMERCIAL                 C        1.60      0.25      0.10    69
  NATURAL FAIR COVER
```

```
  "WOODLAND"                 C       10.10      0.25      1.00    73
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        9.90      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        4.20      0.20      1.00    93
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.82
  SUBAREA AREA(ACRES) =   35.60      SUBAREA RUNOFF(CFS) =   69.78
  EFFECTIVE AREA(ACRES) =   1421.70   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =   1421.70       PEAK FLOW RATE(CFS) =    2758.15
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1318.00 TO NODE   1319.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  26.73
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.370
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D        0.80      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       23.00      0.20      1.00    83
  PUBLIC PARK                D        2.10      0.20      0.85    75
  NATURAL GOOD COVER
  "MEADOWS"                  D        5.10      0.20      1.00    78
  NATURAL FAIR COVER
  "WOODLAND"                 D        5.20      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   36.20      SUBAREA RUNOFF(CFS) =   70.76
  EFFECTIVE AREA(ACRES) =   1457.90   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =   1457.90       PEAK FLOW RATE(CFS) =    2796.89

****************************************************************************
  FLOW PROCESS FROM NODE   1319.00 TO NODE   1336.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    260.00  DOWNSTREAM(FEET) =    255.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1882.00   CHANNEL SLOPE =  0.0027
  CHANNEL BASE(FEET) =   60.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.025   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2796.89
  FLOW VELOCITY(FEET/SEC.) =   8.02   FLOW DEPTH(FEET) =   4.98
  TRAVEL TIME(MIN.) =   3.91   Tc(MIN.) =  30.64
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1336.00 = 14663.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1319.00 TO NODE   1336.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  30.64
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.196
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.20      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                    B        3.00      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        7.60      0.30      1.00    66
  COMMERCIAL                 B        1.50      0.30      0.10    56
  NATURAL FAIR COVER
  "WOODLAND"                 B        5.70      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       23.80      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =   41.80      SUBAREA RUNOFF(CFS) =   72.75
  EFFECTIVE AREA(ACRES) =   1499.70   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =   1499.70       PEAK FLOW RATE(CFS) =    2796.89
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1319.00 TO NODE   1336.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  30.64
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.196
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        0.90      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       12.90      0.25      1.00    77
  COMMERCIAL                 C        1.70      0.25      0.10    69
  NATURAL FAIR COVER
  "WOODLAND"                 C       10.70      0.25      1.00    73
  NATURAL POOR COVER
  "BARREN"                   D        1.30      0.20      1.00    93
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       16.90      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =   44.40      SUBAREA RUNOFF(CFS) =   78.91
  EFFECTIVE AREA(ACRES) =   1544.10   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =   1544.10       PEAK FLOW RATE(CFS) =    2796.89
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1319.00 TO NODE   1336.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  30.64
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.196
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL GOOD COVER
  "MEADOWS"                  D        0.60      0.20      1.00    78
  NATURAL FAIR COVER
  "WOODLAND"                 D        6.50      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    7.10      SUBAREA RUNOFF(CFS) =   12.75
  EFFECTIVE AREA(ACRES) =   1551.20   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =   1551.20       PEAK FLOW RATE(CFS) =    2796.89
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1336.00 TO NODE   1336.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  30.64
  RAINFALL INTENSITY(INCH/HR) =   2.20
  AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24
  AREA-AVERAGED Ap =  0.98
  EFFECTIVE STREAM AREA(ACRES) =  1551.20
  TOTAL STREAM AREA(ACRES) =  1551.20
  PEAK FLOW RATE(CFS) AT CONFLUENCE =   2796.89

****************************************************************************
  FLOW PROCESS FROM NODE   1320.00 TO NODE   1321.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   320.00
  ELEVATION DATA: UPSTREAM(FEET) =    868.00  DOWNSTREAM(FEET) =    775.00
```

```
  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    9.082
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.432
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.80      0.25      1.00    77    9.08
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        0.10      0.25      1.00    81    9.08
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      3.39
  TOTAL AREA(ACRES) =      0.90   PEAK FLOW RATE(CFS) =      3.39

****************************************************************************
  FLOW PROCESS FROM NODE   1321.00 TO NODE   1322.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    775.00  DOWNSTREAM(FEET) =    750.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   141.00   CHANNEL SLOPE =  0.1773
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      3.39
  FLOW VELOCITY(FEET/SEC.) =   6.33   FLOW DEPTH(FEET) =   0.39
  TRAVEL TIME(MIN.) =   0.37   Tc(MIN.) =   9.45
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1322.00 =   461.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1321.00 TO NODE   1322.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.45
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.322
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.40      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        0.70      0.25      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.10      SUBAREA RUNOFF(CFS) =    4.03
  EFFECTIVE AREA(ACRES) =      2.00   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      2.00       PEAK FLOW RATE(CFS) =       7.33

****************************************************************************
  FLOW PROCESS FROM NODE   1322.00 TO NODE   1323.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    750.00  DOWNSTREAM(FEET) =    700.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   365.00   CHANNEL SLOPE =  0.1370
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      7.33
  FLOW VELOCITY(FEET/SEC.) =   7.13   FLOW DEPTH(FEET) =   0.63
  TRAVEL TIME(MIN.) =   0.85   Tc(MIN.) =  10.31
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1323.00 =   826.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1322.00 TO NODE   1323.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.31
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.099
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        0.80      0.25      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        0.80      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.60      SUBAREA RUNOFF(CFS) =    5.58
  EFFECTIVE AREA(ACRES) =      3.60   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      3.60       PEAK FLOW RATE(CFS) =      12.51

****************************************************************************
  FLOW PROCESS FROM NODE   1323.00 TO NODE   1324.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    700.00  DOWNSTREAM(FEET) =    680.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   265.00   CHANNEL SLOPE =  0.0755
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     12.51
  FLOW VELOCITY(FEET/SEC.) =   6.53   FLOW DEPTH(FEET) =   0.97
  TRAVEL TIME(MIN.) =   0.68   Tc(MIN.) =  10.98
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1324.00 =  1091.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1323.00 TO NODE   1324.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.98
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.963
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        1.10      0.25      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        1.30      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    2.40      SUBAREA RUNOFF(CFS) =    8.08
  EFFECTIVE AREA(ACRES) =      6.00   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      6.00       PEAK FLOW RATE(CFS) =      20.15

****************************************************************************
  FLOW PROCESS FROM NODE   1324.00 TO NODE   1325.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    680.00  DOWNSTREAM(FEET) =    670.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   111.00   CHANNEL SLOPE =  0.0901
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     20.15
  FLOW VELOCITY(FEET/SEC.) =   7.68   FLOW DEPTH(FEET) =   0.90
  TRAVEL TIME(MIN.) =   0.24   Tc(MIN.) =  11.22
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1325.00 =  1202.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1324.00 TO NODE   1325.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.22
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.915
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        0.90      0.25      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        1.10      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    2.00      SUBAREA RUNOFF(CFS) =    6.65
  EFFECTIVE AREA(ACRES) =      8.00   AREA-AVERAGED Fm(INCH/HR) =  0.23
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 AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =      8.00       PEAK FLOW RATE(CFS) =      26.53

****************************************************************************
 FLOW PROCESS FROM NODE   1325.00 TO NODE   1326.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    670.00  DOWNSTREAM(FEET) =    665.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =    82.00   CHANNEL SLOPE =  0.0610
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     26.53
 FLOW VELOCITY(FEET/SEC.) =   7.20   FLOW DEPTH(FEET) =   1.16
 TRAVEL TIME(MIN.) =   0.19   Tc(MIN.) =  11.41
 LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1326.00 =  1284.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1325.00 TO NODE   1326.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  11.41
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.877
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"                 C        0.60      0.25      1.00    77
 NATURAL FAIR COVER
 "CHAPARRAL,NARROWLEAF"       C        4.70      0.25      1.00    81
 NATURAL FAIR COVER
 "CHAPARRAL,NARROWLEAF"       D        2.90      0.20      1.00    86
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    8.20      SUBAREA RUNOFF(CFS) =   26.90
 EFFECTIVE AREA(ACRES) =     16.20   AREA-AVERAGED Fm(INCH/HR) =  0.23
 AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     16.20       PEAK FLOW RATE(CFS) =      53.16

****************************************************************************
 FLOW PROCESS FROM NODE   1326.00 TO NODE   1327.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    665.00  DOWNSTREAM(FEET) =    625.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   826.00   CHANNEL SLOPE =  0.0484
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     53.16
 FLOW VELOCITY(FEET/SEC.) =   7.93   FLOW DEPTH(FEET) =   1.77
 TRAVEL TIME(MIN.) =   1.73   Tc(MIN.) =  13.15
 LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1327.00 =  2110.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1326.00 TO NODE   1327.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  13.15
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.567
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"        C        1.10      0.25      1.00    75
 NATURAL FAIR COVER
 "OPEN BRUSH"                 C        2.00      0.25      1.00    77
 NATURAL FAIR COVER
 "CHAPARRAL,NARROWLEAF"       C        2.10      0.25      1.00    81
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"        D        0.70      0.20      1.00    81
 NATURAL FAIR COVER
 "OPEN BRUSH"                 D        1.30      0.20      1.00    83
 NATURAL FAIR COVER
 "CHAPARRAL,NARROWLEAF"       D        4.10      0.20      1.00    86
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   11.30      SUBAREA RUNOFF(CFS) =   34.00
 EFFECTIVE AREA(ACRES) =     27.50   AREA-AVERAGED Fm(INCH/HR) =  0.23
 AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     27.50       PEAK FLOW RATE(CFS) =      82.63

****************************************************************************
 FLOW PROCESS FROM NODE   1326.00 TO NODE   1327.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  13.15
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.567
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "WOODLAND"                   D        0.90      0.20      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    0.90      SUBAREA RUNOFF(CFS) =    2.73
 EFFECTIVE AREA(ACRES) =     28.40   AREA-AVERAGED Fm(INCH/HR) =  0.23
 AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     28.40       PEAK FLOW RATE(CFS) =      85.36

****************************************************************************
 FLOW PROCESS FROM NODE   1327.00 TO NODE   1328.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    625.00  DOWNSTREAM(FEET) =    595.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   794.00   CHANNEL SLOPE =  0.0378
 CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     85.36
 FLOW VELOCITY(FEET/SEC.) =   8.09   FLOW DEPTH(FEET) =   2.08
 TRAVEL TIME(MIN.) =   1.64   Tc(MIN.) =  14.79
 LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1328.00 =  2904.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1327.00 TO NODE   1328.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  14.79
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.331
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"        C        1.30      0.25      1.00    75
 NATURAL FAIR COVER
 "OPEN BRUSH"                 C        3.60      0.25      1.00    77
 NATURAL FAIR COVER
 "CHAPARRAL,NARROWLEAF"       C        5.40      0.25      1.00    81
 NATURAL FAIR COVER
 "WOODLAND"                   C        0.20      0.25      1.00    73
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"        D        1.30      0.20      1.00    81
 NATURAL FAIR COVER
 "OPEN BRUSH"                 D        1.00      0.20      1.00    83
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   12.80      SUBAREA RUNOFF(CFS) =   35.60
 EFFECTIVE AREA(ACRES) =     41.20   AREA-AVERAGED Fm(INCH/HR) =  0.23
 AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     41.20       PEAK FLOW RATE(CFS) =     114.93

****************************************************************************
 FLOW PROCESS FROM NODE   1327.00 TO NODE   1328.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  14.79
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.331
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
```

```
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        6.30      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D        1.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    7.70      SUBAREA RUNOFF(CFS) =   21.70
  EFFECTIVE AREA(ACRES) =     48.90   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     48.90       PEAK FLOW RATE(CFS) =     136.63

****************************************************************************
  FLOW PROCESS FROM NODE   1328.00 TO NODE   1329.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    595.00  DOWNSTREAM(FEET) =    553.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   746.00   CHANNEL SLOPE =  0.0563
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    136.63
  FLOW VELOCITY(FEET/SEC.) =  10.60   FLOW DEPTH(FEET) =   2.39
  TRAVEL TIME(MIN.) =   1.17   Tc(MIN.) =  15.96
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1329.00 =  3650.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1328.00 TO NODE   1329.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  15.96
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.193
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        0.10      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.90      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        4.40      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.20      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        7.10      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D        0.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   12.80      SUBAREA RUNOFF(CFS) =   34.22
  EFFECTIVE AREA(ACRES) =     61.70   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     61.70       PEAK FLOW RATE(CFS) =     164.77

****************************************************************************
  FLOW PROCESS FROM NODE   1329.00 TO NODE   1330.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    553.00  DOWNSTREAM(FEET) =    550.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    81.00   CHANNEL SLOPE =  0.0370
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    164.77
  FLOW VELOCITY(FEET/SEC.) =   9.51   FLOW DEPTH(FEET) =   2.92
  TRAVEL TIME(MIN.) =   0.14   Tc(MIN.) =  16.10
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1330.00 =  3731.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1329.00 TO NODE   1330.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.10
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.177
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
```

```
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        7.10      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       15.70      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        4.60      0.25      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.70      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        2.70      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        7.80      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   38.60      SUBAREA RUNOFF(CFS) =  102.18
  EFFECTIVE AREA(ACRES) =    100.30   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    100.30       PEAK FLOW RATE(CFS) =     266.07

****************************************************************************
  FLOW PROCESS FROM NODE   1330.00 TO NODE   1331.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    550.00  DOWNSTREAM(FEET) =    510.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1259.00   CHANNEL SLOPE =  0.0318
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    266.07
  FLOW VELOCITY(FEET/SEC.) =  10.12   FLOW DEPTH(FEET) =   3.50
  TRAVEL TIME(MIN.) =   2.07   Tc(MIN.) =  18.17
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1331.00 =  4990.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1330.00 TO NODE   1331.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.17
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.961
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        1.00      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        8.80      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        8.60      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C        1.30      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.60      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        4.70      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   26.00      SUBAREA RUNOFF(CFS) =   63.71
  EFFECTIVE AREA(ACRES) =    126.30   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    126.30       PEAK FLOW RATE(CFS) =     310.27

****************************************************************************
  FLOW PROCESS FROM NODE   1330.00 TO NODE   1331.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.17
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.961
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       11.30      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D        4.60      0.20      1.00    79
```

```
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   15.90      SUBAREA RUNOFF(CFS) =   39.51
  EFFECTIVE AREA(ACRES) =    142.20   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    142.20       PEAK FLOW RATE(CFS) =     349.78

****************************************************************************
  FLOW PROCESS FROM NODE   1331.00 TO NODE   1332.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    510.00  DOWNSTREAM(FEET) =    473.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1191.00   CHANNEL SLOPE =  0.0311
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    349.78
  FLOW VELOCITY(FEET/SEC.) =  10.73   FLOW DEPTH(FEET) =   3.73
  TRAVEL TIME(MIN.) =   1.85   Tc(MIN.) =  20.02
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1332.00 =  6181.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1331.00 TO NODE   1332.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  20.02
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.798
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       15.30      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                    C        0.60      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       41.80      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       10.00      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.50      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        3.70      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   71.90      SUBAREA RUNOFF(CFS) =  165.05
  EFFECTIVE AREA(ACRES) =    214.10   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    214.10       PEAK FLOW RATE(CFS) =     494.03

****************************************************************************
  FLOW PROCESS FROM NODE   1331.00 TO NODE   1332.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  20.02
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.798
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       10.30      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       17.30      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D        2.50      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   30.10      SUBAREA RUNOFF(CFS) =   70.38
  EFFECTIVE AREA(ACRES) =    244.20   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    244.20       PEAK FLOW RATE(CFS) =     564.41

****************************************************************************
  FLOW PROCESS FROM NODE   1332.00 TO NODE   1333.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    473.00  DOWNSTREAM(FEET) =    395.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2125.00   CHANNEL SLOPE =  0.0367
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    564.41
  FLOW VELOCITY(FEET/SEC.) =  12.89   FLOW DEPTH(FEET) =   4.57
  TRAVEL TIME(MIN.) =   2.75   Tc(MIN.) =  22.77
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1333.00 =  8306.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1332.00 TO NODE   1333.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  22.77
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.594
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        2.90      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                    C       17.50      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       22.50      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C       15.40      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C        1.40      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        6.80      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   66.50      SUBAREA RUNOFF(CFS) =  140.58
  EFFECTIVE AREA(ACRES) =    310.70   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    310.70       PEAK FLOW RATE(CFS) =     660.06

****************************************************************************
  FLOW PROCESS FROM NODE   1332.00 TO NODE   1333.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  22.77
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.594
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D        3.50      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        4.10      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D       10.00      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D        4.00      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   21.60      SUBAREA RUNOFF(CFS) =   46.53
  EFFECTIVE AREA(ACRES) =    332.30   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    332.30       PEAK FLOW RATE(CFS) =     706.59

****************************************************************************
  FLOW PROCESS FROM NODE   1333.00 TO NODE   1334.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    395.00  DOWNSTREAM(FEET) =    350.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1657.00   CHANNEL SLOPE =  0.0272
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    706.59
  FLOW VELOCITY(FEET/SEC.) =  12.18   FLOW DEPTH(FEET) =   5.19
  TRAVEL TIME(MIN.) =   2.27   Tc(MIN.) =  25.04
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1334.00 =  9963.00 FEET.
```

```
****************************************************************************
  FLOW PROCESS FROM NODE   1333.00 TO NODE   1334.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  25.04
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.458
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       A        1.50      0.40      1.00    40
  NATURAL FAIR COVER
  "GRASS"                     A        0.70      0.40      1.00    50
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        5.70      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C       12.90      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        2.20      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      C        1.50      0.25      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   24.50      SUBAREA RUNOFF(CFS) =   48.39
  EFFECTIVE AREA(ACRES) =    356.80   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    356.80       PEAK FLOW RATE(CFS) =     714.40

****************************************************************************
  FLOW PROCESS FROM NODE   1333.00 TO NODE   1334.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  25.04
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.458
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  C        4.40      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        2.00      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                     D       12.50      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        1.10      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      D        0.50      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   20.50      SUBAREA RUNOFF(CFS) =   41.46
  EFFECTIVE AREA(ACRES) =    377.30   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    377.30       PEAK FLOW RATE(CFS) =     755.86

****************************************************************************
  FLOW PROCESS FROM NODE   1334.00 TO NODE   1335.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    350.00  DOWNSTREAM(FEET) =    325.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1739.00   CHANNEL SLOPE =  0.0144
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    755.86
  FLOW VELOCITY(FEET/SEC.) =   9.76   FLOW DEPTH(FEET) =   5.97
  TRAVEL TIME(MIN.) =   2.97   Tc(MIN.) =  28.01
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1335.00 = 11702.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1334.00 TO NODE   1335.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  28.01
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.308
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     A        1.80      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"                A        1.60      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                  A        1.60      0.40      1.00    36
  NATURAL FAIR COVER
  "GRASS"                     B        0.20      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                  B        1.00      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        1.00      0.30      1.00    66
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.37
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    7.20      SUBAREA RUNOFF(CFS) =   12.56
  EFFECTIVE AREA(ACRES) =    384.50   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    384.50       PEAK FLOW RATE(CFS) =     755.86
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1334.00 TO NODE   1335.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  28.01
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.308
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.20      0.30      1.00    60
  NATURAL FAIR COVER
  "GRASS"                     C       15.40      0.25      1.00    79
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                  C        0.20      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        6.70      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        2.10      0.25      1.00    73
  NATURAL FAIR COVER
  "GRASS"                     D       27.40      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   52.00      SUBAREA RUNOFF(CFS) =   97.52
  EFFECTIVE AREA(ACRES) =    436.50   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    436.50       PEAK FLOW RATE(CFS) =     814.89

****************************************************************************
  FLOW PROCESS FROM NODE   1334.00 TO NODE   1335.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  28.01
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.308
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        2.80      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    2.80      SUBAREA RUNOFF(CFS) =    5.31
  EFFECTIVE AREA(ACRES) =    439.30   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    439.30       PEAK FLOW RATE(CFS) =     820.20

****************************************************************************
  FLOW PROCESS FROM NODE   1335.00 TO NODE   1336.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    325.00  DOWNSTREAM(FEET) =    255.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2829.00   CHANNEL SLOPE =  0.0247
```

```
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    820.20
  FLOW VELOCITY(FEET/SEC.) =  12.19   FLOW DEPTH(FEET) =   5.42
  TRAVEL TIME(MIN.) =   3.87   Tc(MIN.) =  31.88
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1336.00 = 14531.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1335.00 TO NODE   1336.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  31.88
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.149
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       A        2.30      0.40      1.00    40
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        A        8.30      0.40      0.50    32
  NATURAL POOR COVER
  "BARREN"                    A        0.80      0.40      1.00    78
  NATURAL FAIR COVER
  "GRASS"                     A       11.50      0.40      1.00    50
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           A       22.90      0.40      1.00    49
  NATURAL FAIR COVER
  "OPEN BRUSH"                A        0.70      0.40      1.00    46
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.91
  SUBAREA AREA(ACRES) =   46.50      SUBAREA RUNOFF(CFS) =   74.67
  EFFECTIVE AREA(ACRES) =    485.80   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.99
  TOTAL AREA(ACRES) =    485.80       PEAK FLOW RATE(CFS) =     832.01

****************************************************************************
  FLOW PROCESS FROM NODE   1335.00 TO NODE   1336.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  31.88
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.149
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  A        1.30      0.40      1.00    36
  NATURAL FAIR COVER
  "GRASS"                     B        0.70      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                  B       16.70      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.40      0.30      1.00    66
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.90      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        C        0.20      0.25      0.50    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   20.20      SUBAREA RUNOFF(CFS) =   33.56
  EFFECTIVE AREA(ACRES) =    506.00   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.99
  TOTAL AREA(ACRES) =    506.00       PEAK FLOW RATE(CFS) =     865.58

****************************************************************************
  FLOW PROCESS FROM NODE   1335.00 TO NODE   1336.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  31.88
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.149
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     C        4.40      0.25      1.00    79
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                  C        3.40      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        2.70      0.25      1.00    77
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D        0.90      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                    D        7.90      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                     D       10.80      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   30.10      SUBAREA RUNOFF(CFS) =   52.40
  EFFECTIVE AREA(ACRES) =    536.10   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.99
  TOTAL AREA(ACRES) =    536.10       PEAK FLOW RATE(CFS) =     917.97

****************************************************************************
  FLOW PROCESS FROM NODE   1335.00 TO NODE   1336.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  31.88
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.149
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                  D        3.00      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        4.40      0.20      1.00    83
  NATURAL GOOD COVER
  "MEADOWS"                   D        4.20      0.20      1.00    78
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        2.20      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.70      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   14.50      SUBAREA RUNOFF(CFS) =   25.43
  EFFECTIVE AREA(ACRES) =    550.60   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.99
  TOTAL AREA(ACRES) =    550.60       PEAK FLOW RATE(CFS) =     943.40

****************************************************************************
  FLOW PROCESS FROM NODE   1336.00 TO NODE   1336.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  31.88
  RAINFALL INTENSITY(INCH/HR) =   2.15
  AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.25
  AREA-AVERAGED Ap =  0.99
  EFFECTIVE STREAM AREA(ACRES) =   550.60
  TOTAL STREAM AREA(ACRES) =   550.60
  PEAK FLOW RATE(CFS) AT CONFLUENCE =    943.40

  ** CONFLUENCE DATA **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1   2796.89  30.64    2.196  0.24( 0.24) 0.98  1551.2    1300.00
      2    943.40  31.88    2.149  0.25( 0.24) 0.99   550.6    1320.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1   3726.07  30.64    2.196  0.24( 0.24) 0.98  2080.4    1300.00
      2   3673.08  31.88    2.149  0.24( 0.24) 0.98  2101.8    1320.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =   3726.07    Tc(MIN.) =    30.64
  EFFECTIVE AREA(ACRES) =  2080.42   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =   2101.80
```

```
 LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1336.00 = 14663.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1336.00 TO NODE   1354.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    255.00  DOWNSTREAM(FEET) =    240.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1844.00   CHANNEL SLOPE =  0.0081
 CHANNEL BASE(FEET) =   60.00   "Z" FACTOR =   2.000
 MANNING'S FACTOR = 0.025   MAXIMUM DEPTH(FEET) =  15.00
 CHANNEL FLOW THRU SUBAREA(CFS) =   3726.07
 FLOW VELOCITY(FEET/SEC.) =  12.79   FLOW DEPTH(FEET) =   4.25
 TRAVEL TIME(MIN.) =   2.40   Tc(MIN.) =  33.04
 LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1354.00 = 16507.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1336.00 TO NODE   1354.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  33.04
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.104
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"       A        3.30      0.40      0.50    32
 NATURAL FAIR COVER
 "GRASS"                    A        6.90      0.40      1.00    50
 URBAN FAIR COVER
 "TURF"                     A        0.80      0.40      1.00    44
 NATURAL FAIR COVER
 "OPEN BRUSH"               A        0.80      0.40      1.00    46
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          A       24.30      0.40      1.00    49
 NATURAL FAIR COVER
 "WOODLAND"                 A        2.90      0.40      1.00    36
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.96
 SUBAREA AREA(ACRES) =   39.00      SUBAREA RUNOFF(CFS) =   60.42
 EFFECTIVE AREA(ACRES) =   2119.42   AREA-AVERAGED Fm(INCH/HR) =  0.24
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.98
 TOTAL AREA(ACRES) =   2140.80       PEAK FLOW RATE(CFS) =    3726.07
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE   1336.00 TO NODE   1354.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  33.04
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.104
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      B        5.80      0.30      1.00    63
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"       B        3.50      0.30      0.50    56
 NATURAL POOR COVER
 "BARREN"                   B        1.90      0.30      1.00    86
 NATURAL FAIR COVER
 "GRASS"                    B       23.50      0.30      1.00    69
 AGRICULTURAL FAIR COVER
 "ORCHARDS"                 B       12.50      0.30      1.00    65
 URBAN FAIR COVER
 "TURF"                     B        0.70      0.30      1.00    65
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.96
 SUBAREA AREA(ACRES) =   47.90      SUBAREA RUNOFF(CFS) =   78.26
 EFFECTIVE AREA(ACRES) =   2167.32   AREA-AVERAGED Fm(INCH/HR) =  0.24
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.98
 TOTAL AREA(ACRES) =   2188.70       PEAK FLOW RATE(CFS) =    3726.07
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE   1336.00 TO NODE   1354.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  33.04
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.104
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"               B       30.30      0.30      1.00    66
 COMMERCIAL                 B        1.90      0.30      0.10    56
 PUBLIC PARK                B        1.30      0.30      0.85    56
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          B        0.70      0.30      1.00    69
 NATURAL FAIR COVER
 "WOODLAND"                 B       39.60      0.30      1.00    60
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      C       70.40      0.25      1.00    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
 SUBAREA AREA(ACRES) =  144.20      SUBAREA RUNOFF(CFS) =  237.85
 EFFECTIVE AREA(ACRES) =   2311.52   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.98
 TOTAL AREA(ACRES) =   2332.90       PEAK FLOW RATE(CFS) =    3867.16

****************************************************************************
 FLOW PROCESS FROM NODE   1336.00 TO NODE   1354.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  33.04
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.104
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"       C        3.20      0.25      0.50    69
 NATURAL FAIR COVER
 "GRASS"                    C       22.10      0.25      1.00    79
 AGRICULTURAL FAIR COVER
 "ORCHARDS"                 C        2.90      0.25      1.00    77
 URBAN FAIR COVER
 "TURF"                     C        0.70      0.25      1.00    77
 NATURAL FAIR COVER
 "OPEN BRUSH"               C      119.10      0.25      1.00    77
 PUBLIC PARK                C        0.80      0.25      0.85    69
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
 SUBAREA AREA(ACRES) =  148.80      SUBAREA RUNOFF(CFS) =  248.72
 EFFECTIVE AREA(ACRES) =   2460.32   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.98
 TOTAL AREA(ACRES) =   2481.70       PEAK FLOW RATE(CFS) =    4115.89

****************************************************************************
 FLOW PROCESS FROM NODE   1336.00 TO NODE   1354.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  33.04
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.104
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          C        0.40      0.25      1.00    79
 NATURAL FAIR COVER
 "WOODLAND"                 C      114.30      0.25      1.00    73
 PUBLIC PARK                D        0.10      0.20      0.85    75
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      D        1.10      0.20      1.00    81
 NATURAL POOR COVER
 "BARREN"                   D        0.10      0.20      1.00    93
 NATURAL FAIR COVER
 "GRASS"                    D       13.20      0.20      1.00    84
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =  129.20      SUBAREA RUNOFF(CFS) =  216.28
 EFFECTIVE AREA(ACRES) =   2589.52   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.98
```

```
  TOTAL AREA(ACRES) =   2610.90       PEAK FLOW RATE(CFS) =    4332.17

****************************************************************************
  FLOW PROCESS FROM NODE   1336.00 TO NODE   1354.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  33.04
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.104
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                  D        7.20      0.20      1.00    82
  URBAN FAIR COVER
  "TURF"                      D        3.30      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        6.40      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        1.60      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                  D       13.90      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   32.40      SUBAREA RUNOFF(CFS) =   55.53
  EFFECTIVE AREA(ACRES) =   2621.92   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =   2643.30       PEAK FLOW RATE(CFS) =    4387.70

****************************************************************************
  FLOW PROCESS FROM NODE   1354.00 TO NODE   1354.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  33.04
  RAINFALL INTENSITY(INCH/HR) =   2.10
  AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.25
  AREA-AVERAGED Ap =  0.98
  EFFECTIVE STREAM AREA(ACRES) =  2621.92
  TOTAL STREAM AREA(ACRES) =  2643.30
  PEAK FLOW RATE(CFS) AT CONFLUENCE =   4387.70

****************************************************************************
  FLOW PROCESS FROM NODE   1340.00 TO NODE   1341.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   330.00
  ELEVATION DATA: UPSTREAM(FEET) =   1075.00  DOWNSTREAM(FEET) =    985.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    9.312
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.364
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS   Tc
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "GRASS"                     C        0.20      0.25      1.00    79    9.31
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.30      0.25      1.00    77    9.31
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      1.85
  TOTAL AREA(ACRES) =      0.50   PEAK FLOW RATE(CFS) =      1.85

****************************************************************************
  FLOW PROCESS FROM NODE   1341.00 TO NODE   1342.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    985.00  DOWNSTREAM(FEET) =    950.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   148.00   CHANNEL SLOPE =  0.2365
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      1.85
  FLOW VELOCITY(FEET/SEC.) =   5.79   FLOW DEPTH(FEET) =   0.25
  TRAVEL TIME(MIN.) =   0.43   Tc(MIN.) =   9.74
  LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1342.00 =   478.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1341.00 TO NODE   1342.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.74
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.238
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     C        0.20      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.20      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.40      SUBAREA RUNOFF(CFS) =    1.44
  EFFECTIVE AREA(ACRES) =      0.90   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      0.90       PEAK FLOW RATE(CFS) =       3.23

****************************************************************************
  FLOW PROCESS FROM NODE   1342.00 TO NODE   1343.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    950.00  DOWNSTREAM(FEET) =    915.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   210.00   CHANNEL SLOPE =  0.1667
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      3.23
  FLOW VELOCITY(FEET/SEC.) =   6.07   FLOW DEPTH(FEET) =   0.38
  TRAVEL TIME(MIN.) =   0.58   Tc(MIN.) =  10.31
  LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1343.00 =   688.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1342.00 TO NODE   1343.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.31
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.097
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     C        1.00      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.00      SUBAREA RUNOFF(CFS) =    3.46
  EFFECTIVE AREA(ACRES) =      1.90   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.90       PEAK FLOW RATE(CFS) =       6.58

****************************************************************************
  FLOW PROCESS FROM NODE   1343.00 TO NODE   1344.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    915.00  DOWNSTREAM(FEET) =    884.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   310.00   CHANNEL SLOPE =  0.1000
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      6.58
  FLOW VELOCITY(FEET/SEC.) =   6.12   FLOW DEPTH(FEET) =   0.65
  TRAVEL TIME(MIN.) =   0.84   Tc(MIN.) =  11.16
  LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1344.00 =   998.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1343.00 TO NODE   1344.00 IS CODE =  81
----------------------------------------------------------------------------
```

```
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  11.16
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.928
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                   C        2.50      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"              C        0.70      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.20      SUBAREA RUNOFF(CFS) =   10.59
  EFFECTIVE AREA(ACRES) =      5.10   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      5.10       PEAK FLOW RATE(CFS) =      16.88

********************************************************************************
  FLOW PROCESS FROM NODE   1344.00 TO NODE   1345.00 IS CODE =  51
--------------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    884.00  DOWNSTREAM(FEET) =    875.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   387.00   CHANNEL SLOPE =  0.0233
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     16.88
  FLOW VELOCITY(FEET/SEC.) =   4.47   FLOW DEPTH(FEET) =   1.19
  TRAVEL TIME(MIN.) =   1.44   Tc(MIN.) =  12.60
  LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1345.00 =  1385.00 FEET.

********************************************************************************
  FLOW PROCESS FROM NODE   1344.00 TO NODE   1345.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  12.60
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.645
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                   C        5.20      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"              C        1.60      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    6.80      SUBAREA RUNOFF(CFS) =   20.78
  EFFECTIVE AREA(ACRES) =     11.90   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     11.90       PEAK FLOW RATE(CFS) =      36.36

********************************************************************************
  FLOW PROCESS FROM NODE   1345.00 TO NODE   1346.00 IS CODE =  51
--------------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    875.00  DOWNSTREAM(FEET) =    845.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   497.00   CHANNEL SLOPE =  0.0604
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     36.36
  FLOW VELOCITY(FEET/SEC.) =   7.81   FLOW DEPTH(FEET) =   1.38
  TRAVEL TIME(MIN.) =   1.06   Tc(MIN.) =  13.66
  LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1346.00 =  1882.00 FEET.

********************************************************************************
  FLOW PROCESS FROM NODE   1345.00 TO NODE   1346.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  13.66
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.493
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                   B        0.90      0.30      1.00    69
  NATURAL FAIR COVER
  "GRASS"                   C        9.30      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"              C        0.10      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   10.30      SUBAREA RUNOFF(CFS) =   30.02
  EFFECTIVE AREA(ACRES) =     22.20   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     22.20       PEAK FLOW RATE(CFS) =      64.75

********************************************************************************
  FLOW PROCESS FROM NODE   1346.00 TO NODE   1347.00 IS CODE =  51
--------------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    845.00  DOWNSTREAM(FEET) =    700.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   667.00   CHANNEL SLOPE =  0.2174
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     64.75
  FLOW VELOCITY(FEET/SEC.) =  14.58   FLOW DEPTH(FEET) =   1.33
  TRAVEL TIME(MIN.) =   0.76   Tc(MIN.) =  14.42
  LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1347.00 =  2549.00 FEET.

********************************************************************************
  FLOW PROCESS FROM NODE   1346.00 TO NODE   1347.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  14.42
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.383
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                   B        0.60      0.30      1.00    69
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"     C        0.70      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                   C        6.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"              C        1.30      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                C        0.80      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    9.80      SUBAREA RUNOFF(CFS) =   27.60
  EFFECTIVE AREA(ACRES) =     32.00   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     32.00       PEAK FLOW RATE(CFS) =      90.16

********************************************************************************
  FLOW PROCESS FROM NODE   1347.00 TO NODE   1348.00 IS CODE =  51
--------------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    700.00  DOWNSTREAM(FEET) =    625.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   450.00   CHANNEL SLOPE =  0.1667
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     90.16
  FLOW VELOCITY(FEET/SEC.) =  14.38   FLOW DEPTH(FEET) =   1.70
  TRAVEL TIME(MIN.) =   0.52   Tc(MIN.) =  14.95
  LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1348.00 =  2999.00 FEET.

********************************************************************************
  FLOW PROCESS FROM NODE   1347.00 TO NODE   1348.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  14.95
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.308
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
```

```
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B        0.10      0.30       1.00    69
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        2.60      0.25       1.00    75
  NATURAL FAIR COVER
  "GRASS"                    C       11.30      0.25       1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        6.00      0.25       1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.50      0.25       1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   20.50      SUBAREA RUNOFF(CFS) =   56.41
  EFFECTIVE AREA(ACRES) =     52.50   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     52.50       PEAK FLOW RATE(CFS) =     144.40

****************************************************************************
  FLOW PROCESS FROM NODE   1348.00 TO NODE   1349.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    625.00  DOWNSTREAM(FEET) =    465.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1511.00   CHANNEL SLOPE =  0.1059
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    144.40
  FLOW VELOCITY(FEET/SEC.) =  13.60   FLOW DEPTH(FEET) =   2.09
  TRAVEL TIME(MIN.) =   1.85   Tc(MIN.) =  16.80
  LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1349.00 =  4510.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1348.00 TO NODE   1349.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.80
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.099
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   B        0.10      0.30       1.00    86
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.00      0.30       1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.40      0.30       1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        2.10      0.25       1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        1.00      0.25       1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C        8.10      0.25       1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   12.70      SUBAREA RUNOFF(CFS) =   32.49
  EFFECTIVE AREA(ACRES) =     65.20   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     65.20       PEAK FLOW RATE(CFS) =     167.01

****************************************************************************
  FLOW PROCESS FROM NODE   1348.00 TO NODE   1349.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.80
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.099
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       15.20      0.25       1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        6.70      0.25       1.00    73
  NATURAL POOR COVER
  "BARREN"                   D        1.10      0.20       1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D        3.50      0.20       1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        1.70      0.20       1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D        3.60      0.20       1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   31.80      SUBAREA RUNOFF(CFS) =   81.97
  EFFECTIVE AREA(ACRES) =     97.00   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     97.00       PEAK FLOW RATE(CFS) =     248.98

****************************************************************************
  FLOW PROCESS FROM NODE   1349.00 TO NODE   1350.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    465.00  DOWNSTREAM(FEET) =    405.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1128.00   CHANNEL SLOPE =  0.0532
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    248.98
  FLOW VELOCITY(FEET/SEC.) =  12.06   FLOW DEPTH(FEET) =   2.96
  TRAVEL TIME(MIN.) =   1.56   Tc(MIN.) =  18.36
  LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1350.00 =  5638.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1349.00 TO NODE   1350.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.36
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.944
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        1.80      0.30       1.00    63
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B        3.80      0.30       0.50    56
  NATURAL POOR COVER
  "BARREN"                   B        1.10      0.30       1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B        3.20      0.30       1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.50      0.30       1.00    66
  PUBLIC PARK                B        0.40      0.30       0.85    56
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.83
  SUBAREA AREA(ACRES) =   11.80      SUBAREA RUNOFF(CFS) =   28.61
  EFFECTIVE AREA(ACRES) =    108.80   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =    108.80       PEAK FLOW RATE(CFS) =     264.15

****************************************************************************
  FLOW PROCESS FROM NODE   1349.00 TO NODE   1350.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.36
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.944
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 B        3.80      0.30       1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        0.70      0.25       1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        3.60      0.25       0.50    69
  NATURAL POOR COVER
  "BARREN"                   C        1.60      0.25       1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C        5.10      0.25       1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       15.90      0.25       1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
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  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.94
  SUBAREA AREA(ACRES) =   30.70      SUBAREA RUNOFF(CFS) =   74.68
  EFFECTIVE AREA(ACRES) =    139.50   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =    139.50       PEAK FLOW RATE(CFS) =     338.83

****************************************************************************
  FLOW PROCESS FROM NODE   1349.00 TO NODE   1350.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.36
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.944
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C       11.30      0.25      1.00    73
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.40      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        0.20      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D        0.60      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.50      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D        0.50      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   13.50      SUBAREA RUNOFF(CFS) =   32.87
  EFFECTIVE AREA(ACRES) =    153.00   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =    153.00       PEAK FLOW RATE(CFS) =     371.70

****************************************************************************
  FLOW PROCESS FROM NODE   1350.00 TO NODE   1351.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    405.00  DOWNSTREAM(FEET) =    360.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1805.00   CHANNEL SLOPE =  0.0249
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    371.70
  FLOW VELOCITY(FEET/SEC.) =  10.04   FLOW DEPTH(FEET) =   4.08
  TRAVEL TIME(MIN.) =   3.00   Tc(MIN.) =  21.36
  LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1351.00 =  7443.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1350.00 TO NODE   1351.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  21.36
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.697
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B        3.80      0.30      0.50    56
  NATURAL POOR COVER
  "BARREN"                   B        5.10      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B        1.10      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        4.40      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        6.60      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        3.80      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.92
  SUBAREA AREA(ACRES) =   24.80      SUBAREA RUNOFF(CFS) =   54.19
  EFFECTIVE AREA(ACRES) =    177.80   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =    177.80       PEAK FLOW RATE(CFS) =     391.81

****************************************************************************
  FLOW PROCESS FROM NODE   1350.00 TO NODE   1351.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  21.36
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.697
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        2.70      0.25      0.50    69
  NATURAL POOR COVER
  "BARREN"                   C       12.50      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C        1.10      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       11.90      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        5.20      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.50      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.96
  SUBAREA AREA(ACRES) =   33.90      SUBAREA RUNOFF(CFS) =   74.98
  EFFECTIVE AREA(ACRES) =    211.70   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =    211.70       PEAK FLOW RATE(CFS) =     466.80

****************************************************************************
  FLOW PROCESS FROM NODE   1350.00 TO NODE   1351.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  21.36
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.697
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        1.40      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                   D        6.30      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D        0.40      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        3.80      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D        3.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.95
  SUBAREA AREA(ACRES) =   15.00      SUBAREA RUNOFF(CFS) =   33.84
  EFFECTIVE AREA(ACRES) =    226.70   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =    226.70       PEAK FLOW RATE(CFS) =     500.63

****************************************************************************
  FLOW PROCESS FROM NODE   1351.00 TO NODE   1352.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    360.00  DOWNSTREAM(FEET) =    325.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1429.00   CHANNEL SLOPE =  0.0245
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    500.63
  FLOW VELOCITY(FEET/SEC.) =  10.76   FLOW DEPTH(FEET) =   4.76
  TRAVEL TIME(MIN.) =   2.21   Tc(MIN.) =  23.57
  LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1352.00 =  8872.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1351.00 TO NODE   1352.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  23.57
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.546
  SUBAREA LOSS RATE DATA(AMC  II):
```

```
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                    B        1.70      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                     B        4.50      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        4.70      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                  B        5.10      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        3.40      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C        1.30      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   20.70      SUBAREA RUNOFF(CFS) =   42.05
  EFFECTIVE AREA(ACRES) =    247.40   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =    247.40       PEAK FLOW RATE(CFS) =     511.86

****************************************************************************
  FLOW PROCESS FROM NODE   1351.00 TO NODE   1352.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  23.57
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.546
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       12.40      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        3.20      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        0.40      0.20      1.00    81
  NATURAL POOR COVER
  "BARREN"                    D        0.30      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                     D        1.50      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.20      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   18.00      SUBAREA RUNOFF(CFS) =   37.30
  EFFECTIVE AREA(ACRES) =    265.40   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =    265.40       PEAK FLOW RATE(CFS) =     549.16

****************************************************************************
  FLOW PROCESS FROM NODE   1351.00 TO NODE   1352.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  23.57
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.546
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  D        3.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.10      SUBAREA RUNOFF(CFS) =    6.55
  EFFECTIVE AREA(ACRES) =    268.50   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =    268.50       PEAK FLOW RATE(CFS) =     555.71

****************************************************************************
  FLOW PROCESS FROM NODE   1352.00 TO NODE   1353.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    325.00  DOWNSTREAM(FEET) =    290.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1774.00   CHANNEL SLOPE =  0.0197
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    555.71
  FLOW VELOCITY(FEET/SEC.) =  10.17   FLOW DEPTH(FEET) =   4.98
  TRAVEL TIME(MIN.) =   2.91   Tc(MIN.) =  26.47
  LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1353.00 = 10646.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1352.00 TO NODE   1353.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  26.47
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.383
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     B        7.50      0.30      1.00    69
  COMMERCIAL                  B        0.10      0.30      0.10    56
  PUBLIC PARK                 B        0.20      0.30      0.85    56
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        3.00      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                  B        3.90      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        1.60      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   16.30      SUBAREA RUNOFF(CFS) =   30.67
  EFFECTIVE AREA(ACRES) =    284.80   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =    284.80       PEAK FLOW RATE(CFS) =     555.71
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1352.00 TO NODE   1353.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  26.47
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.383
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     C        2.20      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       12.30      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C       11.90      0.25      1.00    73
  NATURAL FAIR COVER
  "GRASS"                     D        4.50      0.20      1.00    84
  COMMERCIAL                  D        0.20      0.20      0.10    75
  PUBLIC PARK                 D        1.10      0.20      0.85    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   32.20      SUBAREA RUNOFF(CFS) =   62.15
  EFFECTIVE AREA(ACRES) =    317.00   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =    317.00       PEAK FLOW RATE(CFS) =     609.23

****************************************************************************
  FLOW PROCESS FROM NODE   1352.00 TO NODE   1353.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  26.47
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.383
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        1.00      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D        2.80      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.80      SUBAREA RUNOFF(CFS) =    7.47
  EFFECTIVE AREA(ACRES) =    320.80   AREA-AVERAGED Fm(INCH/HR) =  0.25
```

```
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =    320.80       PEAK FLOW RATE(CFS) =     616.69

****************************************************************************
  FLOW PROCESS FROM NODE   1353.00 TO NODE   1354.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    290.00  DOWNSTREAM(FEET) =    240.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   681.00   CHANNEL SLOPE =  0.0734
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    616.69
  FLOW VELOCITY(FEET/SEC.) =  17.01   FLOW DEPTH(FEET) =   3.73
  TRAVEL TIME(MIN.) =   0.67   Tc(MIN.) =  27.14
  LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1354.00 = 11327.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1353.00 TO NODE   1354.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  27.14
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.349
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                A        0.10      0.40      1.00    46
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.10      0.30      1.00    66
  NATURAL FAIR COVER
  "GRASS"                     C        0.50      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.50      0.25      1.00    77
  COMMERCIAL                  C        0.60      0.25      0.10    69
  NATURAL FAIR COVER
  "WOODLAND"                  C        1.50      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.84
  SUBAREA AREA(ACRES) =    3.30      SUBAREA RUNOFF(CFS) =    6.34
  EFFECTIVE AREA(ACRES) =    324.10   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =    324.10       PEAK FLOW RATE(CFS) =     616.69
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1353.00 TO NODE   1354.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  27.14
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.349
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  PUBLIC PARK                 D        0.10      0.20      0.85    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        2.10      0.20      1.00    83
  COMMERCIAL                  D        0.20      0.20      0.10    75
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.20      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
  SUBAREA AREA(ACRES) =    2.60      SUBAREA RUNOFF(CFS) =    5.06
  EFFECTIVE AREA(ACRES) =    326.70   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =    326.70       PEAK FLOW RATE(CFS) =     618.07

****************************************************************************
  FLOW PROCESS FROM NODE   1354.00 TO NODE   1354.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  27.14
  RAINFALL INTENSITY(INCH/HR) =   2.35
  AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25
  AREA-AVERAGED Ap =  0.97
  EFFECTIVE STREAM AREA(ACRES) =   326.70
  TOTAL STREAM AREA(ACRES) =   326.70
  PEAK FLOW RATE(CFS) AT CONFLUENCE =    618.07

  ** CONFLUENCE DATA **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)        (ACRES)    NODE
      1   4387.70  33.04    2.104  0.25( 0.24) 0.98  2621.9    1300.00
      1   4310.56  34.29    2.057  0.25( 0.24) 0.98  2643.3    1320.00
      2    618.07  27.14    2.349  0.25( 0.25) 0.97   326.7    1340.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)        (ACRES)    NODE
      1   4695.64  27.14    2.349  0.25( 0.25) 0.98  2480.4    1340.00
      2   4933.96  33.04    2.104  0.25( 0.25) 0.98  2948.6    1300.00
      3   4842.86  34.29    2.057  0.25( 0.25) 0.98  2970.0    1320.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =   4933.96    Tc(MIN.) =    33.04
  EFFECTIVE AREA(ACRES) =  2948.62   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =   2970.00
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1354.00 = 16507.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1354.00 TO NODE   1376.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    240.00  DOWNSTREAM(FEET) =    216.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  3182.00   CHANNEL SLOPE =  0.0075
  CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   4933.96
  FLOW VELOCITY(FEET/SEC.) =  11.15   FLOW DEPTH(FEET) =   4.69
  TRAVEL TIME(MIN.) =   4.75   Tc(MIN.) =  37.80
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1376.00 = 19689.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1354.00 TO NODE   1376.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  37.80
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.946
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  PUBLIC PARK                 A        5.40      0.40      0.85    32
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        A        3.80      0.40      0.50    32
  NATURAL POOR COVER
  "BARREN"                    A        8.50      0.40      1.00    78
  NATURAL FAIR COVER
  "GRASS"                     A        4.80      0.40      1.00    50
  URBAN FAIR COVER
  "TURF"                      A       18.80      0.40      1.00    44
  NATURAL FAIR COVER
  "OPEN BRUSH"                A        4.00      0.40      1.00    46
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.94
  SUBAREA AREA(ACRES) =   45.30      SUBAREA RUNOFF(CFS) =   64.01
  EFFECTIVE AREA(ACRES) =   2993.92   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =   3015.30       PEAK FLOW RATE(CFS) =    4933.96
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1354.00 TO NODE   1376.00 IS CODE =  81
----------------------------------------------------------------------------
```

```
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  37.80
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.946
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        2.30      0.40      1.00    40
  NATURAL FAIR COVER
  "WOODLAND"                 A        3.30      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        3.50      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                    C        0.80      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        3.00      0.25      1.00    77
  COMMERCIAL                 C        2.70      0.25      0.10    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.31
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.84
  SUBAREA AREA(ACRES) =   15.60      SUBAREA RUNOFF(CFS) =   23.60
  EFFECTIVE AREA(ACRES) =   3009.52   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =   3030.90       PEAK FLOW RATE(CFS) =    4933.96
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

********************************************************************************
  FLOW PROCESS FROM NODE   1354.00 TO NODE   1376.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  37.80
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.946
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C       11.70      0.25      1.00    73
  PUBLIC PARK                D       20.40      0.20      0.85    75
  NATURAL FAIR COVER
  "GRASS"                    D        4.60      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                     D        0.20      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        6.10      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
  SUBAREA AREA(ACRES) =   43.00      SUBAREA RUNOFF(CFS) =   67.60
  EFFECTIVE AREA(ACRES) =   3052.52   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =   3073.90       PEAK FLOW RATE(CFS) =    4933.96
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

********************************************************************************
  FLOW PROCESS FROM NODE   1376.00 TO NODE   1376.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
================================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  37.80
  RAINFALL INTENSITY(INCH/HR) =   1.95
  AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25
  AREA-AVERAGED Ap =  0.98
  EFFECTIVE STREAM AREA(ACRES) =  3052.52
  TOTAL STREAM AREA(ACRES) =  3073.90
  PEAK FLOW RATE(CFS) AT CONFLUENCE =   4933.96

********************************************************************************
  FLOW PROCESS FROM NODE   1360.00 TO NODE   1361.00 IS CODE =  21
--------------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
================================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   322.00
  ELEVATION DATA: UPSTREAM(FEET) =   1110.00  DOWNSTREAM(FEET) =   1035.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    9.517
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.303
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "GRASS"                    C        0.50      0.25      1.00    79    9.52
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.20      0.25      1.00    73    9.52
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      2.55
  TOTAL AREA(ACRES) =      0.70   PEAK FLOW RATE(CFS) =      2.55

********************************************************************************
  FLOW PROCESS FROM NODE   1361.00 TO NODE   1362.00 IS CODE =  51
--------------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1035.00  DOWNSTREAM(FEET) =    975.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   166.00   CHANNEL SLOPE =  0.3614
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      2.55
  FLOW VELOCITY(FEET/SEC.) =   7.45   FLOW DEPTH(FEET) =   0.27
  TRAVEL TIME(MIN.) =   0.37   Tc(MIN.) =   9.89
  LONGEST FLOWPATH FROM NODE   1360.00 TO NODE   1362.00 =   488.00 FEET.

********************************************************************************
  FLOW PROCESS FROM NODE   1361.00 TO NODE   1362.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =   9.89
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.193
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        0.10      0.25      1.00    79
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.50      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.60      SUBAREA RUNOFF(CFS) =    2.13
  EFFECTIVE AREA(ACRES) =      1.30   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.30       PEAK FLOW RATE(CFS) =       4.61

********************************************************************************
  FLOW PROCESS FROM NODE   1362.00 TO NODE   1363.00 IS CODE =  51
--------------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    975.00  DOWNSTREAM(FEET) =    950.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   143.00   CHANNEL SLOPE =  0.1748
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      4.61
  FLOW VELOCITY(FEET/SEC.) =   6.86   FLOW DEPTH(FEET) =   0.46
  TRAVEL TIME(MIN.) =   0.35   Tc(MIN.) =  10.24
  LONGEST FLOWPATH FROM NODE   1360.00 TO NODE   1363.00 =   631.00 FEET.

********************************************************************************
  FLOW PROCESS FROM NODE   1362.00 TO NODE   1363.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  10.24
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.113
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        0.40      0.25      1.00    79
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.80      0.25      1.00    73
```

```
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =     1.20      SUBAREA RUNOFF(CFS) =     4.17
  EFFECTIVE AREA(ACRES) =      2.50   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      2.50       PEAK FLOW RATE(CFS) =       8.69

****************************************************************************
  FLOW PROCESS FROM NODE   1363.00 TO NODE   1364.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    950.00  DOWNSTREAM(FEET) =    925.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   136.00   CHANNEL SLOPE =  0.1838
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      8.69
  FLOW VELOCITY(FEET/SEC.) =   8.32   FLOW DEPTH(FEET) =   0.64
  TRAVEL TIME(MIN.) =   0.27   Tc(MIN.) =  10.51
  LONGEST FLOWPATH FROM NODE   1360.00 TO NODE   1364.00 =   767.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1363.00 TO NODE   1364.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.51
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.058
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        1.40      0.25      1.00    79
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.90      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =     2.30      SUBAREA RUNOFF(CFS) =     7.88
  EFFECTIVE AREA(ACRES) =      4.80   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      4.80       PEAK FLOW RATE(CFS) =      16.45

****************************************************************************
  FLOW PROCESS FROM NODE   1364.00 TO NODE   1365.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    925.00  DOWNSTREAM(FEET) =    875.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   146.00   CHANNEL SLOPE =  0.3425
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     16.45
  FLOW VELOCITY(FEET/SEC.) =  12.30   FLOW DEPTH(FEET) =   0.76
  TRAVEL TIME(MIN.) =   0.20   Tc(MIN.) =  10.71
  LONGEST FLOWPATH FROM NODE   1360.00 TO NODE   1365.00 =   913.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1364.00 TO NODE   1365.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.71
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.019
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        2.00      0.25      1.00    79
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.90      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =     2.90      SUBAREA RUNOFF(CFS) =     9.84
  EFFECTIVE AREA(ACRES) =      7.70   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      7.70       PEAK FLOW RATE(CFS) =      26.12

****************************************************************************
  FLOW PROCESS FROM NODE   1365.00 TO NODE   1366.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    875.00  DOWNSTREAM(FEET) =    800.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   310.00   CHANNEL SLOPE =  0.2419
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     26.12
  FLOW VELOCITY(FEET/SEC.) =  11.84   FLOW DEPTH(FEET) =   0.79
  TRAVEL TIME(MIN.) =   0.44   Tc(MIN.) =  11.14
  LONGEST FLOWPATH FROM NODE   1360.00 TO NODE   1366.00 =  1223.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1365.00 TO NODE   1366.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.14
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.931
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        1.40      0.25      1.00    79
  NATURAL FAIR COVER
  "WOODLAND"                 C        1.70      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =     3.10      SUBAREA RUNOFF(CFS) =    10.27
  EFFECTIVE AREA(ACRES) =     10.80   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     10.80       PEAK FLOW RATE(CFS) =      35.78

****************************************************************************
  FLOW PROCESS FROM NODE   1366.00 TO NODE   1367.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    800.00  DOWNSTREAM(FEET) =    775.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   145.00   CHANNEL SLOPE =  0.1724
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     35.78
  FLOW VELOCITY(FEET/SEC.) =  11.42   FLOW DEPTH(FEET) =   1.03
  TRAVEL TIME(MIN.) =   0.21   Tc(MIN.) =  11.35
  LONGEST FLOWPATH FROM NODE   1360.00 TO NODE   1367.00 =  1368.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1366.00 TO NODE   1367.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.35
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.889
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        3.80      0.25      1.00    79
  NATURAL FAIR COVER
  "WOODLAND"                 C        2.00      0.25      1.00    73
  NATURAL FAIR COVER
  "GRASS"                    D        0.30      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =     6.10      SUBAREA RUNOFF(CFS) =    19.99
  EFFECTIVE AREA(ACRES) =     16.90   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     16.90       PEAK FLOW RATE(CFS) =      55.36

****************************************************************************
  FLOW PROCESS FROM NODE   1367.00 TO NODE   1368.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
```

```
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    775.00  DOWNSTREAM(FEET) =    675.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   335.00   CHANNEL SLOPE =  0.2985
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     55.36
  FLOW VELOCITY(FEET/SEC.) =  15.72   FLOW DEPTH(FEET) =   1.13
  TRAVEL TIME(MIN.) =   0.36   Tc(MIN.) =  11.71
  LONGEST FLOWPATH FROM NODE   1360.00 TO NODE   1368.00 =  1703.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1367.00 TO NODE   1368.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.71
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.818
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        5.30      0.25      1.00    79
  NATURAL FAIR COVER
  "WOODLAND"                 C        1.70      0.25      1.00    73
  NATURAL FAIR COVER
  "GRASS"                    D        0.30      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    7.30      SUBAREA RUNOFF(CFS) =   23.46
  EFFECTIVE AREA(ACRES) =     24.20   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     24.20       PEAK FLOW RATE(CFS) =      77.74

****************************************************************************
  FLOW PROCESS FROM NODE   1368.00 TO NODE   1369.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    675.00  DOWNSTREAM(FEET) =    575.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   837.00   CHANNEL SLOPE =  0.1195
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     77.74
  FLOW VELOCITY(FEET/SEC.) =  12.23   FLOW DEPTH(FEET) =   1.71
  TRAVEL TIME(MIN.) =   1.14   Tc(MIN.) =  12.85
  LONGEST FLOWPATH FROM NODE   1360.00 TO NODE   1369.00 =  2540.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1368.00 TO NODE   1369.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.85
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.610
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        0.70      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        3.10      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        2.50      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    6.30      SUBAREA RUNOFF(CFS) =   19.05
  EFFECTIVE AREA(ACRES) =     30.50   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     30.50       PEAK FLOW RATE(CFS) =      92.25

****************************************************************************
  FLOW PROCESS FROM NODE   1369.00 TO NODE   1370.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    575.00  DOWNSTREAM(FEET) =    507.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   524.00   CHANNEL SLOPE =  0.1298
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     92.25
  FLOW VELOCITY(FEET/SEC.) =  13.18   FLOW DEPTH(FEET) =   1.83
  TRAVEL TIME(MIN.) =   0.66   Tc(MIN.) =  13.51
  LONGEST FLOWPATH FROM NODE   1360.00 TO NODE   1370.00 =  3064.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1369.00 TO NODE   1370.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  13.51
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.514
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   C        0.10      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C        1.60      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        8.10      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        6.90      0.25      1.00    73
  NATURAL FAIR COVER
  "GRASS"                    D        0.10      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        1.10      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   17.90      SUBAREA RUNOFF(CFS) =   52.64
  EFFECTIVE AREA(ACRES) =     48.40   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     48.40       PEAK FLOW RATE(CFS) =     142.27

****************************************************************************
  FLOW PROCESS FROM NODE   1370.00 TO NODE   1371.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    507.00  DOWNSTREAM(FEET) =    395.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   714.00   CHANNEL SLOPE =  0.1569
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    142.27
  FLOW VELOCITY(FEET/SEC.) =  15.66   FLOW DEPTH(FEET) =   1.87
  TRAVEL TIME(MIN.) =   0.76   Tc(MIN.) =  14.27
  LONGEST FLOWPATH FROM NODE   1360.00 TO NODE   1371.00 =  3778.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1370.00 TO NODE   1371.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  14.27
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.405
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        0.10      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        3.60      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C        0.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        2.70      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        1.50      0.25      1.00    73
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.10      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    8.40      SUBAREA RUNOFF(CFS) =   23.85
  EFFECTIVE AREA(ACRES) =     56.80   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     56.80       PEAK FLOW RATE(CFS) =     161.36
```

```
****************************************************************************
  FLOW PROCESS FROM NODE   1371.00 TO NODE   1372.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    395.00  DOWNSTREAM(FEET) =    384.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   216.00   CHANNEL SLOPE =  0.0509
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    161.36
  FLOW VELOCITY(FEET/SEC.) =  10.67   FLOW DEPTH(FEET) =   2.67
  TRAVEL TIME(MIN.) =   0.34   Tc(MIN.) =  14.61
  LONGEST FLOWPATH FROM NODE   1360.00 TO NODE   1372.00 =  3994.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1371.00 TO NODE   1372.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  14.61
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.356
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        1.90      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                    C        4.00      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                     C       18.30      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       11.70      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        0.50      0.25      1.00    73
  NATURAL POOR COVER
  "BARREN"                    D        1.70      0.20      1.00    93
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   38.10      SUBAREA RUNOFF(CFS) =  106.59
  EFFECTIVE AREA(ACRES) =    94.90   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    94.90       PEAK FLOW RATE(CFS) =    265.47

****************************************************************************
  FLOW PROCESS FROM NODE   1371.00 TO NODE   1372.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  14.61
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.356
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     D        3.30      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.10      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.40      SUBAREA RUNOFF(CFS) =    9.66
  EFFECTIVE AREA(ACRES) =    98.30   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    98.30       PEAK FLOW RATE(CFS) =    275.13

****************************************************************************
  FLOW PROCESS FROM NODE   1372.00 TO NODE   1373.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    384.00  DOWNSTREAM(FEET) =    325.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1435.00   CHANNEL SLOPE =  0.0411
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    275.13
  FLOW VELOCITY(FEET/SEC.) =  11.24   FLOW DEPTH(FEET) =   3.34
  TRAVEL TIME(MIN.) =   2.13   Tc(MIN.) =  16.74
  LONGEST FLOWPATH FROM NODE   1360.00 TO NODE   1373.00 =  5429.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1372.00 TO NODE   1373.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.74
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.105
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        2.70      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                     B        0.20      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.70      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                  B        2.40      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        9.70      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                    C        2.90      0.25      1.00    91
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   18.60      SUBAREA RUNOFF(CFS) =   47.53
  EFFECTIVE AREA(ACRES) =   116.90   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =   116.90       PEAK FLOW RATE(CFS) =    300.46

****************************************************************************
  FLOW PROCESS FROM NODE   1372.00 TO NODE   1373.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.74
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.105
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     C        9.50      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       14.20      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        4.60      0.25      1.00    73
  NATURAL POOR COVER
  "BARREN"                    D        1.60      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                     D        0.30      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.20      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   30.40      SUBAREA RUNOFF(CFS) =   78.22
  EFFECTIVE AREA(ACRES) =   147.30   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =   147.30       PEAK FLOW RATE(CFS) =    378.68

****************************************************************************
  FLOW PROCESS FROM NODE   1373.00 TO NODE   1374.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    325.00  DOWNSTREAM(FEET) =    280.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1269.00   CHANNEL SLOPE =  0.0355
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    378.68
  FLOW VELOCITY(FEET/SEC.) =  11.50   FLOW DEPTH(FEET) =   3.76
  TRAVEL TIME(MIN.) =   1.84   Tc(MIN.) =  18.58
  LONGEST FLOWPATH FROM NODE   1360.00 TO NODE   1374.00 =  6698.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1373.00 TO NODE   1374.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
```

```
================================================================================
  MAINLINE Tc(MIN) =  18.58
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.925
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        1.30      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                     B        0.10      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        7.30      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                  B        3.30      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        6.00      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C        2.40      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   20.40      SUBAREA RUNOFF(CFS) =   48.58
  EFFECTIVE AREA(ACRES) =    167.70   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    167.70       PEAK FLOW RATE(CFS) =     403.38

****************************************************************************
  FLOW PROCESS FROM NODE   1373.00 TO NODE   1374.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.58
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.925
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       14.60      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        4.40      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        0.20      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                     D        2.20      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.60      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   22.00      SUBAREA RUNOFF(CFS) =   53.11
  EFFECTIVE AREA(ACRES) =    189.70   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    189.70       PEAK FLOW RATE(CFS) =     456.49

****************************************************************************
  FLOW PROCESS FROM NODE   1374.00 TO NODE   1375.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    280.00  DOWNSTREAM(FEET) =    265.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   457.00   CHANNEL SLOPE =  0.0328
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    456.49
  FLOW VELOCITY(FEET/SEC.) =  11.72   FLOW DEPTH(FEET) =   4.22
  TRAVEL TIME(MIN.) =   0.65   Tc(MIN.) =  19.23
  LONGEST FLOWPATH FROM NODE   1360.00 TO NODE   1375.00 =  7155.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1374.00 TO NODE   1375.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.23
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.868
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     B        1.20      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        3.30      0.30      1.00    66
  COMMERCIAL                  B        0.50      0.30      0.10    56
  NATURAL FAIR COVER
  "WOODLAND"                  B        2.80      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C       12.40      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C       43.70      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   63.90      SUBAREA RUNOFF(CFS) =  150.34
  EFFECTIVE AREA(ACRES) =    253.60   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    253.60       PEAK FLOW RATE(CFS) =     597.07

****************************************************************************
  FLOW PROCESS FROM NODE   1374.00 TO NODE   1375.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.23
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.868
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       28.50      0.25      1.00    77
  COMMERCIAL                  C        0.20      0.25      0.10    69
  NATURAL FAIR COVER
  "WOODLAND"                  C       19.10      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        0.70      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                     D       22.60      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.90      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   72.00      SUBAREA RUNOFF(CFS) =  170.78
  EFFECTIVE AREA(ACRES) =    325.60   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    325.60       PEAK FLOW RATE(CFS) =     767.85

****************************************************************************
  FLOW PROCESS FROM NODE   1375.00 TO NODE   1376.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    265.00  DOWNSTREAM(FEET) =    216.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1573.00   CHANNEL SLOPE =  0.0312
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    767.85
  FLOW VELOCITY(FEET/SEC.) =  13.10   FLOW DEPTH(FEET) =   5.22
  TRAVEL TIME(MIN.) =   2.00   Tc(MIN.) =  21.23
  LONGEST FLOWPATH FROM NODE   1360.00 TO NODE   1376.00 =  8728.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1375.00 TO NODE   1376.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  21.23
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.707
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                  B        1.00      0.30      0.10    56
  NATURAL FAIR COVER
  "WOODLAND"                  B        1.30      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.10      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C        1.50      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        1.60      0.25      1.00    77
  COMMERCIAL                  C        1.10      0.25      0.10    69
```

```
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.71
  SUBAREA AREA(ACRES) =    6.60      SUBAREA RUNOFF(CFS) =   14.96
  EFFECTIVE AREA(ACRES) =    332.20   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.99
  TOTAL AREA(ACRES) =    332.20       PEAK FLOW RATE(CFS) =     767.85
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1375.00 TO NODE   1376.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  21.23
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.707
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C        2.20      0.25      1.00    73
  PUBLIC PARK                D        5.80      0.20      0.85    75
  NATURAL FAIR COVER
  "GRASS"                    D        0.40      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       12.00      0.20      1.00    83
  COMMERCIAL                 D        0.40      0.20      0.10    75
  NATURAL FAIR COVER
  "WOODLAND"                 D        1.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.94
  SUBAREA AREA(ACRES) =   21.90      SUBAREA RUNOFF(CFS) =   49.53
  EFFECTIVE AREA(ACRES) =    354.10   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.99
  TOTAL AREA(ACRES) =    354.10       PEAK FLOW RATE(CFS) =     785.04

****************************************************************************
  FLOW PROCESS FROM NODE   1376.00 TO NODE   1376.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  21.23
  RAINFALL INTENSITY(INCH/HR) =   2.71
  AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.25
  AREA-AVERAGED Ap =  0.99
  EFFECTIVE STREAM AREA(ACRES) =   354.10
  TOTAL STREAM AREA(ACRES) =   354.10
  PEAK FLOW RATE(CFS) AT CONFLUENCE =    785.04

  ** CONFLUENCE DATA **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1   4695.64  31.98    2.145  0.25( 0.25) 0.98  2584.3    1340.00
      1   4933.96  37.80    1.946  0.25( 0.25) 0.98  3052.5    1300.00
      1   4842.86  39.08    1.908  0.25( 0.25) 0.98  3073.9    1320.00
      2    785.04  21.23    2.707  0.25( 0.24) 0.99   354.1    1360.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1   4824.72  21.23    2.707  0.25( 0.25) 0.98  2069.5    1360.00
      2   5301.59  31.98    2.145  0.25( 0.25) 0.98  2938.4    1340.00
      3   5476.58  37.80    1.946  0.25( 0.25) 0.98  3406.6    1300.00
      4   5373.25  39.08    1.908  0.25( 0.25) 0.98  3428.0    1320.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =   5476.58    Tc(MIN.) =    37.80
  EFFECTIVE AREA(ACRES) =  3406.62   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =   3428.00
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1376.00 = 19689.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1376.00 TO NODE   1394.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    216.00  DOWNSTREAM(FEET) =    214.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    60.00   CHANNEL SLOPE =  0.0333
  CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   5476.58
  FLOW VELOCITY(FEET/SEC.) =  18.63   FLOW DEPTH(FEET) =   3.21
  TRAVEL TIME(MIN.) =   0.05   Tc(MIN.) =  37.85
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1394.00 = 19749.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1376.00 TO NODE   1394.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  37.85
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.944
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.20      0.20      1.00    83
  PUBLIC PARK                D        0.30      0.20      0.85    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.91
  SUBAREA AREA(ACRES) =    0.50      SUBAREA RUNOFF(CFS) =    0.79
  EFFECTIVE AREA(ACRES) =   3407.12   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =   3428.50       PEAK FLOW RATE(CFS) =    5476.58
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1394.00 TO NODE   1394.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  37.85
  RAINFALL INTENSITY(INCH/HR) =   1.94
  AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25
  AREA-AVERAGED Ap =  0.98
  EFFECTIVE STREAM AREA(ACRES) =  3407.12
  TOTAL STREAM AREA(ACRES) =  3428.50
  PEAK FLOW RATE(CFS) AT CONFLUENCE =   5476.58

****************************************************************************
  FLOW PROCESS FROM NODE   1380.00 TO NODE   1381.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   308.00
  ELEVATION DATA: UPSTREAM(FEET) =    761.00  DOWNSTREAM(FEET) =    650.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    8.568
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.584
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.50      0.25      1.00    77    8.57
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.10      0.20      1.00    83    8.57
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      2.34
  TOTAL AREA(ACRES) =      0.60   PEAK FLOW RATE(CFS) =      2.34

****************************************************************************
  FLOW PROCESS FROM NODE   1381.00 TO NODE   1382.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
```

```
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    650.00  DOWNSTREAM(FEET) =    600.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   222.00   CHANNEL SLOPE =  0.2252
 CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
 CHANNEL FLOW THRU SUBAREA(CFS) =      2.34
 FLOW VELOCITY(FEET/SEC.) =   6.20   FLOW DEPTH(FEET) =   0.29
 TRAVEL TIME(MIN.) =   0.60   Tc(MIN.) =   9.17
 LONGEST FLOWPATH FROM NODE   1380.00 TO NODE   1382.00 =   530.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1381.00 TO NODE   1382.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =   9.17
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.407
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        0.10      0.25      1.00    77
 NATURAL FAIR COVER
 "OPEN BRUSH"                D        1.40      0.20      1.00    83
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    1.50      SUBAREA RUNOFF(CFS) =    5.68
 EFFECTIVE AREA(ACRES) =      2.10   AREA-AVERAGED Fm(INCH/HR) =  0.21
 AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =      2.10       PEAK FLOW RATE(CFS) =       7.92

****************************************************************************
 FLOW PROCESS FROM NODE   1382.00 TO NODE   1383.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    600.00  DOWNSTREAM(FEET) =    588.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =    77.00   CHANNEL SLOPE =  0.1558
 CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
 CHANNEL FLOW THRU SUBAREA(CFS) =      7.92
 FLOW VELOCITY(FEET/SEC.) =   7.58   FLOW DEPTH(FEET) =   0.64
 TRAVEL TIME(MIN.) =   0.17   Tc(MIN.) =   9.33
 LONGEST FLOWPATH FROM NODE   1380.00 TO NODE   1383.00 =   607.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1382.00 TO NODE   1383.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =   9.33
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.357
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        1.60      0.25      1.00    77
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       D        0.10      0.20      1.00    81
 NATURAL FAIR COVER
 "OPEN BRUSH"                D        0.50      0.20      1.00    83
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    2.20      SUBAREA RUNOFF(CFS) =    8.16
 EFFECTIVE AREA(ACRES) =      4.30   AREA-AVERAGED Fm(INCH/HR) =  0.23
 AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =      4.30       PEAK FLOW RATE(CFS) =      15.99

****************************************************************************
 FLOW PROCESS FROM NODE   1383.00 TO NODE   1384.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    588.00  DOWNSTREAM(FEET) =    560.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   310.00   CHANNEL SLOPE =  0.0903
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     15.99
 FLOW VELOCITY(FEET/SEC.) =   7.25   FLOW DEPTH(FEET) =   0.79
 TRAVEL TIME(MIN.) =   0.71   Tc(MIN.) =  10.05
 LONGEST FLOWPATH FROM NODE   1380.00 TO NODE   1384.00 =   917.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1383.00 TO NODE   1384.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  10.05
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.151
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        2.00      0.25      1.00    77
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       D        1.10      0.20      1.00    81
 NATURAL FAIR COVER
 "OPEN BRUSH"                D        1.00      0.20      1.00    83
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    4.10      SUBAREA RUNOFF(CFS) =   14.49
 EFFECTIVE AREA(ACRES) =      8.40   AREA-AVERAGED Fm(INCH/HR) =  0.23
 AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =      8.40       PEAK FLOW RATE(CFS) =      29.68

****************************************************************************
 FLOW PROCESS FROM NODE   1384.00 TO NODE   1385.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    560.00  DOWNSTREAM(FEET) =    530.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   488.00   CHANNEL SLOPE =  0.0615
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     29.68
 FLOW VELOCITY(FEET/SEC.) =   7.44   FLOW DEPTH(FEET) =   1.23
 TRAVEL TIME(MIN.) =   1.09   Tc(MIN.) =  11.14
 LONGEST FLOWPATH FROM NODE   1380.00 TO NODE   1385.00 =  1405.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1384.00 TO NODE   1385.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  11.14
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.932
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       C        1.00      0.25      1.00    75
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        4.10      0.25      1.00    77
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       D        1.90      0.20      1.00    81
 NATURAL FAIR COVER
 "OPEN BRUSH"                D        1.40      0.20      1.00    83
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    8.40      SUBAREA RUNOFF(CFS) =   27.98
 EFFECTIVE AREA(ACRES) =     16.80   AREA-AVERAGED Fm(INCH/HR) =  0.23
 AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     16.80       PEAK FLOW RATE(CFS) =      56.01

****************************************************************************
 FLOW PROCESS FROM NODE   1385.00 TO NODE   1386.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    530.00  DOWNSTREAM(FEET) =    485.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   584.00   CHANNEL SLOPE =  0.0771
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
```

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  CHANNEL FLOW THRU SUBAREA(CFS) =     56.01
  FLOW VELOCITY(FEET/SEC.) =   9.55   FLOW DEPTH(FEET) =   1.62
  TRAVEL TIME(MIN.) =   1.02   Tc(MIN.) =  12.16
  LONGEST FLOWPATH FROM NODE   1380.00 TO NODE   1386.00 =  1989.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1385.00 TO NODE   1386.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.16
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.728
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.10      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.90      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        3.00      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        2.00      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    6.00      SUBAREA RUNOFF(CFS) =   19.01
  EFFECTIVE AREA(ACRES) =     22.80   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     22.80       PEAK FLOW RATE(CFS) =      71.93

****************************************************************************
  FLOW PROCESS FROM NODE   1386.00 TO NODE   1387.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    485.00  DOWNSTREAM(FEET) =    460.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   549.00   CHANNEL SLOPE =  0.0455
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     71.93
  FLOW VELOCITY(FEET/SEC.) =   8.29   FLOW DEPTH(FEET) =   1.81
  TRAVEL TIME(MIN.) =   1.10   Tc(MIN.) =  13.26
  LONGEST FLOWPATH FROM NODE   1380.00 TO NODE   1387.00 =  2538.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1386.00 TO NODE   1387.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  13.26
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.550
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.90      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        4.70      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        5.90      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                     D        0.60      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        3.50      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   15.60      SUBAREA RUNOFF(CFS) =   46.78
  EFFECTIVE AREA(ACRES) =     38.40   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     38.40       PEAK FLOW RATE(CFS) =     115.07

****************************************************************************
  FLOW PROCESS FROM NODE   1387.00 TO NODE   1388.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    460.00  DOWNSTREAM(FEET) =    455.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   140.00   CHANNEL SLOPE =  0.0357
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    115.07
  FLOW VELOCITY(FEET/SEC.) =   8.57   FLOW DEPTH(FEET) =   2.46
  TRAVEL TIME(MIN.) =   0.27   Tc(MIN.) =  13.53
  LONGEST FLOWPATH FROM NODE   1380.00 TO NODE   1388.00 =  2678.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1387.00 TO NODE   1388.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  13.53
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.511
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.90      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C        0.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        7.50      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        6.60      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                     D        2.00      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D       15.50      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   32.90      SUBAREA RUNOFF(CFS) =   97.64
  EFFECTIVE AREA(ACRES) =     71.30   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     71.30       PEAK FLOW RATE(CFS) =     211.35

****************************************************************************
  FLOW PROCESS FROM NODE   1388.00 TO NODE   1389.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    455.00  DOWNSTREAM(FEET) =    420.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1360.00   CHANNEL SLOPE =  0.0257
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    211.35
  FLOW VELOCITY(FEET/SEC.) =   8.83   FLOW DEPTH(FEET) =   3.29
  TRAVEL TIME(MIN.) =   2.57   Tc(MIN.) =  16.10
  LONGEST FLOWPATH FROM NODE   1380.00 TO NODE   1389.00 =  4038.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1388.00 TO NODE   1389.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.10
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.177
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        2.50      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C        0.60      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        3.60      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D       10.20      0.20      1.00    81
  NATURAL POOR COVER
  "BARREN"                    D        2.20      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                     D        7.80      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   26.90      SUBAREA RUNOFF(CFS) =   71.76
  EFFECTIVE AREA(ACRES) =     98.20   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
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  TOTAL AREA(ACRES) =     98.20       PEAK FLOW RATE(CFS) =     261.66

****************************************************************************
  FLOW PROCESS FROM NODE   1388.00 TO NODE   1389.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.10
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.177
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                  D        6.90      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        1.90      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D        4.20      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   13.00      SUBAREA RUNOFF(CFS) =   34.83
  EFFECTIVE AREA(ACRES) =    111.20   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    111.20       PEAK FLOW RATE(CFS) =     296.48

****************************************************************************
  FLOW PROCESS FROM NODE   1389.00 TO NODE   1390.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    420.00  DOWNSTREAM(FEET) =    390.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1047.00   CHANNEL SLOPE =  0.0287
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    296.48
  FLOW VELOCITY(FEET/SEC.) =  10.02   FLOW DEPTH(FEET) =   3.80
  TRAVEL TIME(MIN.) =   1.74   Tc(MIN.) =  17.84
  LONGEST FLOWPATH FROM NODE   1380.00 TO NODE   1390.00 =  5085.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1389.00 TO NODE   1390.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.84
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.990
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                    C        0.20      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                     C        5.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        6.60      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        0.90      0.25      1.00    73
  NATURAL POOR COVER
  "BARREN"                    D        3.10      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                     D       13.90      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   30.10      SUBAREA RUNOFF(CFS) =   74.98
  EFFECTIVE AREA(ACRES) =    141.30   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    141.30       PEAK FLOW RATE(CFS) =     352.77

****************************************************************************
  FLOW PROCESS FROM NODE   1389.00 TO NODE   1390.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.84
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.990
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                  D        8.90      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        1.70      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D        5.30      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   15.90      SUBAREA RUNOFF(CFS) =   39.92
  EFFECTIVE AREA(ACRES) =    157.20   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    157.20       PEAK FLOW RATE(CFS) =     392.69

****************************************************************************
  FLOW PROCESS FROM NODE   1390.00 TO NODE   1391.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    390.00  DOWNSTREAM(FEET) =    323.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1978.00   CHANNEL SLOPE =  0.0339
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    392.69
  FLOW VELOCITY(FEET/SEC.) =  11.40   FLOW DEPTH(FEET) =   3.88
  TRAVEL TIME(MIN.) =   2.89   Tc(MIN.) =  20.74
  LONGEST FLOWPATH FROM NODE   1380.00 TO NODE   1391.00 =  7063.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1390.00 TO NODE   1391.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  20.74
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.744
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     B        0.30      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.40      0.30      1.00    66
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        C        3.40      0.25      0.50    69
  NATURAL FAIR COVER
  "GRASS"                     C        4.70      0.25      1.00    79
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                  C        7.30      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        7.40      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
  SUBAREA AREA(ACRES) =   23.50      SUBAREA RUNOFF(CFS) =   53.10
  EFFECTIVE AREA(ACRES) =    180.70   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.99
  TOTAL AREA(ACRES) =    180.70       PEAK FLOW RATE(CFS) =     411.04

****************************************************************************
  FLOW PROCESS FROM NODE   1390.00 TO NODE   1391.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  20.74
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.744
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  PUBLIC PARK                 C        0.40      0.25      0.85    69
  NATURAL FAIR COVER
  "WOODLAND"                  C        1.60      0.25      1.00    73
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D        6.60      0.20      0.50    75
  NATURAL POOR COVER
  "BARREN"                    D        6.10      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                     D        8.40      0.20      1.00    84
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                  D       13.10      0.20      1.00    82
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
```

```
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.91
  SUBAREA AREA(ACRES) =   36.20      SUBAREA RUNOFF(CFS) =   83.41
  EFFECTIVE AREA(ACRES) =    216.90   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =    216.90       PEAK FLOW RATE(CFS) =     494.45

****************************************************************************
  FLOW PROCESS FROM NODE   1390.00 TO NODE   1391.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  20.74
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.744
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        8.00      0.20      1.00    83
  PUBLIC PARK                 D        1.30      0.20      0.85    75
  NATURAL FAIR COVER
  "WOODLAND"                  D       12.00      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   21.30      SUBAREA RUNOFF(CFS) =   48.81
  EFFECTIVE AREA(ACRES) =    238.20   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =    238.20       PEAK FLOW RATE(CFS) =     543.25

****************************************************************************
  FLOW PROCESS FROM NODE   1391.00 TO NODE   1392.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    323.00  DOWNSTREAM(FEET) =    290.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1595.00   CHANNEL SLOPE =  0.0207
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    543.25
  FLOW VELOCITY(FEET/SEC.) =  10.28   FLOW DEPTH(FEET) =   4.86
  TRAVEL TIME(MIN.) =   2.58   Tc(MIN.) =  23.32
  LONGEST FLOWPATH FROM NODE   1380.00 TO NODE   1392.00 =  8658.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1391.00 TO NODE   1392.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  23.32
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.561
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        A        0.40      0.40      0.50    32
  NATURAL POOR COVER
  "BARREN"                    A        0.10      0.40      1.00    78
  NATURAL FAIR COVER
  "GRASS"                     A        0.10      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"                A        0.20      0.40      1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                  A        2.20      0.40      1.00    36
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        B        1.70      0.30      0.50    56
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.38
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.78
  SUBAREA AREA(ACRES) =    4.70      SUBAREA RUNOFF(CFS) =    9.59
  EFFECTIVE AREA(ACRES) =    242.90   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =    242.90       PEAK FLOW RATE(CFS) =     543.25
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1391.00 TO NODE   1392.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  23.32
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.561
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     B        1.70      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                  B        5.30      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.30      0.30      1.00    66
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        C        2.50      0.25      0.50    69
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                  C        0.60      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        3.00      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.91
  SUBAREA AREA(ACRES) =   13.40      SUBAREA RUNOFF(CFS) =   27.82
  EFFECTIVE AREA(ACRES) =    256.30   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =    256.30       PEAK FLOW RATE(CFS) =     543.25
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1391.00 TO NODE   1392.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  23.32
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.561
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  PUBLIC PARK                 C        0.40      0.25      0.85    69
  NATURAL FAIR COVER
  "WOODLAND"                  C        1.70      0.25      1.00    73
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D        1.10      0.20      0.50    75
  NATURAL FAIR COVER
  "GRASS"                     D        0.10      0.20      1.00    84
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                  D       14.70      0.20      1.00    82
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =   18.00      SUBAREA RUNOFF(CFS) =   38.26
  EFFECTIVE AREA(ACRES) =    274.30   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =    274.30       PEAK FLOW RATE(CFS) =     579.63

****************************************************************************
  FLOW PROCESS FROM NODE   1392.00 TO NODE   1393.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    290.00  DOWNSTREAM(FEET) =    265.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1049.00   CHANNEL SLOPE =  0.0238
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    579.63
  FLOW VELOCITY(FEET/SEC.) =  11.02   FLOW DEPTH(FEET) =   4.85
  TRAVEL TIME(MIN.) =   1.59   Tc(MIN.) =  24.91
  LONGEST FLOWPATH FROM NODE   1380.00 TO NODE   1393.00 =  9707.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1392.00 TO NODE   1393.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  24.91
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.466
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     A        0.40      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"                A        1.40      0.40      1.00    46
```

```
  NATURAL FAIR COVER
  "WOODLAND"                  A        0.60      0.40      1.00    36
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        B        0.10      0.30      0.50    56
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.50      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.37
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =    3.00      SUBAREA RUNOFF(CFS) =    5.67
  EFFECTIVE AREA(ACRES) =    277.30   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =    277.30       PEAK FLOW RATE(CFS) =     579.63
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1393.00 TO NODE   1394.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    265.00  DOWNSTREAM(FEET) =    214.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1585.00   CHANNEL SLOPE =  0.0322
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    579.63
  FLOW VELOCITY(FEET/SEC.) =  12.33   FLOW DEPTH(FEET) =   4.48
  TRAVEL TIME(MIN.) =   2.14   Tc(MIN.) =  27.05
  LONGEST FLOWPATH FROM NODE   1380.00 TO NODE   1394.00 = 11292.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1393.00 TO NODE   1394.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  27.05
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.354
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  PUBLIC PARK                 A        1.60      0.40      0.85    32
  NATURAL POOR COVER
  "BARREN"                    A        3.20      0.40      1.00    78
  NATURAL FAIR COVER
  "GRASS"                     A        4.90      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"                A        0.40      0.40      1.00    46
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       A        0.80      0.40      1.00    40
  NATURAL FAIR COVER
  "WOODLAND"                  A        1.90      0.40      1.00    36
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =   12.80      SUBAREA RUNOFF(CFS) =   22.59
  EFFECTIVE AREA(ACRES) =    290.10   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =    290.10       PEAK FLOW RATE(CFS) =     579.63
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1393.00 TO NODE   1394.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  27.05
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.354
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        B        2.90      0.30      0.50    56
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.20      0.30      1.00    60
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        C        0.80      0.25      0.50    69
  NATURAL FAIR COVER
  "GRASS"                     C        1.30      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        2.20      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        0.10      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.75
  SUBAREA AREA(ACRES) =    7.50      SUBAREA RUNOFF(CFS) =   14.54
  EFFECTIVE AREA(ACRES) =    297.60   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =    297.60       PEAK FLOW RATE(CFS) =     579.63
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1393.00 TO NODE   1394.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  27.05
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.354
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                  D        0.10      0.20      1.00    82
  PUBLIC PARK                 D        0.20      0.20      0.85    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.90
  SUBAREA AREA(ACRES) =    0.30      SUBAREA RUNOFF(CFS) =    0.59
  EFFECTIVE AREA(ACRES) =    297.90   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =    297.90       PEAK FLOW RATE(CFS) =     579.63
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1394.00 TO NODE   1394.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  27.05
  RAINFALL INTENSITY(INCH/HR) =   2.35
  AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.23
  AREA-AVERAGED Ap =  0.97
  EFFECTIVE STREAM AREA(ACRES) =   297.90
  TOTAL STREAM AREA(ACRES) =   297.90
  PEAK FLOW RATE(CFS) AT CONFLUENCE =    579.63

  ** CONFLUENCE DATA **
   STREAM     Q      Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1   4824.72  21.28    2.702  0.25( 0.25) 0.98  2070.0    1360.00
      1   5301.59  32.03    2.143  0.25( 0.25) 0.98  2938.9    1340.00
      1   5476.58  37.85    1.944  0.25( 0.25) 0.98  3407.1    1300.00
      1   5373.25  39.13    1.906  0.25( 0.25) 0.98  3428.5    1320.00
      2    579.63  27.05    2.354  0.23( 0.22) 0.97   297.9    1380.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM     Q      Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1   5355.48  21.28    2.702  0.25( 0.24) 0.98  2304.4    1360.00
      2   5660.05  27.05    2.354  0.25( 0.24) 0.98  2833.8    1380.00
      3   5823.90  32.03    2.143  0.25( 0.24) 0.98  3236.8    1340.00
      4   5945.00  37.85    1.944  0.25( 0.24) 0.98  3705.0    1300.00
      5   5831.22  39.13    1.906  0.25( 0.24) 0.98  3726.4    1320.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =   5945.00    Tc(MIN.) =    37.85
  EFFECTIVE AREA(ACRES) =  3705.02   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =   3726.40
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1394.00 = 19749.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1394.00 TO NODE   1066.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
```

```
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    214.00  DOWNSTREAM(FEET) =    213.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  3053.00   CHANNEL SLOPE =  0.0003
 CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
 MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
 CHANNEL FLOW THRU SUBAREA(CFS) =   5945.00
 FLOW VELOCITY(FEET/SEC.) =   4.16   FLOW DEPTH(FEET) =  12.89
 TRAVEL TIME(MIN.) =  12.22   Tc(MIN.) =  50.07
 LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1066.00 = 22802.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1394.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  50.07
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.649
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 PUBLIC PARK                A        8.80      0.40      0.85    32
 NATURAL FAIR COVER
 "GRASS"                    A       22.60      0.40      1.00    50
 NATURAL FAIR COVER
 "OPEN BRUSH"               A        1.80      0.40      1.00    46
 NATURAL FAIR COVER
 "WOODLAND"                 A        4.90      0.40      1.00    36
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      B        0.20      0.30      1.00    63
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"       B        1.80      0.30      0.50    56
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.94
 SUBAREA AREA(ACRES) =   40.10      SUBAREA RUNOFF(CFS) =   45.97
 EFFECTIVE AREA(ACRES) =   3745.12   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.98
 TOTAL AREA(ACRES) =   3766.50       PEAK FLOW RATE(CFS) =    5945.00
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE   1394.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  50.07
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.649
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL POOR COVER
 "BARREN"                   B        0.20      0.30      1.00    86
 NATURAL FAIR COVER
 "GRASS"                    B        7.50      0.30      1.00    69
 AGRICULTURAL FAIR COVER
 "ORCHARDS"                 B       14.60      0.30      1.00    65
 NATURAL FAIR COVER
 "OPEN BRUSH"               B        5.30      0.30      1.00    66
 COMMERCIAL                 B        0.70      0.30      0.10    56
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          B        1.60      0.30      1.00    69
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
 SUBAREA AREA(ACRES) =   29.90      SUBAREA RUNOFF(CFS) =   36.47
 EFFECTIVE AREA(ACRES) =   3775.02   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.98
 TOTAL AREA(ACRES) =   3796.40       PEAK FLOW RATE(CFS) =    5945.00
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE   1394.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  50.07
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.649
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 PUBLIC PARK                B        0.40      0.30      0.85    56
 NATURAL FAIR COVER
 "WOODLAND"                 B        6.50      0.30      1.00    60
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      C        8.10      0.25      1.00    75
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"       C        0.30      0.25      0.50    69
 NATURAL POOR COVER
 "BARREN"                   C        4.80      0.25      1.00    91
 NATURAL FAIR COVER
 "GRASS"                    C       32.00      0.25      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   52.10      SUBAREA RUNOFF(CFS) =   65.33
 EFFECTIVE AREA(ACRES) =   3827.12   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.98
 TOTAL AREA(ACRES) =   3848.50       PEAK FLOW RATE(CFS) =    5945.00
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE   1394.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  50.07
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.649
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL FAIR COVER
 "ORCHARDS"                 C        2.20      0.25      1.00    77
 NATURAL FAIR COVER
 "OPEN BRUSH"               C        7.80      0.25      1.00    77
 COMMERCIAL                 C        2.20      0.25      0.10    69
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          C        0.90      0.25      1.00    79
 NATURAL FAIR COVER
 "WOODLAND"                 C       13.50      0.25      1.00    73
 NATURAL FAIR COVER
 "GRASS"                    D        5.60      0.20      1.00    84
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.94
 SUBAREA AREA(ACRES) =   32.20      SUBAREA RUNOFF(CFS) =   41.24
 EFFECTIVE AREA(ACRES) =   3859.32   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.98
 TOTAL AREA(ACRES) =   3880.70       PEAK FLOW RATE(CFS) =    5945.00
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE   1394.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  50.07
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.649
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL FAIR COVER
 "ORCHARDS"                 D       20.00      0.20      1.00    82
 NATURAL FAIR COVER
 "OPEN BRUSH"               D       14.50      0.20      1.00    83
 PUBLIC PARK                D       16.00      0.20      0.85    75
 NATURAL GOOD COVER
 "MEADOWS"                  D        1.60      0.20      1.00    78
 NATURAL FAIR COVER
 "WOODLAND"                 D        6.50      0.20      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.96
 SUBAREA AREA(ACRES) =   58.60      SUBAREA RUNOFF(CFS) =   76.84
 EFFECTIVE AREA(ACRES) =   3917.92   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.98
 TOTAL AREA(ACRES) =   3939.30       PEAK FLOW RATE(CFS) =    5945.00
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
============================================================================
 END OF STUDY SUMMARY:
 TOTAL AREA(ACRES)      =   3939.30  TC(MIN.) =     50.07
 EFFECTIVE AREA(ACRES) =   3917.92  AREA-AVERAGED Fm(INCH/HR)=  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.98
```

PEAK FLOW RATE(CFS) = 5945.00

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	5355.48	33.91	2.071	0.25(0.25)	0.98	2517.3	1360.00
2	5660.05	39.46	1.896	0.25(0.24)	0.98	3046.7	1380.00
3	5823.90	44.33	1.780	0.25(0.25)	0.98	3449.7	1340.00
4	5945.00	50.07	1.649	0.25(0.25)	0.98	3917.9	1300.00
5	5831.22	51.43	1.627	0.25(0.25)	0.98	3939.3	1320.00

END OF RATIONAL METHOD ANALYSIS

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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             Ver. 8.0  Release Date: 01/01/2003  License ID 1202

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 ************************* DESCRIPTION OF STUDY *************************
* AREA 13 - EXISTING                                                   *
* 100-YEAR HIGH CONFIDENCE                                             *
* AREAS DRAINING TO THE LARGE BASIN                                    *
 ************************************************************************

  FILE NAME: CE14100H.DAT
  TIME/DATE OF STUDY: 10:37 05/29/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *DATA BANK RAINFALL USED*
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                  PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                    0.000
        FOOTHILL                             0.670
        MOUNTAIN                             0.330
        VALLEY(UNDEVELOPED)/DESERT           0.000
        DESERT(UNDEVELOPED)                  0.000
    SIERRA MADRE DEPTH-AREA FACTORS USED.
                     AREA-AVERAGED
        DURATION    RAINFALL(INCH)
        5-MINUTES         0.52
       30-MINUTES         1.09
        1-HOUR            1.45
        3-HOUR            2.43
        6-HOUR            3.36
       24-HOUR            5.63
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


************************************************************************
  FLOW PROCESS FROM NODE   1400.00 TO NODE   1401.00 IS CODE =  21
------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
========================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   324.00
  ELEVATION DATA: UPSTREAM(FEET) =   1072.00  DOWNSTREAM(FEET) =   1065.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   15.350
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.254
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "GRASS"                    D        0.50      0.20      1.00    84   15.35
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      1.37
  TOTAL AREA(ACRES) =      0.50   PEAK FLOW RATE(CFS) =      1.37

************************************************************************
  FLOW PROCESS FROM NODE   1401.00 TO NODE   1402.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1065.00  DOWNSTREAM(FEET) =    975.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   273.00   CHANNEL SLOPE =  0.3297
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      1.37
  FLOW VELOCITY(FEET/SEC.) =   5.95   FLOW DEPTH(FEET) =   0.19
  TRAVEL TIME(MIN.) =   0.77   Tc(MIN.) =  16.12
  LONGEST FLOWPATH FROM NODE   1400.00 TO NODE   1402.00 =   597.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1401.00 TO NODE   1402.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  16.12
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.175
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        0.30      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =     0.30      SUBAREA RUNOFF(CFS) =     0.79
  EFFECTIVE AREA(ACRES) =      0.80   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      0.80       PEAK FLOW RATE(CFS) =       2.13

************************************************************************
  FLOW PROCESS FROM NODE   1402.00 TO NODE   1403.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    975.00  DOWNSTREAM(FEET) =    925.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   202.00   CHANNEL SLOPE =  0.2475
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      2.13
  FLOW VELOCITY(FEET/SEC.) =   6.21   FLOW DEPTH(FEET) =   0.27
  TRAVEL TIME(MIN.) =   0.54   Tc(MIN.) =  16.66
  LONGEST FLOWPATH FROM NODE   1400.00 TO NODE   1403.00 =   799.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE   1402.00 TO NODE   1403.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  16.66
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.114
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        0.50      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =     0.50      SUBAREA RUNOFF(CFS) =     1.29
  EFFECTIVE AREA(ACRES) =      1.30   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.30       PEAK FLOW RATE(CFS) =       3.37
```

```
****************************************************************************
  FLOW PROCESS FROM NODE   1403.00 TO NODE   1404.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    925.00  DOWNSTREAM(FEET) =    900.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    83.00   CHANNEL SLOPE =  0.3012
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      3.37
  FLOW VELOCITY(FEET/SEC.) =   7.61   FLOW DEPTH(FEET) =   0.33
  TRAVEL TIME(MIN.) =   0.18   Tc(MIN.) =  16.84
  LONGEST FLOWPATH FROM NODE   1400.00 TO NODE   1404.00 =   882.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1403.00 TO NODE   1404.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.84
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.094
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        0.30      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =     0.30      SUBAREA RUNOFF(CFS) =     0.77
  EFFECTIVE AREA(ACRES) =      1.60   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.60       PEAK FLOW RATE(CFS) =       4.12

****************************************************************************
  FLOW PROCESS FROM NODE   1404.00 TO NODE   1405.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    900.00  DOWNSTREAM(FEET) =    875.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   113.00   CHANNEL SLOPE =  0.2212
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      4.12
  FLOW VELOCITY(FEET/SEC.) =   7.19   FLOW DEPTH(FEET) =   0.41
  TRAVEL TIME(MIN.) =   0.26   Tc(MIN.) =  17.10
  LONGEST FLOWPATH FROM NODE   1400.00 TO NODE   1405.00 =   995.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1404.00 TO NODE   1405.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.10
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.065
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        2.50      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.70      0.25      1.00    77
  NATURAL FAIR COVER
  "GRASS"                    D        0.20      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =     3.40      SUBAREA RUNOFF(CFS) =     8.62
  EFFECTIVE AREA(ACRES) =      5.00   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      5.00       PEAK FLOW RATE(CFS) =      12.70

****************************************************************************
  FLOW PROCESS FROM NODE   1405.00 TO NODE   1406.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    875.00  DOWNSTREAM(FEET) =    800.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   331.00   CHANNEL SLOPE =  0.2266
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     12.70
  FLOW VELOCITY(FEET/SEC.) =   9.81   FLOW DEPTH(FEET) =   0.74
  TRAVEL TIME(MIN.) =   0.56   Tc(MIN.) =  17.66
  LONGEST FLOWPATH FROM NODE   1400.00 TO NODE   1406.00 =  1326.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1405.00 TO NODE   1406.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.66
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.006
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        1.20      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.60      0.25      1.00    77
  NATURAL FAIR COVER
  "GRASS"                    D        0.70      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.40      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =     2.90      SUBAREA RUNOFF(CFS) =     7.24
  EFFECTIVE AREA(ACRES) =      7.90   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      7.90       PEAK FLOW RATE(CFS) =      19.67

****************************************************************************
  FLOW PROCESS FROM NODE   1406.00 TO NODE   1407.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    800.00  DOWNSTREAM(FEET) =    725.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   360.00   CHANNEL SLOPE =  0.2083
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     19.67
  FLOW VELOCITY(FEET/SEC.) =  10.73   FLOW DEPTH(FEET) =   0.94
  TRAVEL TIME(MIN.) =   0.56   Tc(MIN.) =  18.22
  LONGEST FLOWPATH FROM NODE   1400.00 TO NODE   1407.00 =  1686.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1406.00 TO NODE   1407.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.22
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.956
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        3.00      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        2.20      0.25      1.00    77
  NATURAL FAIR COVER
  "GRASS"                    D        1.80      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                 D        0.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =     7.10      SUBAREA RUNOFF(CFS) =    17.38
  EFFECTIVE AREA(ACRES) =     15.00   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     15.00       PEAK FLOW RATE(CFS) =      36.70

****************************************************************************
  FLOW PROCESS FROM NODE   1407.00 TO NODE   1408.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
```

```
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    725.00  DOWNSTREAM(FEET) =    675.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   205.00   CHANNEL SLOPE =  0.2439
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     36.70
  FLOW VELOCITY(FEET/SEC.) =  13.08   FLOW DEPTH(FEET) =   0.95
  TRAVEL TIME(MIN.) =   0.26   Tc(MIN.) =  18.48
  LONGEST FLOWPATH FROM NODE   1400.00 TO NODE   1408.00 =  1891.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1407.00 TO NODE   1408.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.48
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.933
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     C        0.80      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.40      0.25      1.00    77
  NATURAL FAIR COVER
  "GRASS"                     D        1.10      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.10      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.30      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    2.70      SUBAREA RUNOFF(CFS) =    6.59
  EFFECTIVE AREA(ACRES) =     17.70   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     17.70       PEAK FLOW RATE(CFS) =      42.98

****************************************************************************
  FLOW PROCESS FROM NODE   1408.00 TO NODE   1409.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    675.00  DOWNSTREAM(FEET) =    655.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    81.00   CHANNEL SLOPE =  0.2469
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     42.98
  FLOW VELOCITY(FEET/SEC.) =  13.69   FLOW DEPTH(FEET) =   1.03
  TRAVEL TIME(MIN.) =   0.10   Tc(MIN.) =  18.58
  LONGEST FLOWPATH FROM NODE   1400.00 TO NODE   1409.00 =  1972.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1408.00 TO NODE   1409.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.58
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.925
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     C        5.00      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.20      0.25      1.00    77
  NATURAL FAIR COVER
  "GRASS"                     D        8.90      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.20      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D        1.30      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   15.60      SUBAREA RUNOFF(CFS) =   38.02
  EFFECTIVE AREA(ACRES) =     33.30   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     33.30       PEAK FLOW RATE(CFS) =      80.86

****************************************************************************
  FLOW PROCESS FROM NODE   1409.00 TO NODE   1410.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    655.00  DOWNSTREAM(FEET) =    595.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   303.00   CHANNEL SLOPE =  0.1980
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     80.86
  FLOW VELOCITY(FEET/SEC.) =  14.88   FLOW DEPTH(FEET) =   1.54
  TRAVEL TIME(MIN.) =   0.34   Tc(MIN.) =  18.92
  LONGEST FLOWPATH FROM NODE   1400.00 TO NODE   1410.00 =  2275.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1409.00 TO NODE   1410.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.92
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.895
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     C        0.70      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        1.30      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        1.10      0.25      1.00    73
  NATURAL FAIR COVER
  "GRASS"                     D        5.40      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.80      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D        1.80      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   11.10      SUBAREA RUNOFF(CFS) =   26.78
  EFFECTIVE AREA(ACRES) =     44.40   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     44.40       PEAK FLOW RATE(CFS) =     106.75

****************************************************************************
  FLOW PROCESS FROM NODE   1410.00 TO NODE   1411.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    595.00  DOWNSTREAM(FEET) =    570.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   561.00   CHANNEL SLOPE =  0.0446
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    106.75
  FLOW VELOCITY(FEET/SEC.) =   9.14   FLOW DEPTH(FEET) =   2.23
  TRAVEL TIME(MIN.) =   1.02   Tc(MIN.) =  19.95
  LONGEST FLOWPATH FROM NODE   1400.00 TO NODE   1411.00 =  2836.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1410.00 TO NODE   1411.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.95
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.805
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.10      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C        1.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        2.70      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        4.60      0.25      1.00    73
  NATURAL FAIR COVER
  "GRASS"                     D       15.40      0.20      1.00    84
```

```
______________________________________________________________________
**********************************************************************
             RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
            (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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             Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                           Analysis prepared by:

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 ************************* DESCRIPTION OF STUDY *************************
* AREA 13 - EXISTING                                                   *
* 100-YEAR HIGH CONFIDENCE                                             *
* AREAS DRAINING TO THE SMALL BASIN                                    *
 **********************************************************************

  FILE NAME: CE15100H.DAT
  TIME/DATE OF STUDY: 10:42 05/29/2004
==========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *DATA BANK RAINFALL USED*
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                 PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                   0.000
        FOOTHILL                            0.670
        MOUNTAIN                            0.330
        VALLEY(UNDEVELOPED)/DESERT          0.000
        DESERT(UNDEVELOPED)                 0.000
    SIERRA MADRE DEPTH-AREA FACTORS USED.
                     AREA-AVERAGED
        DURATION    RAINFALL(INCH)
        5-MINUTES         0.52
       30-MINUTES         1.09
        1-HOUR            1.45
        3-HOUR            2.43
        6-HOUR            3.36
       24-HOUR            5.63
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


**********************************************************************
  FLOW PROCESS FROM NODE   1500.00 TO NODE   1501.00 IS CODE =  21
----------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
======================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   325.00
  ELEVATION DATA: UPSTREAM(FEET) =   1110.00  DOWNSTREAM(FEET) =   1050.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   10.007
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.158
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "GRASS"                    C        0.30      0.25      1.00    79   10.01
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      1.06
  TOTAL AREA(ACRES) =      0.30   PEAK FLOW RATE(CFS) =      1.06

**********************************************************************
  FLOW PROCESS FROM NODE   1501.00 TO NODE   1502.00 IS CODE =  51
----------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
======================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1050.00  DOWNSTREAM(FEET) =   1025.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    88.00   CHANNEL SLOPE =  0.2841
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      1.06
  FLOW VELOCITY(FEET/SEC.) =   5.21   FLOW DEPTH(FEET) =   0.17
  TRAVEL TIME(MIN.) =   0.28   Tc(MIN.) =  10.29
  LONGEST FLOWPATH FROM NODE   1500.00 TO NODE   1502.00 =   413.00 FEET.

**********************************************************************
  FLOW PROCESS FROM NODE   1501.00 TO NODE   1502.00 IS CODE =  81
----------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
======================================================================
  MAINLINE Tc(MIN) =  10.29
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.102
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        0.20      0.25      1.00    79
  NATURAL FAIR COVER
  "GRASS"                    D        0.30      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.50      SUBAREA RUNOFF(CFS) =    1.75
  EFFECTIVE AREA(ACRES) =      0.80   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      0.80       PEAK FLOW RATE(CFS) =       2.79

**********************************************************************
  FLOW PROCESS FROM NODE   1502.00 TO NODE   1503.00 IS CODE =  51
----------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
======================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1025.00  DOWNSTREAM(FEET) =   1000.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    99.00   CHANNEL SLOPE =  0.2525
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      2.79
  FLOW VELOCITY(FEET/SEC.) =   6.71   FLOW DEPTH(FEET) =   0.32
  TRAVEL TIME(MIN.) =   0.25   Tc(MIN.) =  10.53
  LONGEST FLOWPATH FROM NODE   1500.00 TO NODE   1503.00 =   512.00 FEET.

**********************************************************************
  FLOW PROCESS FROM NODE   1502.00 TO NODE   1503.00 IS CODE =  81
----------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
======================================================================
  MAINLINE Tc(MIN) =  10.53
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.053
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        0.50      0.25      1.00    79
  NATURAL FAIR COVER
  "GRASS"                    D        0.60      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.10      SUBAREA RUNOFF(CFS) =    3.79
```

```
  EFFECTIVE AREA(ACRES) =      1.90   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.90       PEAK FLOW RATE(CFS) =       6.54

****************************************************************************
  FLOW PROCESS FROM NODE   1503.00 TO NODE   1504.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1000.00  DOWNSTREAM(FEET) =    950.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   122.00   CHANNEL SLOPE =  0.4098
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      6.54
  FLOW VELOCITY(FEET/SEC.) =  10.34   FLOW DEPTH(FEET) =   0.44
  TRAVEL TIME(MIN.) =   0.20   Tc(MIN.) =  10.73
  LONGEST FLOWPATH FROM NODE   1500.00 TO NODE   1504.00 =   634.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1503.00 TO NODE   1504.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.73
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.014
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     C        0.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.10      0.25      1.00    77
  NATURAL FAIR COVER
  "GRASS"                     D        0.60      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.10      SUBAREA RUNOFF(CFS) =    3.75
  EFFECTIVE AREA(ACRES) =      3.00   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      3.00       PEAK FLOW RATE(CFS) =      10.23

****************************************************************************
  FLOW PROCESS FROM NODE   1504.00 TO NODE   1505.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    950.00  DOWNSTREAM(FEET) =    875.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   205.00   CHANNEL SLOPE =  0.3659
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     10.23
  FLOW VELOCITY(FEET/SEC.) =  11.09   FLOW DEPTH(FEET) =   0.58
  TRAVEL TIME(MIN.) =   0.31   Tc(MIN.) =  11.04
  LONGEST FLOWPATH FROM NODE   1500.00 TO NODE   1505.00 =   839.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1504.00 TO NODE   1505.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.04
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.952
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     C        0.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.50      0.25      1.00    77
  NATURAL FAIR COVER
  "GRASS"                     D        0.30      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.20      SUBAREA RUNOFF(CFS) =    4.01
  EFFECTIVE AREA(ACRES) =      4.20   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      4.20       PEAK FLOW RATE(CFS) =      14.08

****************************************************************************
  FLOW PROCESS FROM NODE   1505.00 TO NODE   1506.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    875.00  DOWNSTREAM(FEET) =    850.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   146.00   CHANNEL SLOPE =  0.1712
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     14.08
  FLOW VELOCITY(FEET/SEC.) =   9.16   FLOW DEPTH(FEET) =   0.84
  TRAVEL TIME(MIN.) =   0.27   Tc(MIN.) =  11.30
  LONGEST FLOWPATH FROM NODE   1500.00 TO NODE   1506.00 =   985.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1505.00 TO NODE   1506.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.30
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.899
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     C        1.30      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        1.20      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    2.50      SUBAREA RUNOFF(CFS) =    8.21
  EFFECTIVE AREA(ACRES) =      6.70   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      6.70       PEAK FLOW RATE(CFS) =      22.09

****************************************************************************
  FLOW PROCESS FROM NODE   1506.00 TO NODE   1507.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    850.00  DOWNSTREAM(FEET) =    835.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   129.00   CHANNEL SLOPE =  0.1163
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     22.09
  FLOW VELOCITY(FEET/SEC.) =   8.69   FLOW DEPTH(FEET) =   0.88
  TRAVEL TIME(MIN.) =   0.25   Tc(MIN.) =  11.55
  LONGEST FLOWPATH FROM NODE   1500.00 TO NODE   1507.00 =  1114.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1506.00 TO NODE   1507.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.55
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.850
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     C        3.10      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        4.60      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        0.50      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    8.20      SUBAREA RUNOFF(CFS) =   26.57
  EFFECTIVE AREA(ACRES) =     14.90   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     14.90       PEAK FLOW RATE(CFS) =      48.35

****************************************************************************
  FLOW PROCESS FROM NODE   1507.00 TO NODE   1508.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
```

```
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    835.00  DOWNSTREAM(FEET) =    625.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   654.00   CHANNEL SLOPE =  0.3211
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     48.35
  FLOW VELOCITY(FEET/SEC.) =  15.55   FLOW DEPTH(FEET) =   1.03
  TRAVEL TIME(MIN.) =   0.70   Tc(MIN.) =  12.25
  LONGEST FLOWPATH FROM NODE   1500.00 TO NODE   1508.00 =  1768.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1507.00 TO NODE   1508.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  12.25
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.709
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        1.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.40      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        1.30      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.10      SUBAREA RUNOFF(CFS) =    9.65
  EFFECTIVE AREA(ACRES) =     18.00   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     18.00       PEAK FLOW RATE(CFS) =      56.12

****************************************************************************
  FLOW PROCESS FROM NODE   1508.00 TO NODE   1509.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    625.00  DOWNSTREAM(FEET) =    610.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    87.00   CHANNEL SLOPE =  0.1724
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     56.12
  FLOW VELOCITY(FEET/SEC.) =  12.87   FLOW DEPTH(FEET) =   1.32
  TRAVEL TIME(MIN.) =   0.11   Tc(MIN.) =  12.37
  LONGEST FLOWPATH FROM NODE   1500.00 TO NODE   1509.00 =  1855.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1508.00 TO NODE   1509.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  12.37
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.687
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        2.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        1.40      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        6.90      0.25      1.00    73
  NATURAL FAIR COVER
  "GRASS"                    D        0.10      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        1.50      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   12.30      SUBAREA RUNOFF(CFS) =   38.12
  EFFECTIVE AREA(ACRES) =     30.30   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     30.30       PEAK FLOW RATE(CFS) =      93.88

****************************************************************************
  FLOW PROCESS FROM NODE   1509.00 TO NODE   1510.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    610.00  DOWNSTREAM(FEET) =    525.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   816.00   CHANNEL SLOPE =  0.1042
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     93.88
  FLOW VELOCITY(FEET/SEC.) =  12.06   FLOW DEPTH(FEET) =   1.67
  TRAVEL TIME(MIN.) =   1.13   Tc(MIN.) =  13.49
  LONGEST FLOWPATH FROM NODE   1500.00 TO NODE   1510.00 =  2671.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1509.00 TO NODE   1510.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  13.49
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.517
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        0.90      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.90      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        2.60      0.25      1.00    73
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.30      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    4.70      SUBAREA RUNOFF(CFS) =   13.83
  EFFECTIVE AREA(ACRES) =     35.00   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     35.00       PEAK FLOW RATE(CFS) =     103.08

****************************************************************************
  FLOW PROCESS FROM NODE   1510.00 TO NODE   1511.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    525.00  DOWNSTREAM(FEET) =    522.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    67.00   CHANNEL SLOPE =  0.0448
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    103.08
  FLOW VELOCITY(FEET/SEC.) =   9.05   FLOW DEPTH(FEET) =   2.19
  TRAVEL TIME(MIN.) =   0.12   Tc(MIN.) =  13.62
  LONGEST FLOWPATH FROM NODE   1500.00 TO NODE   1511.00 =  2738.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1510.00 TO NODE   1511.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  13.62
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.499
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   C        2.20      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C        8.20      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        5.90      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        5.20      0.25      1.00    73
  NATURAL POOR COVER
  "BARREN"                   D        1.10      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D        0.20      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   22.80      SUBAREA RUNOFF(CFS) =   66.73
  EFFECTIVE AREA(ACRES) =     57.80   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
```

```
  TOTAL AREA(ACRES) =     57.80       PEAK FLOW RATE(CFS) =     169.25

****************************************************************************
  FLOW PROCESS FROM NODE   1510.00 TO NODE   1511.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  13.62
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.499
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.20      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.20      SUBAREA RUNOFF(CFS) =    0.59
  EFFECTIVE AREA(ACRES) =     58.00   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     58.00       PEAK FLOW RATE(CFS) =     169.84

****************************************************************************
  FLOW PROCESS FROM NODE   1511.00 TO NODE   1512.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    522.00  DOWNSTREAM(FEET) =    485.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   313.00   CHANNEL SLOPE =  0.1182
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    169.84
  FLOW VELOCITY(FEET/SEC.) =  14.77   FLOW DEPTH(FEET) =   2.21
  TRAVEL TIME(MIN.) =   0.35   Tc(MIN.) =  13.97
  LONGEST FLOWPATH FROM NODE   1500.00 TO NODE   1512.00 =  3051.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1511.00 TO NODE   1512.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  13.97
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.448
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     C        0.80      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        1.20      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        0.50      0.25      1.00    73
  NATURAL FAIR COVER
  "GRASS"                     D        0.60      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.50      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.60      SUBAREA RUNOFF(CFS) =   10.41
  EFFECTIVE AREA(ACRES) =     61.60   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     61.60       PEAK FLOW RATE(CFS) =     177.60

****************************************************************************
  FLOW PROCESS FROM NODE   1512.00 TO NODE   1512.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  13.97
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.448
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                    B        5.20      0.30      1.00    86
  NATURAL POOR COVER
  "BARREN"                    C       55.10      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                     C        1.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        5.70      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        0.10      0.25      1.00    73
  NATURAL POOR COVER
  "BARREN"                    D        5.00      0.20      1.00    93
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   72.50      SUBAREA RUNOFF(CFS) =  208.68
  EFFECTIVE AREA(ACRES) =    134.10   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    134.10       PEAK FLOW RATE(CFS) =     386.28

****************************************************************************
  FLOW PROCESS FROM NODE   1512.00 TO NODE   1512.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  13.97
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.448
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     D        0.30      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.60      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.90      SUBAREA RUNOFF(CFS) =    2.63
  EFFECTIVE AREA(ACRES) =    135.00   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    135.00       PEAK FLOW RATE(CFS) =     388.91
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =    135.00  TC(MIN.) =     13.97
  EFFECTIVE AREA(ACRES) =    135.00  AREA-AVERAGED Fm(INCH/HR)=  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  PEAK FLOW RATE(CFS)   =    388.91
============================================================================
============================================================================
  END OF RATIONAL METHOD ANALYSIS
```

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  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.60      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   24.80      SUBAREA RUNOFF(CFS) =   57.74
  EFFECTIVE AREA(ACRES) =     69.20   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     69.20       PEAK FLOW RATE(CFS) =     160.90

****************************************************************************
  FLOW PROCESS FROM NODE   1410.00 TO NODE   1411.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.95
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.805
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  D        2.30      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    2.30      SUBAREA RUNOFF(CFS) =    5.39
  EFFECTIVE AREA(ACRES) =     71.50   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     71.50       PEAK FLOW RATE(CFS) =     166.29

****************************************************************************
  FLOW PROCESS FROM NODE   1411.00 TO NODE   1411.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.95
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.805
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        1.10      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                     B        7.30      0.30      1.00    69
  PUBLIC PARK                 B        8.90      0.30      0.85    56
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.70      0.30      1.00    66
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C       59.60      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                    C        1.70      0.25      1.00    91
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =   79.30      SUBAREA RUNOFF(CFS) =  181.89
  EFFECTIVE AREA(ACRES) =    150.80   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.99
  TOTAL AREA(ACRES) =    150.80       PEAK FLOW RATE(CFS) =     348.18

****************************************************************************
  FLOW PROCESS FROM NODE   1411.00 TO NODE   1411.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.95
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.805
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     C       41.60      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       45.00      0.25      1.00    77
  PUBLIC PARK                 C       46.20      0.25      0.85    69
  NATURAL FAIR COVER
  "WOODLAND"                  C       23.70      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        3.30      0.20      1.00    81
  NATURAL POOR COVER
  "BARREN"                    D        1.30      0.20      1.00    93
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.96
  SUBAREA AREA(ACRES) =  161.10      SUBAREA RUNOFF(CFS) =  372.19
  EFFECTIVE AREA(ACRES) =    311.90   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =    311.90       PEAK FLOW RATE(CFS) =     720.37

****************************************************************************
  FLOW PROCESS FROM NODE   1411.00 TO NODE   1411.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.95
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.805
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     D       27.90      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        5.60      0.20      1.00    83
  PUBLIC PARK                 D        1.10      0.20      0.85    75
  NATURAL FAIR COVER
  "WOODLAND"                  D       12.80      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   47.40      SUBAREA RUNOFF(CFS) =  111.15
  EFFECTIVE AREA(ACRES) =    359.30   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =    359.30       PEAK FLOW RATE(CFS) =     831.52

****************************************************************************
  FLOW PROCESS FROM NODE   1411.00 TO NODE   1411.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>PEAK FLOW RATE ESTIMATOR CHANGED TO UNIT-HYDROGRAPH METHOD<<<<<
  >>>>>USING TIME-OF-CONCENTRATION OF LONGEST FLOWPATH<<<<<
============================================================================
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
  S-GRAPH: VALLEY(DEV.)=  0.0%;VALLEY(UNDEV.)/DESERT=  0.0%
           MOUNTAIN= 33.0%;FOOTHILL= 67.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 0.33; LAG(HR) = 0.27; Fm(INCH/HR) = 0.23; Ybar = 0.43
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.98; 30M = 0.98; 1HR = 0.98;
  3HR = 1.00; 6HR = 1.00; 24HR= 1.00
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =    359.30
  LONGEST FLOWPATH FROM NODE   1400.00 TO NODE   1411.00 =  2836.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.1030; Lca/L=0.4,n=.0923; Lca/L=0.5,n=.0848;Lca/L=0.6,n=.0791
  TIME OF PEAK FLOW(HR) = 16.33  RUNOFF VOLUME(AF) =     107.60
  UNIT-HYDROGRAPH METHOD PEAK FLOW RATE(CFS) =    766.46
  TOTAL PEAK FLOW RATE(CFS) =    766.46 (SOURCE FLOW INCLUDED)
  RATIONAL METHOD PEAK FLOW RATE(CFS) =    831.52
   (UPSTREAM NODE PEAK FLOW RATE(CFS) =    831.52)
  PEAK FLOW RATE(CFS) USED =    831.52
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =    359.30  TC(MIN.) =     19.95
  AREA-AVERAGED Fm(INCH/HR)=  0.23   Ybar =  0.43
  PEAK FLOW RATE(CFS)   =    831.52
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

TECHNICAL APPENDIX III-B
HYDROLOGIC ANALYSIS
PROPOSED CONDITION
100-YEAR HIGH CONFIDENCE

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             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
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                          Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

------------------------------------------------------------------------------
  FILE NAME: CP13100H.FLD
  TIME/DATE OF STUDY: 12:00 03/14/2004


******************************************************************************
  FLOW PROCESS FROM NODE  1340.00 TO NODE  1375.00 IS CODE =   1
------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==============================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =     823.000 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.460 HOURS
          CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
          THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
          MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
         STORM RETURN FREQUENCY =  100-YEAR
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.480
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.150
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.170
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.200
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:
         +------------------+--------+--------+--------+--------+--------+
         | RAINFALL DEPTHS & |        |        |        |        |        |
         |    LOSS RATES     |  DAY 1 |  DAY 2 |  DAY 3 |  DAY 4 |  DAY 5 |
         |==================+========+========+========+========+========|
         | 5-MINUTE (INCHES) |    0.52|    0.24|    0.10|    0.06|    0.04|
         |30-MINUTE (INCHES) |    1.09|    0.50|    0.22|    0.12|    0.08|
         |   1-HOUR (INCHES) |    1.45|    0.67|    0.29|    0.15|    0.11|
         |   3-HOUR (INCHES) |    2.43|    1.12|    0.49|    0.26|    0.19|
         |   6-HOUR (INCHES) |    3.36|    1.55|    0.67|    0.36|    0.26|
         |  24-HOUR (INCHES) |    5.63|    2.59|    1.13|    0.60|    0.43|
         |==================+========+========+========+========+========|
         | LOSS RATE(IN/HR)  |   0.150|   0.150|   0.150|   0.150|   0.150|
         | LOW LOSS FRACTION |   0.550|   0.800|   0.970|   0.990|   0.990|
         +------------------+--------+--------+--------+--------+--------+

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.963
          30-MINUTE FACTOR = 0.963
           1-HOUR FACTOR = 0.963
           3-HOUR FACTOR = 0.994
           6-HOUR FACTOR = 0.997
          24-HOUR FACTOR = 0.998

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
```

UNIT INTERVAL PERCENTAGE OF LAG-TIME = 18.116

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.333	132.639
2	4.983	363.296
3	12.063	704.686
4	22.654	1054.141
5	34.671	1196.070
6	49.057	1431.855
7	60.836	1172.411
8	69.556	867.905
9	75.856	627.111
10	80.406	452.789
11	83.708	328.660
12	86.267	254.765
13	88.184	190.747
14	89.585	139.498
15	90.634	104.352
16	91.588	94.984
17	92.452	86.013
18	93.231	77.510
19	93.961	72.699
20	94.526	56.198
21	94.950	42.216
22	95.354	40.161
23	95.709	35.402
24	96.008	29.728
25	96.273	26.395
26	96.516	24.138
27	96.755	23.829
28	96.985	22.891
29	97.197	21.101
30	97.389	19.059
31	97.571	18.125
32	97.751	17.902
33	97.931	17.907
34	98.103	17.165
35	98.234	13.072
36	98.354	11.908
37	98.473	11.888
38	98.590	11.600
39	98.693	10.216
40	98.794	10.056
41	98.895	10.057
42	98.996	10.056
43	99.097	10.049
44	99.189	9.220
45	99.266	7.674
46	99.337	6.998
47	99.407	6.999
48	99.477	6.984
49	99.548	6.998
50	99.608	6.021
51	99.651	4.232
52	99.670	1.933
53	99.682	1.204
54	99.694	1.204
55	99.706	1.204
56	99.718	1.197

57	99.730	1.211
58	99.743	1.204
59	99.755	1.204
60	99.767	1.204
61	99.779	1.204
62	99.791	1.197
63	99.803	1.204
64	99.815	1.211
65	99.827	1.197
66	99.839	1.204
67	99.851	1.197
68	99.863	1.197
69	99.875	1.197
70	99.887	1.197
71	99.899	1.197
72	99.911	1.196
73	99.923	1.197
74	99.935	1.197
75	99.948	1.197
76	99.960	1.197
77	99.972	1.197
78	99.984	1.197
79	99.996	1.197
80	100.000	0.438

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 390.0630
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 320.4894

---

5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 350.0 700.0 1050.0 1400.0
0.083	0.0000	0.00	Q
(PEAK DAY 5, HOUR 0.083)			
0.167	0.0000	0.00	Q
(PEAK DAY 5, HOUR 0.167)			
0.250	0.0001	0.01	Q
(PEAK DAY 5, HOUR 0.250)			
0.333	0.0002	0.01	Q
(PEAK DAY 5, HOUR 0.333)			
0.417	0.0003	0.02	Q
(PEAK DAY 5, HOUR 0.417)			
0.500	0.0005	0.03	Q
(PEAK DAY 5, HOUR 0.500)			
0.583	0.0007	0.03	Q
(PEAK DAY 5, HOUR 0.583)			
0.667	0.0010	0.04	Q
(PEAK DAY 5, HOUR 0.667)			
0.750	0.0013	0.04	Q
(PEAK DAY 5, HOUR 0.750)			
0.833	0.0016	0.05	Q
(PEAK DAY 5, HOUR 0.833)			
0.917	0.0019	0.05	Q
(PEAK DAY 5, HOUR 0.917)			
1.000	0.0022	0.05	Q
(PEAK DAY 5, HOUR 1.000)			
1.083	0.0026	0.05	Q
(PEAK DAY 5, HOUR 1.083)			
1.167	0.0029	0.05	Q
(PEAK DAY 5, HOUR 1.167)			
1.250	0.0033	0.05	Q
(PEAK DAY 5, HOUR 1.250)			
1.333	0.0037	0.05	Q
(PEAK DAY 5, HOUR 1.333)			
1.417	0.0040	0.05	Q
(PEAK DAY 5, HOUR 1.417)			
1.500	0.0044	0.05	Q
(PEAK DAY 5, HOUR 1.500)			
1.583	0.0048	0.05	Q
(PEAK DAY 5, HOUR 1.583)			
1.667	0.0051	0.05	Q
(PEAK DAY 5, HOUR 1.667)			
1.750	0.0055	0.06	Q
(PEAK DAY 5, HOUR 1.750)			
1.833	0.0059	0.06	Q
(PEAK DAY 5, HOUR 1.833)			
1.917	0.0063	0.06	Q
(PEAK DAY 5, HOUR 1.917)			
2.000	0.0067	0.06	Q
(PEAK DAY 5, HOUR 2.000)			
2.083	0.0071	0.06	Q
(PEAK DAY 5, HOUR 2.083)			
2.167	0.0075	0.06	Q
(PEAK DAY 5, HOUR 2.167)			
2.250	0.0079	0.06	Q
(PEAK DAY 5, HOUR 2.250)			
2.333	0.0082	0.06	Q
(PEAK DAY 5, HOUR 2.333)			
2.417	0.0086	0.06	Q
(PEAK DAY 5, HOUR 2.417)			
2.500	0.0090	0.06	Q
(PEAK DAY 5, HOUR 2.500)			
2.583	0.0095	0.06	Q
(PEAK DAY 5, HOUR 2.583)			
2.667	0.0099	0.06	Q
(PEAK DAY 5, HOUR 2.667)			
2.750	0.0103	0.06	Q
(PEAK DAY 5, HOUR 2.750)			
2.833	0.0107	0.06	Q
(PEAK DAY 5, HOUR 2.833)			
2.917	0.0111	0.06	Q
(PEAK DAY 5, HOUR 2.917)			
3.000	0.0115	0.06	Q
(PEAK DAY 5, HOUR 3.000)			
3.083	0.0119	0.06	Q
(PEAK DAY 5, HOUR 3.083)			
3.167	0.0123	0.06	Q
(PEAK DAY 5, HOUR 3.167)			
3.250	0.0128	0.06	Q
(PEAK DAY 5, HOUR 3.250)			
3.333	0.0132	0.06	Q
(PEAK DAY 5, HOUR 3.333)			
3.417	0.0136	0.06	Q
(PEAK DAY 5, HOUR 3.417)			
3.500	0.0140	0.06	Q
(PEAK DAY 5, HOUR 3.500)			
3.583	0.0145	0.06	Q
(PEAK DAY 5, HOUR 3.583)			
3.667	0.0149	0.06	Q
(PEAK DAY 5, HOUR 3.667)			
3.750	0.0153	0.06	Q
(PEAK DAY 5, HOUR 3.750)			
3.833	0.0158	0.06	Q
(PEAK DAY 5, HOUR 3.833)			
3.917	0.0162	0.06	Q
(PEAK DAY 5, HOUR 3.917)			
4.000	0.0166	0.06	Q
(PEAK DAY 5, HOUR 4.000)			
4.083	0.0171	0.06	Q
(PEAK DAY 5, HOUR 4.083)			
4.167	0.0175	0.06	Q
(PEAK DAY 5, HOUR 4.167)			
4.250	0.0180	0.06	Q
(PEAK DAY 5, HOUR 4.250)			
4.333	0.0184	0.06	Q
(PEAK DAY 5, HOUR 4.333)			
4.417	0.0189	0.07	Q
(PEAK DAY 5, HOUR 4.417)			
4.500	0.0193	0.07	Q
(PEAK DAY 5, HOUR 4.500)			
4.583	0.0198	0.07	Q
(PEAK DAY 5, HOUR 4.583)			
4.667	0.0202	0.07	Q
(PEAK DAY 5, HOUR 4.667)			
4.750	0.0207	0.07	Q
(PEAK DAY 5, HOUR 4.750)			
4.833	0.0211	0.07	Q
(PEAK DAY 5, HOUR 4.833)			
4.917	0.0216	0.07	Q
(PEAK DAY 5, HOUR 4.917)			
5.000	0.0221	0.07	Q
(PEAK DAY 5, HOUR 5.000)			
5.083	0.0225	0.07	Q
(PEAK DAY 5, HOUR 5.083)			
5.167	0.0230	0.07	Q

(PEAK DAY 5, HOUR 5.167)
5.250 0.0235 0.07 Q . . . .
(PEAK DAY 5, HOUR 5.250)
5.333 0.0239 0.07 Q . . . .
(PEAK DAY 5, HOUR 5.333)
5.417 0.0244 0.07 Q . . . .
(PEAK DAY 5, HOUR 5.417)
5.500 0.0249 0.07 Q . . . .
(PEAK DAY 5, HOUR 5.500)
5.583 0.0254 0.07 Q . . . .
(PEAK DAY 5, HOUR 5.583)
5.667 0.0259 0.07 Q . . . .
(PEAK DAY 5, HOUR 5.667)
5.750 0.0263 0.07 Q . . . .
(PEAK DAY 5, HOUR 5.750)
5.833 0.0268 0.07 Q . . . .
(PEAK DAY 5, HOUR 5.833)
5.917 0.0273 0.07 Q . . . .
(PEAK DAY 5, HOUR 5.917)
6.000 0.0278 0.07 Q . . . .
(PEAK DAY 5, HOUR 6.000)
6.083 0.0283 0.07 Q . . . .
(PEAK DAY 5, HOUR 6.083)
6.167 0.0288 0.07 Q . . . .
(PEAK DAY 5, HOUR 6.167)
6.250 0.0293 0.07 Q . . . .
(PEAK DAY 5, HOUR 6.250)
6.333 0.0298 0.07 Q . . . .
(PEAK DAY 5, HOUR 6.333)
6.417 0.0303 0.07 Q . . . .
(PEAK DAY 5, HOUR 6.417)
6.500 0.0308 0.07 Q . . . .
(PEAK DAY 5, HOUR 6.500)
6.583 0.0313 0.07 Q . . . .
(PEAK DAY 5, HOUR 6.583)
6.667 0.0318 0.07 Q . . . .
(PEAK DAY 5, HOUR 6.667)
6.750 0.0323 0.07 Q . . . .
(PEAK DAY 5, HOUR 6.750)
6.833 0.0329 0.08 Q . . . .
(PEAK DAY 5, HOUR 6.833)
6.917 0.0334 0.08 Q . . . .
(PEAK DAY 5, HOUR 6.917)
7.000 0.0339 0.08 Q . . . .
(PEAK DAY 5, HOUR 7.000)
7.083 0.0344 0.08 Q . . . .
(PEAK DAY 5, HOUR 7.083)
7.167 0.0350 0.08 Q . . . .
(PEAK DAY 5, HOUR 7.167)
7.250 0.0355 0.08 Q . . . .
(PEAK DAY 5, HOUR 7.250)
7.333 0.0360 0.08 Q . . . .
(PEAK DAY 5, HOUR 7.333)
7.417 0.0366 0.08 Q . . . .
(PEAK DAY 5, HOUR 7.417)
7.500 0.0371 0.08 Q . . . .
(PEAK DAY 5, HOUR 7.500)
7.583 0.0376 0.08 Q . . . .
(PEAK DAY 5, HOUR 7.583)
7.667 0.0382 0.08 Q . . . .
(PEAK DAY 5, HOUR 7.667)
7.750 0.0387 0.08 Q . . . .
(PEAK DAY 5, HOUR 7.750)
7.833 0.0393 0.08 Q . . . .
(PEAK DAY 5, HOUR 7.833)
7.917 0.0399 0.08 Q . . . .
(PEAK DAY 5, HOUR 7.917)
8.000 0.0404 0.08 Q . . . .
(PEAK DAY 5, HOUR 8.000)
8.083 0.0410 0.08 Q . . . .
(PEAK DAY 5, HOUR 8.083)
8.167 0.0415 0.08 Q . . . .
(PEAK DAY 5, HOUR 8.167)
8.250 0.0421 0.08 Q . . . .
(PEAK DAY 5, HOUR 8.250)
8.333 0.0427 0.08 Q . . . .
(PEAK DAY 5, HOUR 8.333)
8.417 0.0433 0.08 Q . . . .
(PEAK DAY 5, HOUR 8.417)
8.500 0.0438 0.08 Q . . . .
(PEAK DAY 5, HOUR 8.500)
8.583 0.0444 0.08 Q . . . .
(PEAK DAY 5, HOUR 8.583)
8.667 0.0450 0.09 Q . . . .
(PEAK DAY 5, HOUR 8.667)
8.750 0.0456 0.09 Q . . . .
(PEAK DAY 5, HOUR 8.750)
8.833 0.0462 0.09 Q . . . .
(PEAK DAY 5, HOUR 8.833)
8.917 0.0468 0.09 Q . . . .
(PEAK DAY 5, HOUR 8.917)
9.000 0.0474 0.09 Q . . . .
(PEAK DAY 5, HOUR 9.000)
9.083 0.0480 0.09 Q . . . .
(PEAK DAY 5, HOUR 9.083)
9.167 0.0486 0.09 Q . . . .
(PEAK DAY 5, HOUR 9.167)
9.250 0.0493 0.09 Q . . . .
(PEAK DAY 5, HOUR 9.250)
9.333 0.0499 0.09 Q . . . .
(PEAK DAY 5, HOUR 9.333)
9.417 0.0505 0.09 Q . . . .
(PEAK DAY 5, HOUR 9.417)
9.500 0.0511 0.09 Q . . . .
(PEAK DAY 5, HOUR 9.500)
9.583 0.0518 0.09 Q . . . .
(PEAK DAY 5, HOUR 9.583)
9.667 0.0524 0.09 Q . . . .
(PEAK DAY 5, HOUR 9.667)
9.750 0.0531 0.09 Q . . . .
(PEAK DAY 5, HOUR 9.750)
9.833 0.0537 0.09 Q . . . .
(PEAK DAY 5, HOUR 9.833)
9.917 0.0544 0.10 Q . . . .
(PEAK DAY 5, HOUR 9.917)
10.000 0.0550 0.10 Q . . . .
(PEAK DAY 5, HOUR 10.000)
10.083 0.0557 0.10 Q . . . .
(PEAK DAY 5, HOUR 10.083)
10.167 0.0564 0.10 Q . . . .
(PEAK DAY 5, HOUR 10.167)
10.250 0.0570 0.10 Q . . . .
(PEAK DAY 5, HOUR 10.250)
10.333 0.0577 0.10 Q . . . .
(PEAK DAY 5, HOUR 10.333)
10.417 0.0584 0.10 Q . . . .
(PEAK DAY 5, HOUR 10.417)
10.500 0.0591 0.10 Q . . . .
(PEAK DAY 5, HOUR 10.500)
10.583 0.0598 0.10 Q . . . .
(PEAK DAY 5, HOUR 10.583)
10.667 0.0605 0.10 Q . . . .
(PEAK DAY 5, HOUR 10.667)
10.750 0.0612 0.10 Q . . . .

(PEAK DAY 5, HOUR 10.750)							
10.833	0.0619	0.10	Q	.	.	.	.
(PEAK DAY 5, HOUR 10.833)							
10.917	0.0627	0.11	Q	.	.	.	.
(PEAK DAY 5, HOUR 10.917)							
11.000	0.0634	0.11	Q	.	.	.	.
(PEAK DAY 5, HOUR 11.000)							
11.083	0.0641	0.11	Q	.	.	.	.
(PEAK DAY 5, HOUR 11.083)							
11.167	0.0649	0.11	Q	.	.	.	.
(PEAK DAY 5, HOUR 11.167)							
11.250	0.0656	0.11	Q	.	.	.	.
(PEAK DAY 5, HOUR 11.250)							
11.333	0.0664	0.11	Q	.	.	.	.
(PEAK DAY 5, HOUR 11.333)							
11.417	0.0672	0.11	Q	.	.	.	.
(PEAK DAY 5, HOUR 11.417)							
11.500	0.0679	0.11	Q	.	.	.	.
(PEAK DAY 5, HOUR 11.500)							
11.583	0.0687	0.11	Q	.	.	.	.
(PEAK DAY 5, HOUR 11.583)							
11.667	0.0695	0.12	Q	.	.	.	.
(PEAK DAY 5, HOUR 11.667)							
11.750	0.0703	0.12	Q	.	.	.	.
(PEAK DAY 5, HOUR 11.750)							
11.833	0.0711	0.12	Q	.	.	.	.
(PEAK DAY 5, HOUR 11.833)							
11.917	0.0719	0.12	Q	.	.	.	.
(PEAK DAY 5, HOUR 11.917)							
12.000	0.0728	0.12	Q	.	.	.	.
(PEAK DAY 5, HOUR 12.000)							
12.083	0.0736	0.12	Q	.	.	.	.
(PEAK DAY 5, HOUR 12.083)							
12.167	0.0745	0.12	Q	.	.	.	.
(PEAK DAY 5, HOUR 12.167)							
12.250	0.0754	0.13	Q	.	.	.	.
(PEAK DAY 5, HOUR 12.250)							
12.333	0.0763	0.13	Q	.	.	.	.
(PEAK DAY 5, HOUR 12.333)							
12.417	0.0772	0.14	Q	.	.	.	.
(PEAK DAY 5, HOUR 12.417)							
12.500	0.0782	0.15	Q	.	.	.	.
(PEAK DAY 5, HOUR 12.500)							
12.583	0.0793	0.15	Q	.	.	.	.
(PEAK DAY 5, HOUR 12.583)							
12.667	0.0804	0.16	Q	.	.	.	.
(PEAK DAY 5, HOUR 12.667)							
12.750	0.0815	0.16	Q	.	.	.	.
(PEAK DAY 5, HOUR 12.750)							
12.833	0.0826	0.16	Q	.	.	.	.
(PEAK DAY 5, HOUR 12.833)							
12.917	0.0838	0.17	Q	.	.	.	.
(PEAK DAY 5, HOUR 12.917)							
13.000	0.0850	0.17	Q	.	.	.	.
(PEAK DAY 5, HOUR 13.000)							
13.083	0.0861	0.17	Q	.	.	.	.
(PEAK DAY 5, HOUR 13.083)							
13.167	0.0874	0.18	Q	.	.	.	.
(PEAK DAY 5, HOUR 13.167)							
13.250	0.0886	0.18	Q	.	.	.	.
(PEAK DAY 5, HOUR 13.250)							
13.333	0.0898	0.18	Q	.	.	.	.
(PEAK DAY 5, HOUR 13.333)							
13.417	0.0911	0.18	Q	.	.	.	.
(PEAK DAY 5, HOUR 13.417)							
13.500	0.0924	0.19	Q	.	.	.	.
(PEAK DAY 5, HOUR 13.500)							
13.583	0.0937	0.19	Q	.	.	.	.
(PEAK DAY 5, HOUR 13.583)							
13.667	0.0951	0.19	Q	.	.	.	.
(PEAK DAY 5, HOUR 13.667)							
13.750	0.0964	0.20	Q	.	.	.	.
(PEAK DAY 5, HOUR 13.750)							
13.833	0.0978	0.20	Q	.	.	.	.
(PEAK DAY 5, HOUR 13.833)							
13.917	0.0992	0.20	Q	.	.	.	.
(PEAK DAY 5, HOUR 13.917)							
14.000	0.1006	0.21	Q	.	.	.	.
(PEAK DAY 5, HOUR 14.000)							
14.083	0.1021	0.21	Q	.	.	.	.
(PEAK DAY 5, HOUR 14.083)							
14.167	0.1036	0.22	Q	.	.	.	.
(PEAK DAY 5, HOUR 14.167)							
14.250	0.1051	0.22	Q	.	.	.	.
(PEAK DAY 5, HOUR 14.250)							
14.333	0.1066	0.23	Q	.	.	.	.
(PEAK DAY 5, HOUR 14.333)							
14.417	0.1082	0.23	Q	.	.	.	.
(PEAK DAY 5, HOUR 14.417)							
14.500	0.1099	0.24	Q	.	.	.	.
(PEAK DAY 5, HOUR 14.500)							
14.583	0.1116	0.25	Q	.	.	.	.
(PEAK DAY 5, HOUR 14.583)							
14.667	0.1133	0.25	Q	.	.	.	.
(PEAK DAY 5, HOUR 14.667)							
14.750	0.1151	0.26	Q	.	.	.	.
(PEAK DAY 5, HOUR 14.750)							
14.833	0.1170	0.27	Q	.	.	.	.
(PEAK DAY 5, HOUR 14.833)							
14.917	0.1189	0.27	Q	.	.	.	.
(PEAK DAY 5, HOUR 14.917)							
15.000	0.1208	0.28	Q	.	.	.	.
(PEAK DAY 5, HOUR 15.000)							
15.083	0.1228	0.29	Q	.	.	.	.
(PEAK DAY 5, HOUR 15.083)							
15.167	0.1249	0.30	Q	.	.	.	.
(PEAK DAY 5, HOUR 15.167)							
15.250	0.1270	0.31	Q	.	.	.	.
(PEAK DAY 5, HOUR 15.250)							
15.333	0.1292	0.32	Q	.	.	.	.
(PEAK DAY 5, HOUR 15.333)							
15.417	0.1315	0.33	Q	.	.	.	.
(PEAK DAY 5, HOUR 15.417)							
15.500	0.1339	0.34	Q	.	.	.	.
(PEAK DAY 5, HOUR 15.500)							
15.583	0.1363	0.35	Q	.	.	.	.
(PEAK DAY 5, HOUR 15.583)							
15.667	0.1388	0.36	Q	.	.	.	.
(PEAK DAY 5, HOUR 15.667)							
15.750	0.1414	0.38	Q	.	.	.	.
(PEAK DAY 5, HOUR 15.750)							
15.833	0.1441	0.39	Q	.	.	.	.
(PEAK DAY 5, HOUR 15.833)							
15.917	0.1470	0.42	Q	.	.	.	.
(PEAK DAY 5, HOUR 15.917)							
16.000	0.1503	0.47	Q	.	.	.	.
(PEAK DAY 5, HOUR 16.000)							
16.083	0.1775	3.95	Q	.	.	.	.
(PEAK DAY 5, HOUR 16.083)							
16.167	0.2461	9.96	Q	.	.	.	.
(PEAK DAY 5, HOUR 16.167)							
16.250	0.3757	18.81	Q	.	.	.	.
(PEAK DAY 5, HOUR 16.250)							
16.333	0.5674	27.84	Q	.	.	.	.

(PEAK DAY 5, HOUR 16.333)							
16.417	0.7844	31.51	Q	.	.	.	.
(PEAK DAY 5, HOUR 16.417)							
16.500	1.0428	37.52	VQ	.	.	.	.
(PEAK DAY 5, HOUR 16.500)							
16.583	1.2549	30.80	Q	.	.	.	.
(PEAK DAY 5, HOUR 16.583)							
16.667	1.4127	22.91	Q	.	.	.	.
(PEAK DAY 5, HOUR 16.667)							
16.750	1.5274	16.66	Q	.	.	.	.
(PEAK DAY 5, HOUR 16.750)							
16.833	1.6110	12.13	Q	.	.	.	.
(PEAK DAY 5, HOUR 16.833)							
16.917	1.6723	8.90	Q	.	.	.	.
(PEAK DAY 5, HOUR 16.917)							
17.000	1.7203	6.97	Q	.	.	.	.
(PEAK DAY 5, HOUR 17.000)							
17.083	1.7567	5.29	Q	.	.	.	.
(PEAK DAY 5, HOUR 17.083)							
17.167	1.7839	3.95	Q	.	.	.	.
(PEAK DAY 5, HOUR 17.167)							
17.250	1.8048	3.03	Q	.	.	.	.
(PEAK DAY 5, HOUR 17.250)							
17.333	1.8238	2.77	Q	.	.	.	.
(PEAK DAY 5, HOUR 17.333)							
17.417	1.8412	2.52	Q	.	.	.	.
(PEAK DAY 5, HOUR 17.417)							
17.500	1.8569	2.28	Q	.	.	.	.
(PEAK DAY 5, HOUR 17.500)							
17.583	1.8716	2.14	Q	.	.	.	.
(PEAK DAY 5, HOUR 17.583)							
17.667	1.8834	1.71	Q	.	.	.	.
(PEAK DAY 5, HOUR 17.667)							
17.750	1.8926	1.34	Q	.	.	.	.
(PEAK DAY 5, HOUR 17.750)							
17.833	1.9014	1.27	Q	.	.	.	.
(PEAK DAY 5, HOUR 17.833)							
17.917	1.9092	1.14	Q	.	.	.	.
(PEAK DAY 5, HOUR 17.917)							
18.000	1.9160	0.99	Q	.	.	.	.
(PEAK DAY 5, HOUR 18.000)							
18.083	1.9222	0.89	Q	.	.	.	.
(PEAK DAY 5, HOUR 18.083)							
18.167	1.9279	0.83	Q	.	.	.	.
(PEAK DAY 5, HOUR 18.167)							
18.250	1.9335	0.81	Q	.	.	.	.
(PEAK DAY 5, HOUR 18.250)							
18.333	1.9389	0.78	Q	.	.	.	.
(PEAK DAY 5, HOUR 18.333)							
18.417	1.9438	0.72	Q	.	.	.	.
(PEAK DAY 5, HOUR 18.417)							
18.500	1.9484	0.66	Q	.	.	.	.
(PEAK DAY 5, HOUR 18.500)							
18.583	1.9527	0.63	Q	.	.	.	.
(PEAK DAY 5, HOUR 18.583)							
18.667	1.9570	0.62	Q	.	.	.	.
(PEAK DAY 5, HOUR 18.667)							
18.750	1.9612	0.61	Q	.	.	.	.
(PEAK DAY 5, HOUR 18.750)							
18.833	1.9652	0.59	Q	.	.	.	.
(PEAK DAY 5, HOUR 18.833)							
18.917	1.9685	0.48	Q	.	.	.	.
(PEAK DAY 5, HOUR 18.917)							
19.000	1.9715	0.44	Q	.	.	.	.
(PEAK DAY 5, HOUR 19.000)							
19.083	1.9745	0.44	Q	.	.	.	.
(PEAK DAY 5, HOUR 19.083)							
19.167	1.9775	0.43	Q	.	.	.	.
(PEAK DAY 5, HOUR 19.167)							
19.250	1.9802	0.39	Q	.	.	.	.
(PEAK DAY 5, HOUR 19.250)							
19.333	1.9828	0.38	Q	.	.	.	.
(PEAK DAY 5, HOUR 19.333)							
19.417	1.9854	0.38	Q	.	.	.	.
(PEAK DAY 5, HOUR 19.417)							
19.500	1.9880	0.38	Q	.	.	.	.
(PEAK DAY 5, HOUR 19.500)							
19.583	1.9905	0.37	Q	.	.	.	.
(PEAK DAY 5, HOUR 19.583)							
19.667	1.9929	0.35	Q	.	.	.	.
(PEAK DAY 5, HOUR 19.667)							
19.750	1.9951	0.31	Q	.	.	.	.
(PEAK DAY 5, HOUR 19.750)							
19.833	1.9970	0.29	Q	.	.	.	.
(PEAK DAY 5, HOUR 19.833)							
19.917	1.9990	0.29	Q	.	.	.	.
(PEAK DAY 5, HOUR 19.917)							
20.000	2.0010	0.28	Q	.	.	.	.
(PEAK DAY 5, HOUR 20.000)							
20.083	2.0029	0.28	Q	.	.	.	.
(PEAK DAY 5, HOUR 20.083)							
20.167	2.0046	0.25	Q	.	.	.	.
(PEAK DAY 5, HOUR 20.167)							
20.250	2.0061	0.21	Q	.	.	.	.
(PEAK DAY 5, HOUR 20.250)							
20.333	2.0071	0.15	Q	.	.	.	.
(PEAK DAY 5, HOUR 20.333)							
20.417	2.0079	0.12	Q	.	.	.	.
(PEAK DAY 5, HOUR 20.417)							
20.500	2.0088	0.12	Q	.	.	.	.
(PEAK DAY 5, HOUR 20.500)							
20.583	2.0096	0.12	Q	.	.	.	.
(PEAK DAY 5, HOUR 20.583)							
20.667	2.0104	0.12	Q	.	.	.	.
(PEAK DAY 5, HOUR 20.667)							
20.750	2.0113	0.12	Q	.	.	.	.
(PEAK DAY 5, HOUR 20.750)							
20.833	2.0121	0.12	Q	.	.	.	.
(PEAK DAY 5, HOUR 20.833)							
20.917	2.0129	0.12	Q	.	.	.	.
(PEAK DAY 5, HOUR 20.917)							
21.000	2.0137	0.12	Q	.	.	.	.
(PEAK DAY 5, HOUR 21.000)							
21.083	2.0145	0.11	Q	.	.	.	.
(PEAK DAY 5, HOUR 21.083)							
21.167	2.0152	0.11	Q	.	.	.	.
(PEAK DAY 5, HOUR 21.167)							
21.250	2.0160	0.11	Q	.	.	.	.
(PEAK DAY 5, HOUR 21.250)							
21.333	2.0168	0.11	Q	.	.	.	.
(PEAK DAY 5, HOUR 21.333)							
21.417	2.0175	0.11	Q	.	.	.	.
(PEAK DAY 5, HOUR 21.417)							
21.500	2.0183	0.11	Q	.	.	.	.
(PEAK DAY 5, HOUR 21.500)							
21.583	2.0190	0.11	Q	.	.	.	.
(PEAK DAY 5, HOUR 21.583)							
21.667	2.0198	0.11	Q	.	.	.	.
(PEAK DAY 5, HOUR 21.667)							
21.750	2.0205	0.11	Q	.	.	.	.
(PEAK DAY 5, HOUR 21.750)							
21.833	2.0212	0.11	Q	.	.	.	.
(PEAK DAY 5, HOUR 21.833)							
21.917	2.0220	0.10	Q	.	.	.	.

(PEAK DAY 5, HOUR 21.917)							
22.000	2.0227	0.10	Q	.	.	.	.
(PEAK DAY 5, HOUR 22.000)							
22.083	2.0234	0.10	Q	.	.	.	.
(PEAK DAY 5, HOUR 22.083)							
22.167	2.0241	0.10	Q	.	.	.	.
(PEAK DAY 5, HOUR 22.167)							
22.250	2.0248	0.10	Q	.	.	.	.
(PEAK DAY 5, HOUR 22.250)							
22.333	2.0255	0.10	Q	.	.	.	.
(PEAK DAY 5, HOUR 22.333)							
22.417	2.0262	0.10	Q	.	.	.	.
(PEAK DAY 5, HOUR 22.417)							
22.500	2.0269	0.10	Q	.	.	.	.
(PEAK DAY 5, HOUR 22.500)							
22.583	2.0276	0.10	Q	.	.	.	.
(PEAK DAY 5, HOUR 22.583)							
22.667	2.0281	0.08	Q	.	.	.	.
(PEAK DAY 5, HOUR 22.667)							
22.750	2.0286	0.07	Q	.	.	.	.
(PEAK DAY 5, HOUR 22.750)							
22.833	2.0290	0.07	Q	.	.	.	.
(PEAK DAY 5, HOUR 22.833)							
22.917	2.0295	0.07	Q	.	.	.	.
(PEAK DAY 5, HOUR 22.917)							
23.000	2.0299	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 23.000)							
23.083	2.0304	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 23.083)							
23.167	2.0308	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 23.167)							
23.250	2.0312	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 23.250)							
23.333	2.0317	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 23.333)							
23.417	2.0321	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 23.417)							
23.500	2.0325	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 23.500)							
23.583	2.0329	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 23.583)							
23.667	2.0334	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 23.667)							
23.750	2.0338	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 23.750)							
23.833	2.0342	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 23.833)							
23.917	2.0346	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 23.917)							
24.000	2.0350	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 24.000)							
24.083	2.0354	0.06	Q	.	.	.	.
(PEAK DAY 4, HOUR 0.083)							
24.167	2.0358	0.06	Q	.	.	.	.
(PEAK DAY 4, HOUR 0.167)							
24.250	2.0362	0.06	Q	.	.	.	.
(PEAK DAY 4, HOUR 0.250)							
24.333	2.0367	0.06	Q	.	.	.	.
(PEAK DAY 4, HOUR 0.333)							
24.417	2.0371	0.06	Q	.	.	.	.
(PEAK DAY 4, HOUR 0.417)							
24.500	2.0376	0.07	Q	.	.	.	.
(PEAK DAY 4, HOUR 0.500)							
24.583	2.0381	0.07	Q	.	.	.	.
(PEAK DAY 4, HOUR 0.583)							
24.667	2.0386	0.07	Q	.	.	.	.
(PEAK DAY 4, HOUR 0.667)							
24.750	2.0391	0.07	Q	.	.	.	.
(PEAK DAY 4, HOUR 0.750)							
24.833	2.0396	0.07	Q	.	.	.	.
(PEAK DAY 4, HOUR 0.833)							
24.917	2.0401	0.08	Q	.	.	.	.
(PEAK DAY 4, HOUR 0.917)							
25.000	2.0406	0.08	Q	.	.	.	.
(PEAK DAY 4, HOUR 1.000)							
25.083	2.0412	0.08	Q	.	.	.	.
(PEAK DAY 4, HOUR 1.083)							
25.167	2.0417	0.08	Q	.	.	.	.
(PEAK DAY 4, HOUR 1.167)							
25.250	2.0422	0.08	Q	.	.	.	.
(PEAK DAY 4, HOUR 1.250)							
25.333	2.0428	0.08	Q	.	.	.	.
(PEAK DAY 4, HOUR 1.333)							
25.417	2.0433	0.08	Q	.	.	.	.
(PEAK DAY 4, HOUR 1.417)							
25.500	2.0438	0.08	Q	.	.	.	.
(PEAK DAY 4, HOUR 1.500)							
25.583	2.0444	0.08	Q	.	.	.	.
(PEAK DAY 4, HOUR 1.583)							
25.667	2.0449	0.08	Q	.	.	.	.
(PEAK DAY 4, HOUR 1.667)							
25.750	2.0455	0.08	Q	.	.	.	.
(PEAK DAY 4, HOUR 1.750)							
25.833	2.0460	0.08	Q	.	.	.	.
(PEAK DAY 4, HOUR 1.833)							
25.917	2.0466	0.08	Q	.	.	.	.
(PEAK DAY 4, HOUR 1.917)							
26.000	2.0472	0.08	Q	.	.	.	.
(PEAK DAY 4, HOUR 2.000)							
26.083	2.0477	0.08	Q	.	.	.	.
(PEAK DAY 4, HOUR 2.083)							
26.167	2.0483	0.08	Q	.	.	.	.
(PEAK DAY 4, HOUR 2.167)							
26.250	2.0488	0.08	Q	.	.	.	.
(PEAK DAY 4, HOUR 2.250)							
26.333	2.0494	0.08	Q	.	.	.	.
(PEAK DAY 4, HOUR 2.333)							
26.417	2.0500	0.08	Q	.	.	.	.
(PEAK DAY 4, HOUR 2.417)							
26.500	2.0506	0.08	Q	.	.	.	.
(PEAK DAY 4, HOUR 2.500)							
26.583	2.0511	0.08	Q	.	.	.	.
(PEAK DAY 4, HOUR 2.583)							
26.667	2.0517	0.08	Q	.	.	.	.
(PEAK DAY 4, HOUR 2.667)							
26.750	2.0523	0.08	Q	.	.	.	.
(PEAK DAY 4, HOUR 2.750)							
26.833	2.0529	0.08	Q	.	.	.	.
(PEAK DAY 4, HOUR 2.833)							
26.917	2.0534	0.08	Q	.	.	.	.
(PEAK DAY 4, HOUR 2.917)							
27.000	2.0540	0.09	Q	.	.	.	.
(PEAK DAY 4, HOUR 3.000)							
27.083	2.0546	0.09	Q	.	.	.	.
(PEAK DAY 4, HOUR 3.083)							
27.167	2.0552	0.09	Q	.	.	.	.
(PEAK DAY 4, HOUR 3.167)							
27.250	2.0558	0.09	Q	.	.	.	.
(PEAK DAY 4, HOUR 3.250)							
27.333	2.0564	0.09	Q	.	.	.	.
(PEAK DAY 4, HOUR 3.333)							
27.417	2.0570	0.09	Q	.	.	.	.
(PEAK DAY 4, HOUR 3.417)							
27.500	2.0576	0.09	Q	.	.	.	.

(PEAK DAY 4, HOUR 3.500)
27.583 2.0582 0.09 Q . . . .
(PEAK DAY 4, HOUR 3.583)
27.667 2.0588 0.09 Q . . . .
(PEAK DAY 4, HOUR 3.667)
27.750 2.0594 0.09 Q . . . .
(PEAK DAY 4, HOUR 3.750)
27.833 2.0600 0.09 Q . . . .
(PEAK DAY 4, HOUR 3.833)
27.917 2.0606 0.09 Q . . . .
(PEAK DAY 4, HOUR 3.917)
28.000 2.0612 0.09 Q . . . .
(PEAK DAY 4, HOUR 4.000)
28.083 2.0619 0.09 Q . . . .
(PEAK DAY 4, HOUR 4.083)
28.167 2.0625 0.09 Q . . . .
(PEAK DAY 4, HOUR 4.167)
28.250 2.0631 0.09 Q . . . .
(PEAK DAY 4, HOUR 4.250)
28.333 2.0637 0.09 Q . . . .
(PEAK DAY 4, HOUR 4.333)
28.417 2.0644 0.09 Q . . . .
(PEAK DAY 4, HOUR 4.417)
28.500 2.0650 0.09 Q . . . .
(PEAK DAY 4, HOUR 4.500)
28.583 2.0656 0.09 Q . . . .
(PEAK DAY 4, HOUR 4.583)
28.667 2.0663 0.09 Q . . . .
(PEAK DAY 4, HOUR 4.667)
28.750 2.0669 0.09 Q . . . .
(PEAK DAY 4, HOUR 4.750)
28.833 2.0675 0.09 Q . . . .
(PEAK DAY 4, HOUR 4.833)
28.917 2.0682 0.09 Q . . . .
(PEAK DAY 4, HOUR 4.917)
29.000 2.0688 0.09 Q . . . .
(PEAK DAY 4, HOUR 5.000)
29.083 2.0695 0.09 Q . . . .
(PEAK DAY 4, HOUR 5.083)
29.167 2.0701 0.09 Q . . . .
(PEAK DAY 4, HOUR 5.167)
29.250 2.0708 0.10 Q . . . .
(PEAK DAY 4, HOUR 5.250)
29.333 2.0715 0.10 Q . . . .
(PEAK DAY 4, HOUR 5.333)
29.417 2.0721 0.10 Q . . . .
(PEAK DAY 4, HOUR 5.417)
29.500 2.0728 0.10 Q . . . .
(PEAK DAY 4, HOUR 5.500)
29.583 2.0735 0.10 Q . . . .
(PEAK DAY 4, HOUR 5.583)
29.667 2.0741 0.10 Q . . . .
(PEAK DAY 4, HOUR 5.667)
29.750 2.0748 0.10 Q . . . .
(PEAK DAY 4, HOUR 5.750)
29.833 2.0755 0.10 Q . . . .
(PEAK DAY 4, HOUR 5.833)
29.917 2.0762 0.10 Q . . . .
(PEAK DAY 4, HOUR 5.917)
30.000 2.0769 0.10 Q . . . .
(PEAK DAY 4, HOUR 6.000)
30.083 2.0775 0.10 Q . . . .
(PEAK DAY 4, HOUR 6.083)
30.167 2.0782 0.10 Q . . . .
(PEAK DAY 4, HOUR 6.167)
30.250 2.0789 0.10 Q . . . .
(PEAK DAY 4, HOUR 6.250)
30.333 2.0796 0.10 Q . . . .
(PEAK DAY 4, HOUR 6.333)
30.417 2.0803 0.10 Q . . . .
(PEAK DAY 4, HOUR 6.417)
30.500 2.0810 0.10 Q . . . .
(PEAK DAY 4, HOUR 6.500)
30.583 2.0817 0.10 Q . . . .
(PEAK DAY 4, HOUR 6.583)
30.667 2.0825 0.10 Q . . . .
(PEAK DAY 4, HOUR 6.667)
30.750 2.0832 0.10 Q . . . .
(PEAK DAY 4, HOUR 6.750)
30.833 2.0839 0.10 Q . . . .
(PEAK DAY 4, HOUR 6.833)
30.917 2.0846 0.11 Q . . . .
(PEAK DAY 4, HOUR 6.917)
31.000 2.0854 0.11 Q . . . .
(PEAK DAY 4, HOUR 7.000)
31.083 2.0861 0.11 Q . . . .
(PEAK DAY 4, HOUR 7.083)
31.167 2.0868 0.11 Q . . . .
(PEAK DAY 4, HOUR 7.167)
31.250 2.0876 0.11 Q . . . .
(PEAK DAY 4, HOUR 7.250)
31.333 2.0883 0.11 Q . . . .
(PEAK DAY 4, HOUR 7.333)
31.417 2.0891 0.11 Q . . . .
(PEAK DAY 4, HOUR 7.417)
31.500 2.0898 0.11 Q . . . .
(PEAK DAY 4, HOUR 7.500)
31.583 2.0906 0.11 Q . . . .
(PEAK DAY 4, HOUR 7.583)
31.667 2.0913 0.11 Q . . . .
(PEAK DAY 4, HOUR 7.667)
31.750 2.0921 0.11 Q . . . .
(PEAK DAY 4, HOUR 7.750)
31.833 2.0929 0.11 Q . . . .
(PEAK DAY 4, HOUR 7.833)
31.917 2.0937 0.11 Q . . . .
(PEAK DAY 4, HOUR 7.917)
32.000 2.0944 0.11 Q . . . .
(PEAK DAY 4, HOUR 8.000)
32.083 2.0952 0.11 Q . . . .
(PEAK DAY 4, HOUR 8.083)
32.167 2.0960 0.11 Q . . . .
(PEAK DAY 4, HOUR 8.167)
32.250 2.0968 0.12 Q . . . .
(PEAK DAY 4, HOUR 8.250)
32.333 2.0976 0.12 Q . . . .
(PEAK DAY 4, HOUR 8.333)
32.417 2.0984 0.12 Q . . . .
(PEAK DAY 4, HOUR 8.417)
32.500 2.0992 0.12 Q . . . .
(PEAK DAY 4, HOUR 8.500)
32.583 2.1000 0.12 Q . . . .
(PEAK DAY 4, HOUR 8.583)
32.667 2.1009 0.12 Q . . . .
(PEAK DAY 4, HOUR 8.667)
32.750 2.1017 0.12 Q . . . .
(PEAK DAY 4, HOUR 8.750)
32.833 2.1025 0.12 Q . . . .
(PEAK DAY 4, HOUR 8.833)
32.917 2.1034 0.12 Q . . . .
(PEAK DAY 4, HOUR 8.917)
33.000 2.1042 0.12 Q . . . .
(PEAK DAY 4, HOUR 9.000)
33.083 2.1051 0.12 Q . . . .

(PEAK DAY 4, HOUR 9.083)
33.167 2.1059 0.12 Q . . . .
(PEAK DAY 4, HOUR 9.167)
33.250 2.1068 0.13 Q . . . .
(PEAK DAY 4, HOUR 9.250)
33.333 2.1076 0.13 Q . . . .
(PEAK DAY 4, HOUR 9.333)
33.417 2.1085 0.13 Q . . . .
(PEAK DAY 4, HOUR 9.417)
33.500 2.1094 0.13 Q . . . .
(PEAK DAY 4, HOUR 9.500)
33.583 2.1103 0.13 Q . . . .
(PEAK DAY 4, HOUR 9.583)
33.667 2.1112 0.13 Q . . . .
(PEAK DAY 4, HOUR 9.667)
33.750 2.1121 0.13 Q . . . .
(PEAK DAY 4, HOUR 9.750)
33.833 2.1130 0.13 Q . . . .
(PEAK DAY 4, HOUR 9.833)
33.917 2.1139 0.13 Q . . . .
(PEAK DAY 4, HOUR 9.917)
34.000 2.1148 0.13 Q . . . .
(PEAK DAY 4, HOUR 10.000)
34.083 2.1158 0.13 Q . . . .
(PEAK DAY 4, HOUR 10.083)
34.167 2.1167 0.14 Q . . . .
(PEAK DAY 4, HOUR 10.167)
34.250 2.1176 0.14 Q . . . .
(PEAK DAY 4, HOUR 10.250)
34.333 2.1186 0.14 Q . . . .
(PEAK DAY 4, HOUR 10.333)
34.417 2.1195 0.14 Q . . . .
(PEAK DAY 4, HOUR 10.417)
34.500 2.1205 0.14 Q . . . .
(PEAK DAY 4, HOUR 10.500)
34.583 2.1215 0.14 Q . . . .
(PEAK DAY 4, HOUR 10.583)
34.667 2.1225 0.14 Q . . . .
(PEAK DAY 4, HOUR 10.667)
34.750 2.1235 0.14 Q . . . .
(PEAK DAY 4, HOUR 10.750)
34.833 2.1245 0.15 Q . . . .
(PEAK DAY 4, HOUR 10.833)
34.917 2.1255 0.15 Q . . . .
(PEAK DAY 4, HOUR 10.917)
35.000 2.1265 0.15 Q . . . .
(PEAK DAY 4, HOUR 11.000)
35.083 2.1275 0.15 Q . . . .
(PEAK DAY 4, HOUR 11.083)
35.167 2.1286 0.15 Q . . . .
(PEAK DAY 4, HOUR 11.167)
35.250 2.1296 0.15 Q . . . .
(PEAK DAY 4, HOUR 11.250)
35.333 2.1307 0.15 Q . . . .
(PEAK DAY 4, HOUR 11.333)
35.417 2.1318 0.16 Q . . . .
(PEAK DAY 4, HOUR 11.417)
35.500 2.1328 0.16 Q . . . .
(PEAK DAY 4, HOUR 11.500)
35.583 2.1339 0.16 Q . . . .
(PEAK DAY 4, HOUR 11.583)
35.667 2.1350 0.16 Q . . . .
(PEAK DAY 4, HOUR 11.667)
35.750 2.1362 0.16 Q . . . .
(PEAK DAY 4, HOUR 11.750)
35.833 2.1373 0.16 Q . . . .
(PEAK DAY 4, HOUR 11.833)
35.917 2.1384 0.17 Q . . . .
(PEAK DAY 4, HOUR 11.917)
36.000 2.1396 0.17 Q . . . .
(PEAK DAY 4, HOUR 12.000)
36.083 2.1408 0.17 Q . . . .
(PEAK DAY 4, HOUR 12.083)
36.167 2.1420 0.17 Q . . . .
(PEAK DAY 4, HOUR 12.167)
36.250 2.1432 0.18 Q . . . .
(PEAK DAY 4, HOUR 12.250)
36.333 2.1445 0.19 Q . . . .
(PEAK DAY 4, HOUR 12.333)
36.417 2.1458 0.19 Q . . . .
(PEAK DAY 4, HOUR 12.417)
36.500 2.1472 0.20 Q . . . .
(PEAK DAY 4, HOUR 12.500)
36.583 2.1487 0.21 Q . . . .
(PEAK DAY 4, HOUR 12.583)
36.667 2.1502 0.22 Q . . . .
(PEAK DAY 4, HOUR 12.667)
36.750 2.1518 0.22 Q . . . .
(PEAK DAY 4, HOUR 12.750)
36.833 2.1533 0.23 Q . . . .
(PEAK DAY 4, HOUR 12.833)
36.917 2.1549 0.23 Q . . . .
(PEAK DAY 4, HOUR 12.917)
37.000 2.1566 0.24 Q . . . .
(PEAK DAY 4, HOUR 13.000)
37.083 2.1583 0.24 Q . . . .
(PEAK DAY 4, HOUR 13.083)
37.167 2.1599 0.25 Q . . . .
(PEAK DAY 4, HOUR 13.167)
37.250 2.1617 0.25 Q . . . .
(PEAK DAY 4, HOUR 13.250)
37.333 2.1634 0.25 Q . . . .
(PEAK DAY 4, HOUR 13.333)
37.417 2.1652 0.26 Q . . . .
(PEAK DAY 4, HOUR 13.417)
37.500 2.1670 0.26 Q . . . .
(PEAK DAY 4, HOUR 13.500)
37.583 2.1688 0.27 Q . . . .
(PEAK DAY 4, HOUR 13.583)
37.667 2.1707 0.27 Q . . . .
(PEAK DAY 4, HOUR 13.667)
37.750 2.1726 0.27 Q . . . .
(PEAK DAY 4, HOUR 13.750)
37.833 2.1745 0.28 Q . . . .
(PEAK DAY 4, HOUR 13.833)
37.917 2.1765 0.28 Q . . . .
(PEAK DAY 4, HOUR 13.917)
38.000 2.1784 0.29 Q . . . .
(PEAK DAY 4, HOUR 14.000)
38.083 2.1805 0.29 Q . . . .
(PEAK DAY 4, HOUR 14.083)
38.167 2.1825 0.30 Q . . . .
(PEAK DAY 4, HOUR 14.167)
38.250 2.1847 0.31 Q . . . .
(PEAK DAY 4, HOUR 14.250)
38.333 2.1868 0.32 Q . . . .
(PEAK DAY 4, HOUR 14.333)
38.417 2.1891 0.32 Q . . . .
(PEAK DAY 4, HOUR 14.417)
38.500 2.1914 0.33 Q . . . .
(PEAK DAY 4, HOUR 14.500)
38.583 2.1938 0.34 Q . . . .
(PEAK DAY 4, HOUR 14.583)
38.667 2.1962 0.35 Q . . . .

(PEAK DAY 4, HOUR 14.667)							
38.750	2.1987	0.36	Q	.	.	.	.
(PEAK DAY 4, HOUR 14.750)							
38.833	2.2013	0.37	Q	.	.	.	.
(PEAK DAY 4, HOUR 14.833)							
38.917	2.2039	0.38	Q	.	.	.	.
(PEAK DAY 4, HOUR 14.917)							
39.000	2.2066	0.39	Q	.	.	.	.
(PEAK DAY 4, HOUR 15.000)							
39.083	2.2094	0.41	Q	.	.	.	.
(PEAK DAY 4, HOUR 15.083)							
39.167	2.2123	0.42	Q	.	.	.	.
(PEAK DAY 4, HOUR 15.167)							
39.250	2.2153	0.43	Q	.	.	.	.
(PEAK DAY 4, HOUR 15.250)							
39.333	2.2184	0.45	Q	.	.	.	.
(PEAK DAY 4, HOUR 15.333)							
39.417	2.2216	0.46	Q	.	.	.	.
(PEAK DAY 4, HOUR 15.417)							
39.500	2.2249	0.48	Q	.	.	.	.
(PEAK DAY 4, HOUR 15.500)							
39.583	2.2283	0.49	Q	.	.	.	.
(PEAK DAY 4, HOUR 15.583)							
39.667	2.2318	0.51	Q	.	.	.	.
(PEAK DAY 4, HOUR 15.667)							
39.750	2.2354	0.53	Q	.	.	.	.
(PEAK DAY 4, HOUR 15.750)							
39.833	2.2392	0.55	Q	.	.	.	.
(PEAK DAY 4, HOUR 15.833)							
39.917	2.2435	0.63	Q	.	.	.	.
(PEAK DAY 4, HOUR 15.917)							
40.000	2.2533	1.43	Q	.	.	.	.
(PEAK DAY 4, HOUR 16.000)							
40.083	2.3097	8.19	Q	.	.	.	.
(PEAK DAY 4, HOUR 16.083)							
40.167	2.4442	19.52	Q	.	.	.	.
(PEAK DAY 4, HOUR 16.167)							
40.250	2.6875	35.33	VQ	.	.	.	.
(PEAK DAY 4, HOUR 16.250)							
40.333	3.0347	50.42	VQ	.	.	.	.
(PEAK DAY 4, HOUR 16.333)							
40.417	3.4296	57.33	VQ	.	.	.	.
(PEAK DAY 4, HOUR 16.417)							
40.500	3.8807	65.50	VQ	.	.	.	.
(PEAK DAY 4, HOUR 16.500)							
40.583	4.2475	53.25	VQ	.	.	.	.
(PEAK DAY 4, HOUR 16.583)							
40.667	4.5195	39.50	VQ	.	.	.	.
(PEAK DAY 4, HOUR 16.667)							
40.750	4.7171	28.69	Q	.	.	.	.
(PEAK DAY 4, HOUR 16.750)							
40.833	4.8609	20.87	Q	.	.	.	.
(PEAK DAY 4, HOUR 16.833)							
40.917	4.9667	15.37	Q	.	.	.	.
(PEAK DAY 4, HOUR 16.917)							
41.000	5.0491	11.97	Q	.	.	.	.
(PEAK DAY 4, HOUR 17.000)							
41.083	5.1115	9.05	Q	.	.	.	.
(PEAK DAY 4, HOUR 17.083)							
41.167	5.1579	6.75	Q	.	.	.	.
(PEAK DAY 4, HOUR 17.167)							
41.250	5.1940	5.23	Q	.	.	.	.
(PEAK DAY 4, HOUR 17.250)							
41.333	5.2269	4.78	Q	.	.	.	.
(PEAK DAY 4, HOUR 17.333)							
41.417	5.2568	4.34	Q	.	.	.	.
(PEAK DAY 4, HOUR 17.417)							
41.500	5.2840	3.95	Q	.	.	.	.
(PEAK DAY 4, HOUR 17.500)							
41.583	5.3091	3.64	Q	.	.	.	.
(PEAK DAY 4, HOUR 17.583)							
41.667	5.3289	2.88	Q	.	.	.	.
(PEAK DAY 4, HOUR 17.667)							
41.750	5.3447	2.28	Q	.	.	.	.
(PEAK DAY 4, HOUR 17.750)							
41.833	5.3595	2.16	Q	.	.	.	.
(PEAK DAY 4, HOUR 17.833)							
41.917	5.3728	1.92	Q	.	.	.	.
(PEAK DAY 4, HOUR 17.917)							
42.000	5.3842	1.66	Q	.	.	.	.
(PEAK DAY 4, HOUR 18.000)							
42.083	5.3946	1.51	Q	.	.	.	.
(PEAK DAY 4, HOUR 18.083)							
42.167	5.4042	1.40	Q	.	.	.	.
(PEAK DAY 4, HOUR 18.167)							
42.250	5.4137	1.37	Q	.	.	.	.
(PEAK DAY 4, HOUR 18.250)							
42.333	5.4227	1.31	Q	.	.	.	.
(PEAK DAY 4, HOUR 18.333)							
42.417	5.4311	1.21	Q	.	.	.	.
(PEAK DAY 4, HOUR 18.417)							
42.500	5.4387	1.11	Q	.	.	.	.
(PEAK DAY 4, HOUR 18.500)							
42.583	5.4460	1.06	Q	.	.	.	.
(PEAK DAY 4, HOUR 18.583)							
42.667	5.4532	1.04	Q	.	.	.	.
(PEAK DAY 4, HOUR 18.667)							
42.750	5.4603	1.03	Q	.	.	.	.
(PEAK DAY 4, HOUR 18.750)							
42.833	5.4670	0.97	Q	.	.	.	.
(PEAK DAY 4, HOUR 18.833)							
42.917	5.4724	0.79	Q	.	.	.	.
(PEAK DAY 4, HOUR 18.917)							
43.000	5.4775	0.74	Q	.	.	.	.
(PEAK DAY 4, HOUR 19.000)							
43.083	5.4826	0.73	Q	.	.	.	.
(PEAK DAY 4, HOUR 19.083)							
43.167	5.4874	0.71	Q	.	.	.	.
(PEAK DAY 4, HOUR 19.167)							
43.250	5.4919	0.64	Q	.	.	.	.
(PEAK DAY 4, HOUR 19.250)							
43.333	5.4962	0.63	Q	.	.	.	.
(PEAK DAY 4, HOUR 19.333)							
43.417	5.5006	0.63	Q	.	.	.	.
(PEAK DAY 4, HOUR 19.417)							
43.500	5.5049	0.63	Q	.	.	.	.
(PEAK DAY 4, HOUR 19.500)							
43.583	5.5091	0.62	Q	.	.	.	.
(PEAK DAY 4, HOUR 19.583)							
43.667	5.5131	0.57	Q	.	.	.	.
(PEAK DAY 4, HOUR 19.667)							
43.750	5.5166	0.50	Q	.	.	.	.
(PEAK DAY 4, HOUR 19.750)							
43.833	5.5198	0.47	Q	.	.	.	.
(PEAK DAY 4, HOUR 19.833)							
43.917	5.5230	0.47	Q	.	.	.	.
(PEAK DAY 4, HOUR 19.917)							
44.000	5.5263	0.47	Q	.	.	.	.
(PEAK DAY 4, HOUR 20.000)							
44.083	5.5294	0.46	Q	.	.	.	.
(PEAK DAY 4, HOUR 20.083)							
44.167	5.5322	0.41	Q	.	.	.	.
(PEAK DAY 4, HOUR 20.167)							
44.250	5.5344	0.32	Q	.	.	.	.

(PEAK DAY 4, HOUR 20.250)							
44.333	5.5359	0.22	Q	.	.	.	.
(PEAK DAY 4, HOUR 20.333)							
44.417	5.5372	0.19	Q	.	.	.	.
(PEAK DAY 4, HOUR 20.417)							
44.500	5.5385	0.18	Q	.	.	.	.
(PEAK DAY 4, HOUR 20.500)							
44.583	5.5397	0.18	Q	.	.	.	.
(PEAK DAY 4, HOUR 20.583)							
44.667	5.5410	0.18	Q	.	.	.	.
(PEAK DAY 4, HOUR 20.667)							
44.750	5.5422	0.18	Q	.	.	.	.
(PEAK DAY 4, HOUR 20.750)							
44.833	5.5434	0.18	Q	.	.	.	.
(PEAK DAY 4, HOUR 20.833)							
44.917	5.5446	0.18	Q	.	.	.	.
(PEAK DAY 4, HOUR 20.917)							
45.000	5.5458	0.17	Q	.	.	.	.
(PEAK DAY 4, HOUR 21.000)							
45.083	5.5470	0.17	Q	.	.	.	.
(PEAK DAY 4, HOUR 21.083)							
45.167	5.5482	0.17	Q	.	.	.	.
(PEAK DAY 4, HOUR 21.167)							
45.250	5.5493	0.17	Q	.	.	.	.
(PEAK DAY 4, HOUR 21.250)							
45.333	5.5505	0.17	Q	.	.	.	.
(PEAK DAY 4, HOUR 21.333)							
45.417	5.5516	0.17	Q	.	.	.	.
(PEAK DAY 4, HOUR 21.417)							
45.500	5.5528	0.16	Q	.	.	.	.
(PEAK DAY 4, HOUR 21.500)							
45.583	5.5539	0.16	Q	.	.	.	.
(PEAK DAY 4, HOUR 21.583)							
45.667	5.5550	0.16	Q	.	.	.	.
(PEAK DAY 4, HOUR 21.667)							
45.750	5.5561	0.16	Q	.	.	.	.
(PEAK DAY 4, HOUR 21.750)							
45.833	5.5572	0.16	Q	.	.	.	.
(PEAK DAY 4, HOUR 21.833)							
45.917	5.5583	0.16	Q	.	.	.	.
(PEAK DAY 4, HOUR 21.917)							
46.000	5.5594	0.16	Q	.	.	.	.
(PEAK DAY 4, HOUR 22.000)							
46.083	5.5605	0.16	Q	.	.	.	.
(PEAK DAY 4, HOUR 22.083)							
46.167	5.5615	0.16	Q	.	.	.	.
(PEAK DAY 4, HOUR 22.167)							
46.250	5.5626	0.15	Q	.	.	.	.
(PEAK DAY 4, HOUR 22.250)							
46.333	5.5636	0.15	Q	.	.	.	.
(PEAK DAY 4, HOUR 22.333)							
46.417	5.5647	0.15	Q	.	.	.	.
(PEAK DAY 4, HOUR 22.417)							
46.500	5.5657	0.15	Q	.	.	.	.
(PEAK DAY 4, HOUR 22.500)							
46.583	5.5667	0.15	Q	.	.	.	.
(PEAK DAY 4, HOUR 22.583)							
46.667	5.5675	0.11	Q	.	.	.	.
(PEAK DAY 4, HOUR 22.667)							
46.750	5.5682	0.09	Q	.	.	.	.
(PEAK DAY 4, HOUR 22.750)							
46.833	5.5688	0.09	Q	.	.	.	.
(PEAK DAY 4, HOUR 22.833)							
46.917	5.5694	0.09	Q	.	.	.	.
(PEAK DAY 4, HOUR 22.917)							
47.000	5.5701	0.09	Q	.	.	.	.
(PEAK DAY 4, HOUR 23.000)							
47.083	5.5707	0.09	Q	.	.	.	.
(PEAK DAY 4, HOUR 23.083)							
47.167	5.5713	0.09	Q	.	.	.	.
(PEAK DAY 4, HOUR 23.167)							
47.250	5.5719	0.09	Q	.	.	.	.
(PEAK DAY 4, HOUR 23.250)							
47.333	5.5725	0.09	Q	.	.	.	.
(PEAK DAY 4, HOUR 23.333)							
47.417	5.5731	0.09	Q	.	.	.	.
(PEAK DAY 4, HOUR 23.417)							
47.500	5.5737	0.09	Q	.	.	.	.
(PEAK DAY 4, HOUR 23.500)							
47.583	5.5743	0.09	Q	.	.	.	.
(PEAK DAY 4, HOUR 23.583)							
47.667	5.5749	0.08	Q	.	.	.	.
(PEAK DAY 4, HOUR 23.667)							
47.750	5.5754	0.08	Q	.	.	.	.
(PEAK DAY 4, HOUR 23.750)							
47.833	5.5760	0.08	Q	.	.	.	.
(PEAK DAY 4, HOUR 23.833)							
47.917	5.5766	0.08	Q	.	.	.	.
(PEAK DAY 4, HOUR 23.917)							
48.000	5.5772	0.08	Q	.	.	.	.
(PEAK DAY 4, HOUR 24.000)							
48.083	5.5777	0.09	Q	.	.	.	.
(PEAK DAY 3, HOUR 0.083)							
48.167	5.5784	0.10	Q	.	.	.	.
(PEAK DAY 3, HOUR 0.167)							
48.250	5.5793	0.12	Q	.	.	.	.
(PEAK DAY 3, HOUR 0.250)							
48.333	5.5804	0.16	Q	.	.	.	.
(PEAK DAY 3, HOUR 0.333)							
48.417	5.5818	0.20	Q	.	.	.	.
(PEAK DAY 3, HOUR 0.417)							
48.500	5.5836	0.26	Q	.	.	.	.
(PEAK DAY 3, HOUR 0.500)							
48.583	5.5856	0.30	Q	.	.	.	.
(PEAK DAY 3, HOUR 0.583)							
48.667	5.5879	0.33	Q	.	.	.	.
(PEAK DAY 3, HOUR 0.667)							
48.750	5.5904	0.35	Q	.	.	.	.
(PEAK DAY 3, HOUR 0.750)							
48.833	5.5929	0.37	Q	.	.	.	.
(PEAK DAY 3, HOUR 0.833)							
48.917	5.5956	0.39	Q	.	.	.	.
(PEAK DAY 3, HOUR 0.917)							
49.000	5.5983	0.40	Q	.	.	.	.
(PEAK DAY 3, HOUR 1.000)							
49.083	5.6011	0.40	Q	.	.	.	.
(PEAK DAY 3, HOUR 1.083)							
49.167	5.6039	0.41	Q	.	.	.	.
(PEAK DAY 3, HOUR 1.167)							
49.250	5.6068	0.42	Q	.	.	.	.
(PEAK DAY 3, HOUR 1.250)							
49.333	5.6097	0.42	Q	.	.	.	.
(PEAK DAY 3, HOUR 1.333)							
49.417	5.6126	0.42	Q	.	.	.	.
(PEAK DAY 3, HOUR 1.417)							
49.500	5.6155	0.43	Q	.	.	.	.
(PEAK DAY 3, HOUR 1.500)							
49.583	5.6185	0.43	Q	.	.	.	.
(PEAK DAY 3, HOUR 1.583)							
49.667	5.6215	0.44	Q	.	.	.	.
(PEAK DAY 3, HOUR 1.667)							
49.750	5.6245	0.44	Q	.	.	.	.
(PEAK DAY 3, HOUR 1.750)							
49.833	5.6276	0.44	Q	.	.	.	.

(PEAK DAY 3, HOUR 1.833)
49.917 5.6306 0.44 Q . . . .
(PEAK DAY 3, HOUR 1.917)
50.000 5.6337 0.45 Q . . . .
(PEAK DAY 3, HOUR 2.000)
50.083 5.6368 0.45 Q . . . .
(PEAK DAY 3, HOUR 2.083)
50.167 5.6399 0.45 Q . . . .
(PEAK DAY 3, HOUR 2.167)
50.250 5.6431 0.45 Q . . . .
(PEAK DAY 3, HOUR 2.250)
50.333 5.6462 0.46 Q . . . .
(PEAK DAY 3, HOUR 2.333)
50.417 5.6494 0.46 Q . . . .
(PEAK DAY 3, HOUR 2.417)
50.500 5.6526 0.46 Q . . . .
(PEAK DAY 3, HOUR 2.500)
50.583 5.6558 0.46 Q . . . .
(PEAK DAY 3, HOUR 2.583)
50.667 5.6590 0.47 Q . . . .
(PEAK DAY 3, HOUR 2.667)
50.750 5.6622 0.47 Q . . . .
(PEAK DAY 3, HOUR 2.750)
50.833 5.6655 0.47 Q . . . .
(PEAK DAY 3, HOUR 2.833)
50.917 5.6687 0.47 Q . . . .
(PEAK DAY 3, HOUR 2.917)
51.000 5.6720 0.48 Q . . . .
(PEAK DAY 3, HOUR 3.000)
51.083 5.6753 0.48 Q . . . .
(PEAK DAY 3, HOUR 3.083)
51.167 5.6786 0.48 Q . . . .
(PEAK DAY 3, HOUR 3.167)
51.250 5.6819 0.48 Q . . . .
(PEAK DAY 3, HOUR 3.250)
51.333 5.6853 0.49 Q . . . .
(PEAK DAY 3, HOUR 3.333)
51.417 5.6886 0.49 Q . . . .
(PEAK DAY 3, HOUR 3.417)
51.500 5.6920 0.49 Q . . . .
(PEAK DAY 3, HOUR 3.500)
51.583 5.6954 0.49 Q . . . .
(PEAK DAY 3, HOUR 3.583)
51.667 5.6988 0.49 Q . . . .
(PEAK DAY 3, HOUR 3.667)
51.750 5.7022 0.50 Q . . . .
(PEAK DAY 3, HOUR 3.750)
51.833 5.7056 0.50 Q . . . .
(PEAK DAY 3, HOUR 3.833)
51.917 5.7091 0.50 Q . . . .
(PEAK DAY 3, HOUR 3.917)
52.000 5.7126 0.50 Q . . . .
(PEAK DAY 3, HOUR 4.000)
52.083 5.7160 0.51 Q . . . .
(PEAK DAY 3, HOUR 4.083)
52.167 5.7195 0.51 Q . . . .
(PEAK DAY 3, HOUR 4.167)
52.250 5.7231 0.51 Q . . . .
(PEAK DAY 3, HOUR 4.250)
52.333 5.7266 0.51 Q . . . .
(PEAK DAY 3, HOUR 4.333)
52.417 5.7301 0.51 Q . . . .
(PEAK DAY 3, HOUR 4.417)
52.500 5.7337 0.52 Q . . . .
(PEAK DAY 3, HOUR 4.500)
52.583 5.7373 0.52 Q . . . .
(PEAK DAY 3, HOUR 4.583)
52.667 5.7409 0.52 Q . . . .
(PEAK DAY 3, HOUR 4.667)
52.750 5.7445 0.52 Q . . . .
(PEAK DAY 3, HOUR 4.750)
52.833 5.7481 0.53 Q . . . .
(PEAK DAY 3, HOUR 4.833)
52.917 5.7517 0.53 Q . . . .
(PEAK DAY 3, HOUR 4.917)
53.000 5.7554 0.53 Q . . . .
(PEAK DAY 3, HOUR 5.000)
53.083 5.7591 0.53 Q . . . .
(PEAK DAY 3, HOUR 5.083)
53.167 5.7628 0.54 Q . . . .
(PEAK DAY 3, HOUR 5.167)
53.250 5.7665 0.54 Q . . . .
(PEAK DAY 3, HOUR 5.250)
53.333 5.7702 0.54 Q . . . .
(PEAK DAY 3, HOUR 5.333)
53.417 5.7739 0.54 Q . . . .
(PEAK DAY 3, HOUR 5.417)
53.500 5.7777 0.55 Q . . . .
(PEAK DAY 3, HOUR 5.500)
53.583 5.7815 0.55 Q . . . .
(PEAK DAY 3, HOUR 5.583)
53.667 5.7853 0.55 Q . . . .
(PEAK DAY 3, HOUR 5.667)
53.750 5.7891 0.55 Q . . . .
(PEAK DAY 3, HOUR 5.750)
53.833 5.7929 0.56 Q . . . .
(PEAK DAY 3, HOUR 5.833)
53.917 5.7968 0.56 Q . . . .
(PEAK DAY 3, HOUR 5.917)
54.000 5.8006 0.56 Q . . . .
(PEAK DAY 3, HOUR 6.000)
54.083 5.8045 0.57 Q . . . .
(PEAK DAY 3, HOUR 6.083)
54.167 5.8085 0.57 Q . . . .
(PEAK DAY 3, HOUR 6.167)
54.250 5.8124 0.57 Q . . . .
(PEAK DAY 3, HOUR 6.250)
54.333 5.8163 0.57 Q . . . .
(PEAK DAY 3, HOUR 6.333)
54.417 5.8203 0.58 Q . . . .
(PEAK DAY 3, HOUR 6.417)
54.500 5.8243 0.58 Q . . . .
(PEAK DAY 3, HOUR 6.500)
54.583 5.8283 0.58 Q . . . .
(PEAK DAY 3, HOUR 6.583)
54.667 5.8323 0.59 Q . . . .
(PEAK DAY 3, HOUR 6.667)
54.750 5.8364 0.59 Q . . . .
(PEAK DAY 3, HOUR 6.750)
54.833 5.8405 0.59 Q . . . .
(PEAK DAY 3, HOUR 6.833)
54.917 5.8446 0.60 Q . . . .
(PEAK DAY 3, HOUR 6.917)
55.000 5.8487 0.60 Q . . . .
(PEAK DAY 3, HOUR 7.000)
55.083 5.8528 0.60 Q . . . .
(PEAK DAY 3, HOUR 7.083)
55.167 5.8570 0.61 Q . . . .
(PEAK DAY 3, HOUR 7.167)
55.250 5.8612 0.61 Q . . . .
(PEAK DAY 3, HOUR 7.250)
55.333 5.8654 0.61 Q . . . .
(PEAK DAY 3, HOUR 7.333)
55.417 5.8697 0.62 Q . . . .

(PEAK DAY 3, HOUR 7.417)
55.500 5.8739 0.62 Q . . . .
(PEAK DAY 3, HOUR 7.500)
55.583 5.8782 0.62 Q . . . .
(PEAK DAY 3, HOUR 7.583)
55.667 5.8825 0.63 Q . . . .
(PEAK DAY 3, HOUR 7.667)
55.750 5.8869 0.63 Q . . . .
(PEAK DAY 3, HOUR 7.750)
55.833 5.8912 0.63 Q . . . .
(PEAK DAY 3, HOUR 7.833)
55.917 5.8956 0.64 Q . . . .
(PEAK DAY 3, HOUR 7.917)
56.000 5.9000 0.64 Q . . . .
(PEAK DAY 3, HOUR 8.000)
56.083 5.9045 0.64 Q . . . .
(PEAK DAY 3, HOUR 8.083)
56.167 5.9089 0.65 Q . . . .
(PEAK DAY 3, HOUR 8.167)
56.250 5.9134 0.65 Q . . . .
(PEAK DAY 3, HOUR 8.250)
56.333 5.9180 0.66 Q . . . .
(PEAK DAY 3, HOUR 8.333)
56.417 5.9225 0.66 Q . . . .
(PEAK DAY 3, HOUR 8.417)
56.500 5.9271 0.67 Q . . . .
(PEAK DAY 3, HOUR 8.500)
56.583 5.9317 0.67 Q . . . .
(PEAK DAY 3, HOUR 8.583)
56.667 5.9363 0.67 Q . . . .
(PEAK DAY 3, HOUR 8.667)
56.750 5.9410 0.68 Q . . . .
(PEAK DAY 3, HOUR 8.750)
56.833 5.9457 0.68 Q . . . .
(PEAK DAY 3, HOUR 8.833)
56.917 5.9505 0.69 Q . . . .
(PEAK DAY 3, HOUR 8.917)
57.000 5.9552 0.69 Q . . . .
(PEAK DAY 3, HOUR 9.000)
57.083 5.9600 0.70 Q . . . .
(PEAK DAY 3, HOUR 9.083)
57.167 5.9649 0.70 Q . . . .
(PEAK DAY 3, HOUR 9.167)
57.250 5.9697 0.71 Q . . . .
(PEAK DAY 3, HOUR 9.250)
57.333 5.9746 0.71 Q . . . .
(PEAK DAY 3, HOUR 9.333)
57.417 5.9796 0.72 Q . . . .
(PEAK DAY 3, HOUR 9.417)
57.500 5.9846 0.72 Q . . . .
(PEAK DAY 3, HOUR 9.500)
57.583 5.9896 0.73 Q . . . .
(PEAK DAY 3, HOUR 9.583)
57.667 5.9946 0.73 Q . . . .
(PEAK DAY 3, HOUR 9.667)
57.750 5.9997 0.74 Q . . . .
(PEAK DAY 3, HOUR 9.750)
57.833 6.0048 0.74 Q . . . .
(PEAK DAY 3, HOUR 9.833)
57.917 6.0100 0.75 Q . . . .
(PEAK DAY 3, HOUR 9.917)
58.000 6.0152 0.76 Q . . . .
(PEAK DAY 3, HOUR 10.000)
58.083 6.0205 0.76 Q . . . .
(PEAK DAY 3, HOUR 10.083)
58.167 6.0257 0.77 Q . . . .
(PEAK DAY 3, HOUR 10.167)
58.250 6.0311 0.77 Q . . . .
(PEAK DAY 3, HOUR 10.250)
58.333 6.0365 0.78 Q . . . .
(PEAK DAY 3, HOUR 10.333)
58.417 6.0419 0.79 Q . . . .
(PEAK DAY 3, HOUR 10.417)
58.500 6.0474 0.79 Q . . . .
(PEAK DAY 3, HOUR 10.500)
58.583 6.0529 0.80 Q . . . .
(PEAK DAY 3, HOUR 10.583)
58.667 6.0584 0.81 Q . . . .
(PEAK DAY 3, HOUR 10.667)
58.750 6.0641 0.82 Q . . . .
(PEAK DAY 3, HOUR 10.750)
58.833 6.0697 0.82 Q . . . .
(PEAK DAY 3, HOUR 10.833)
58.917 6.0754 0.83 Q . . . .
(PEAK DAY 3, HOUR 10.917)
59.000 6.0812 0.84 Q . . . .
(PEAK DAY 3, HOUR 11.000)
59.083 6.0870 0.85 Q . . . .
(PEAK DAY 3, HOUR 11.083)
59.167 6.0929 0.85 Q . . . .
(PEAK DAY 3, HOUR 11.167)
59.250 6.0988 0.86 Q . . . .
(PEAK DAY 3, HOUR 11.250)
59.333 6.1048 0.87 Q . . . .
(PEAK DAY 3, HOUR 11.333)
59.417 6.1109 0.88 Q . . . .
(PEAK DAY 3, HOUR 11.417)
59.500 6.1170 0.89 Q . . . .
(PEAK DAY 3, HOUR 11.500)
59.583 6.1232 0.90 Q . . . .
(PEAK DAY 3, HOUR 11.583)
59.667 6.1294 0.91 Q . . . .
(PEAK DAY 3, HOUR 11.667)
59.750 6.1358 0.92 Q . . . .
(PEAK DAY 3, HOUR 11.750)
59.833 6.1421 0.93 Q . . . .
(PEAK DAY 3, HOUR 11.833)
59.917 6.1486 0.94 Q . . . .
(PEAK DAY 3, HOUR 11.917)
60.000 6.1551 0.95 Q . . . .
(PEAK DAY 3, HOUR 12.000)
60.083 6.1617 0.96 Q . . . .
(PEAK DAY 3, HOUR 12.083)
60.167 6.1685 0.98 Q . . . .
(PEAK DAY 3, HOUR 12.167)
60.250 6.1755 1.01 Q . . . .
(PEAK DAY 3, HOUR 12.250)
60.333 6.1828 1.06 Q . . . .
(PEAK DAY 3, HOUR 12.333)
60.417 6.1904 1.10 Q . . . .
(PEAK DAY 3, HOUR 12.417)
60.500 6.1983 1.15 Q . . . .
(PEAK DAY 3, HOUR 12.500)
60.583 6.2066 1.20 Q . . . .
(PEAK DAY 3, HOUR 12.583)
60.667 6.2151 1.24 Q . . . .
(PEAK DAY 3, HOUR 12.667)
60.750 6.2238 1.27 Q . . . .
(PEAK DAY 3, HOUR 12.750)
60.833 6.2328 1.30 Q . . . .
(PEAK DAY 3, HOUR 12.833)
60.917 6.2419 1.32 Q . . . .
(PEAK DAY 3, HOUR 12.917)
61.000 6.2511 1.35 Q . . . .

(PEAK DAY 3, HOUR 13.000)
61.083 6.2606 1.37 Q . . . .
(PEAK DAY 3, HOUR 13.083)
61.167 6.2701 1.39 Q . . . .
(PEAK DAY 3, HOUR 13.167)
61.250 6.2799 1.41 Q . . . .
(PEAK DAY 3, HOUR 13.250)
61.333 6.2897 1.43 Q . . . .
(PEAK DAY 3, HOUR 13.333)
61.417 6.2998 1.46 Q . . . .
(PEAK DAY 3, HOUR 13.417)
61.500 6.3099 1.48 Q . . . .
(PEAK DAY 3, HOUR 13.500)
61.583 6.3203 1.50 Q . . . .
(PEAK DAY 3, HOUR 13.583)
61.667 6.3308 1.53 Q . . . .
(PEAK DAY 3, HOUR 13.667)
61.750 6.3415 1.55 Q . . . .
(PEAK DAY 3, HOUR 13.750)
61.833 6.3524 1.58 Q . . . .
(PEAK DAY 3, HOUR 13.833)
61.917 6.3634 1.60 Q . . . .
(PEAK DAY 3, HOUR 13.917)
62.000 6.3747 1.63 Q . . . .
(PEAK DAY 3, HOUR 14.000)
62.083 6.3861 1.66 Q . . . .
(PEAK DAY 3, HOUR 14.083)
62.167 6.3978 1.70 Q . . . .
(PEAK DAY 3, HOUR 14.167)
62.250 6.4098 1.74 Q . . . .
(PEAK DAY 3, HOUR 14.250)
62.333 6.4221 1.79 Q . . . .
(PEAK DAY 3, HOUR 14.333)
62.417 6.4347 1.84 Q . . . .
(PEAK DAY 3, HOUR 14.417)
62.500 6.4478 1.89 Q . . . .
(PEAK DAY 3, HOUR 14.500)
62.583 6.4611 1.94 Q . . . .
(PEAK DAY 3, HOUR 14.583)
62.667 6.4749 2.00 Q . . . .
(PEAK DAY 3, HOUR 14.667)
62.750 6.4890 2.05 Q . . . .
(PEAK DAY 3, HOUR 14.750)
62.833 6.5036 2.11 Q . . . .
(PEAK DAY 3, HOUR 14.833)
62.917 6.5185 2.17 Q . . . .
(PEAK DAY 3, HOUR 14.917)
63.000 6.5338 2.23 Q . . . .
(PEAK DAY 3, HOUR 15.000)
63.083 6.5496 2.29 Q . . . .
(PEAK DAY 3, HOUR 15.083)
63.167 6.5659 2.37 Q . . . .
(PEAK DAY 3, HOUR 15.167)
63.250 6.5828 2.44 Q . . . .
(PEAK DAY 3, HOUR 15.250)
63.333 6.6002 2.53 Q . . . .
(PEAK DAY 3, HOUR 15.333)
63.417 6.6182 2.62 Q . . . .
(PEAK DAY 3, HOUR 15.417)
63.500 6.6369 2.71 Q . . . .
(PEAK DAY 3, HOUR 15.500)
63.583 6.6561 2.79 Q . . . .
(PEAK DAY 3, HOUR 15.583)
63.667 6.6759 2.87 Q . . . .
(PEAK DAY 3, HOUR 15.667)
63.750 6.6985 3.28 Q . . . .
(PEAK DAY 3, HOUR 15.750)
63.833 6.7294 4.50 Q . . . .
(PEAK DAY 3, HOUR 15.833)
63.917 6.7842 7.95 Q . . . .
(PEAK DAY 3, HOUR 15.917)
64.000 6.8926 15.75 Q . . . .
(PEAK DAY 3, HOUR 16.000)
64.083 7.1542 37.99 VQ . . . .
(PEAK DAY 3, HOUR 16.083)
64.167 7.6461 71.42 V Q . . . .
(PEAK DAY 3, HOUR 16.167)
64.250 8.4198 112.35 .V Q . . . .
(PEAK DAY 3, HOUR 16.250)
64.333 9.4488 149.41 .V Q . . . .
(PEAK DAY 3, HOUR 16.333)
64.417 10.5824 164.60 .V Q . . . .
(PEAK DAY 3, HOUR 16.417)
64.500 11.7966 176.30 .V Q . . . .
(PEAK DAY 3, HOUR 16.500)
64.583 12.7970 145.26 .V Q . . . .
(PEAK DAY 3, HOUR 16.583)
64.667 13.5493 109.23 .V Q . . . .
(PEAK DAY 3, HOUR 16.667)
64.750 14.1013 80.15 .VQ . . . .
(PEAK DAY 3, HOUR 16.750)
64.833 14.5075 58.97 .Q . . . .
(PEAK DAY 3, HOUR 16.833)
64.917 14.8101 43.94 .Q . . . .
(PEAK DAY 3, HOUR 16.917)
65.000 15.0456 34.20 QV . . . .
(PEAK DAY 3, HOUR 17.000)
65.083 15.2267 26.29 QV . . . .
(PEAK DAY 3, HOUR 17.083)
65.167 15.3661 20.25 QV . . . .
(PEAK DAY 3, HOUR 17.167)
65.250 15.4781 16.27 QV . . . .
(PEAK DAY 3, HOUR 17.250)
65.333 15.5793 14.68 QV . . . .
(PEAK DAY 3, HOUR 17.333)
65.417 15.6712 13.35 QV . . . .
(PEAK DAY 3, HOUR 17.417)
65.500 15.7543 12.06 QV . . . .
(PEAK DAY 3, HOUR 17.500)
65.583 15.8297 10.96 QV . . . .
(PEAK DAY 3, HOUR 17.583)
65.667 15.8920 9.04 QV . . . .
(PEAK DAY 3, HOUR 17.667)
65.750 15.9435 7.49 QV . . . .
(PEAK DAY 3, HOUR 17.750)
65.833 15.9913 6.94 QV . . . .
(PEAK DAY 3, HOUR 17.833)
65.917 16.0345 6.27 Q V . . . .
(PEAK DAY 3, HOUR 17.917)
66.000 16.0729 5.58 Q V . . . .
(PEAK DAY 3, HOUR 18.000)
66.083 16.1082 5.13 Q V . . . .
(PEAK DAY 3, HOUR 18.083)
66.167 16.1414 4.81 Q V . . . .
(PEAK DAY 3, HOUR 18.167)
66.250 16.1734 4.65 Q V . . . .
(PEAK DAY 3, HOUR 18.250)
66.333 16.2040 4.43 Q V . . . .
(PEAK DAY 3, HOUR 18.333)
66.417 16.2325 4.14 Q V . . . .
(PEAK DAY 3, HOUR 18.417)
66.500 16.2591 3.85 Q V . . . .
(PEAK DAY 3, HOUR 18.500)
66.583 16.2844 3.67 Q V . . . .

(PEAK DAY 3, HOUR 18.583)
66.667 16.3089 3.56 Q V . . . .
(PEAK DAY 3, HOUR 18.667)
66.750 16.3326 3.45 Q V . . . .
(PEAK DAY 3, HOUR 18.750)
66.833 16.3550 3.24 Q V . . . .
(PEAK DAY 3, HOUR 18.833)
66.917 16.3744 2.82 Q V . . . .
(PEAK DAY 3, HOUR 18.917)
67.000 16.3926 2.64 Q V . . . .
(PEAK DAY 3, HOUR 19.000)
67.083 16.4103 2.58 Q V . . . .
(PEAK DAY 3, HOUR 19.083)
67.167 16.4275 2.50 Q V . . . .
(PEAK DAY 3, HOUR 19.167)
67.250 16.4437 2.35 Q V . . . .
(PEAK DAY 3, HOUR 19.250)
67.333 16.4595 2.30 Q V . . . .
(PEAK DAY 3, HOUR 19.333)
67.417 16.4751 2.27 Q V . . . .
(PEAK DAY 3, HOUR 19.417)
67.500 16.4905 2.23 Q V . . . .
(PEAK DAY 3, HOUR 19.500)
67.583 16.5054 2.17 Q V . . . .
(PEAK DAY 3, HOUR 19.583)
67.667 16.5195 2.04 Q V . . . .
(PEAK DAY 3, HOUR 19.667)
67.750 16.5324 1.87 Q V . . . .
(PEAK DAY 3, HOUR 19.750)
67.833 16.5446 1.78 Q V . . . .
(PEAK DAY 3, HOUR 19.833)
67.917 16.5567 1.75 Q V . . . .
(PEAK DAY 3, HOUR 19.917)
68.000 16.5684 1.71 Q V . . . .
(PEAK DAY 3, HOUR 20.000)
68.083 16.5797 1.64 Q V . . . .
(PEAK DAY 3, HOUR 20.083)
68.167 16.5899 1.48 Q V . . . .
(PEAK DAY 3, HOUR 20.167)
68.250 16.5985 1.24 Q V . . . .
(PEAK DAY 3, HOUR 20.250)
68.333 16.6054 1.00 Q V . . . .
(PEAK DAY 3, HOUR 20.333)
68.417 16.6116 0.91 Q V . . . .
(PEAK DAY 3, HOUR 20.417)
68.500 16.6177 0.89 Q V . . . .
(PEAK DAY 3, HOUR 20.500)
68.583 16.6237 0.88 Q V . . . .
(PEAK DAY 3, HOUR 20.583)
68.667 16.6297 0.86 Q V . . . .
(PEAK DAY 3, HOUR 20.667)
68.750 16.6356 0.86 Q V . . . .
(PEAK DAY 3, HOUR 20.750)
68.833 16.6414 0.84 Q V . . . .
(PEAK DAY 3, HOUR 20.833)
68.917 16.6472 0.84 Q V . . . .
(PEAK DAY 3, HOUR 20.917)
69.000 16.6528 0.83 Q V . . . .
(PEAK DAY 3, HOUR 21.000)
69.083 16.6585 0.82 Q V . . . .
(PEAK DAY 3, HOUR 21.083)
69.167 16.6640 0.81 Q V . . . .
(PEAK DAY 3, HOUR 21.167)
69.250 16.6696 0.80 Q V . . . .
(PEAK DAY 3, HOUR 21.250)
69.333 16.6750 0.79 Q V . . . .
(PEAK DAY 3, HOUR 21.333)
69.417 16.6804 0.78 Q V . . . .
(PEAK DAY 3, HOUR 21.417)
69.500 16.6858 0.78 Q V . . . .
(PEAK DAY 3, HOUR 21.500)
69.583 16.6911 0.77 Q V . . . .
(PEAK DAY 3, HOUR 21.583)
69.667 16.6963 0.76 Q V . . . .
(PEAK DAY 3, HOUR 21.667)
69.750 16.7015 0.76 Q V . . . .
(PEAK DAY 3, HOUR 21.750)
69.833 16.7067 0.75 Q V . . . .
(PEAK DAY 3, HOUR 21.833)
69.917 16.7118 0.74 Q V . . . .
(PEAK DAY 3, HOUR 21.917)
70.000 16.7169 0.74 Q V . . . .
(PEAK DAY 3, HOUR 22.000)
70.083 16.7219 0.73 Q V . . . .
(PEAK DAY 3, HOUR 22.083)
70.167 16.7269 0.72 Q V . . . .
(PEAK DAY 3, HOUR 22.167)
70.250 16.7319 0.72 Q V . . . .
(PEAK DAY 3, HOUR 22.250)
70.333 16.7368 0.71 Q V . . . .
(PEAK DAY 3, HOUR 22.333)
70.417 16.7416 0.70 Q V . . . .
(PEAK DAY 3, HOUR 22.417)
70.500 16.7463 0.69 Q V . . . .
(PEAK DAY 3, HOUR 22.500)
70.583 16.7509 0.66 Q V . . . .
(PEAK DAY 3, HOUR 22.583)
70.667 16.7549 0.58 Q V . . . .
(PEAK DAY 3, HOUR 22.667)
70.750 16.7585 0.53 Q V . . . .
(PEAK DAY 3, HOUR 22.750)
70.833 16.7621 0.52 Q V . . . .
(PEAK DAY 3, HOUR 22.833)
70.917 16.7657 0.52 Q V . . . .
(PEAK DAY 3, HOUR 22.917)
71.000 16.7692 0.51 Q V . . . .
(PEAK DAY 3, HOUR 23.000)
71.083 16.7727 0.51 Q V . . . .
(PEAK DAY 3, HOUR 23.083)
71.167 16.7762 0.50 Q V . . . .
(PEAK DAY 3, HOUR 23.167)
71.250 16.7796 0.50 Q V . . . .
(PEAK DAY 3, HOUR 23.250)
71.333 16.7830 0.50 Q V . . . .
(PEAK DAY 3, HOUR 23.333)
71.417 16.7864 0.49 Q V . . . .
(PEAK DAY 3, HOUR 23.417)
71.500 16.7898 0.49 Q V . . . .
(PEAK DAY 3, HOUR 23.500)
71.583 16.7931 0.48 Q V . . . .
(PEAK DAY 3, HOUR 23.583)
71.667 16.7964 0.48 Q V . . . .
(PEAK DAY 3, HOUR 23.667)
71.750 16.7997 0.48 Q V . . . .
(PEAK DAY 3, HOUR 23.750)
71.833 16.8029 0.47 Q V . . . .
(PEAK DAY 3, HOUR 23.833)
71.917 16.8062 0.47 Q V . . . .
(PEAK DAY 3, HOUR 23.917)
72.000 16.8094 0.46 Q V . . . .
(PEAK DAY 3, HOUR 24.000)
72.083 16.8131 0.54 Q V . . . .
(PEAK DAY 2, HOUR 0.083)
72.167 16.8184 0.77 Q V . . . .

(PEAK DAY 2, HOUR 0.167)
72.250 16.8267 1.21 Q V . . . .
(PEAK DAY 2, HOUR 0.250)
72.333 16.8396 1.87 Q V . . . .
(PEAK DAY 2, HOUR 0.333)
72.417 16.8577 2.62 Q V . . . .
(PEAK DAY 2, HOUR 0.417)
72.500 16.8819 3.52 Q V . . . .
(PEAK DAY 2, HOUR 0.500)
72.583 16.9113 4.27 Q V . . . .
(PEAK DAY 2, HOUR 0.583)
72.667 16.9445 4.82 Q V . . . .
(PEAK DAY 2, HOUR 0.667)
72.750 16.9806 5.23 Q V . . . .
(PEAK DAY 2, HOUR 0.750)
72.833 17.0187 5.53 Q V . . . .
(PEAK DAY 2, HOUR 0.833)
72.917 17.0583 5.75 Q V . . . .
(PEAK DAY 2, HOUR 0.917)
73.000 17.0991 5.93 Q V . . . .
(PEAK DAY 2, HOUR 1.000)
73.083 17.1410 6.07 Q V . . . .
(PEAK DAY 2, HOUR 1.083)
73.167 17.1835 6.18 Q V . . . .
(PEAK DAY 2, HOUR 1.167)
73.250 17.2267 6.26 Q V . . . .
(PEAK DAY 2, HOUR 1.250)
73.333 17.2704 6.35 Q V . . . .
(PEAK DAY 2, HOUR 1.333)
73.417 17.3146 6.42 Q V . . . .
(PEAK DAY 2, HOUR 1.417)
73.500 17.3593 6.49 Q V . . . .
(PEAK DAY 2, HOUR 1.500)
73.583 17.4045 6.56 Q V . . . .
(PEAK DAY 2, HOUR 1.583)
73.667 17.4500 6.62 Q V . . . .
(PEAK DAY 2, HOUR 1.667)
73.750 17.4959 6.67 Q V . . . .
(PEAK DAY 2, HOUR 1.750)
73.833 17.5422 6.71 Q V . . . .
(PEAK DAY 2, HOUR 1.833)
73.917 17.5887 6.76 Q V . . . .
(PEAK DAY 2, HOUR 1.917)
74.000 17.6356 6.80 Q V . . . .
(PEAK DAY 2, HOUR 2.000)
74.083 17.6827 6.84 Q V . . . .
(PEAK DAY 2, HOUR 2.083)
74.167 17.7301 6.88 Q V . . . .
(PEAK DAY 2, HOUR 2.167)
74.250 17.7778 6.92 Q V . . . .
(PEAK DAY 2, HOUR 2.250)
74.333 17.8258 6.96 Q V . . . .
(PEAK DAY 2, HOUR 2.333)
74.417 17.8740 7.00 Q V . . . .
(PEAK DAY 2, HOUR 2.417)
74.500 17.9225 7.04 Q V . . . .
(PEAK DAY 2, HOUR 2.500)
74.583 17.9712 7.08 Q V . . . .
(PEAK DAY 2, HOUR 2.583)
74.667 18.0202 7.11 Q V . . . .
(PEAK DAY 2, HOUR 2.667)
74.750 18.0695 7.15 Q V . . . .
(PEAK DAY 2, HOUR 2.750)
74.833 18.1190 7.19 Q V . . . .
(PEAK DAY 2, HOUR 2.833)
74.917 18.1687 7.23 Q V . . . .
(PEAK DAY 2, HOUR 2.917)
75.000 18.2187 7.26 Q V . . . .
(PEAK DAY 2, HOUR 3.000)
75.083 18.2690 7.30 Q V . . . .
(PEAK DAY 2, HOUR 3.083)
75.167 18.3195 7.33 Q V . . . .
(PEAK DAY 2, HOUR 3.167)
75.250 18.3702 7.37 Q V . . . .
(PEAK DAY 2, HOUR 3.250)
75.333 18.4212 7.40 Q V . . . .
(PEAK DAY 2, HOUR 3.333)
75.417 18.4724 7.44 Q V . . . .
(PEAK DAY 2, HOUR 3.417)
75.500 18.5239 7.47 Q V . . . .
(PEAK DAY 2, HOUR 3.500)
75.583 18.5756 7.51 Q V . . . .
(PEAK DAY 2, HOUR 3.583)
75.667 18.6275 7.54 Q V . . . .
(PEAK DAY 2, HOUR 3.667)
75.750 18.6798 7.58 Q V . . . .
(PEAK DAY 2, HOUR 3.750)
75.833 18.7322 7.62 Q V . . . .
(PEAK DAY 2, HOUR 3.833)
75.917 18.7849 7.65 Q V . . . .
(PEAK DAY 2, HOUR 3.917)
76.000 18.8378 7.69 Q V . . . .
(PEAK DAY 2, HOUR 4.000)
76.083 18.8910 7.72 Q V . . . .
(PEAK DAY 2, HOUR 4.083)
76.167 18.9445 7.76 Q V . . . .
(PEAK DAY 2, HOUR 4.167)
76.250 18.9981 7.79 Q V . . . .
(PEAK DAY 2, HOUR 4.250)
76.333 19.0521 7.83 Q V . . . .
(PEAK DAY 2, HOUR 4.333)
76.417 19.1062 7.86 Q V . . . .
(PEAK DAY 2, HOUR 4.417)
76.500 19.1606 7.90 Q V . . . .
(PEAK DAY 2, HOUR 4.500)
76.583 19.2152 7.93 Q V . . . .
(PEAK DAY 2, HOUR 4.583)
76.667 19.2701 7.97 Q V . . . .
(PEAK DAY 2, HOUR 4.667)
76.750 19.3252 8.00 Q V . . . .
(PEAK DAY 2, HOUR 4.750)
76.833 19.3806 8.04 Q V . . . .
(PEAK DAY 2, HOUR 4.833)
76.917 19.4362 8.08 Q V . . . .
(PEAK DAY 2, HOUR 4.917)
77.000 19.4921 8.11 Q V . . . .
(PEAK DAY 2, HOUR 5.000)
77.083 19.5482 8.15 Q V . . . .
(PEAK DAY 2, HOUR 5.083)
77.167 19.6046 8.19 Q V . . . .
(PEAK DAY 2, HOUR 5.167)
77.250 19.6612 8.23 Q V . . . .
(PEAK DAY 2, HOUR 5.250)
77.333 19.7182 8.26 Q V . . . .
(PEAK DAY 2, HOUR 5.333)
77.417 19.7753 8.30 Q V . . . .
(PEAK DAY 2, HOUR 5.417)
77.500 19.8328 8.34 Q V . . . .
(PEAK DAY 2, HOUR 5.500)
77.583 19.8905 8.38 Q V . . . .
(PEAK DAY 2, HOUR 5.583)
77.667 19.9486 8.42 Q V . . . .
(PEAK DAY 2, HOUR 5.667)
77.750 20.0069 8.47 Q V . . . .

(PEAK DAY 2, HOUR 5.750)								
77.833	20.0654	8.51	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 5.833)								
77.917	20.1243	8.55	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 5.917)								
78.000	20.1835	8.59	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 6.000)								
78.083	20.2430	8.63	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 6.083)								
78.167	20.3027	8.68	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 6.167)								
78.250	20.3628	8.72	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 6.250)								
78.333	20.4232	8.77	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 6.333)								
78.417	20.4839	8.81	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 6.417)								
78.500	20.5449	8.86	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 6.500)								
78.583	20.6062	8.91	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 6.583)								
78.667	20.6679	8.95	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 6.667)								
78.750	20.7299	9.00	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 6.750)								
78.833	20.7922	9.05	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 6.833)								
78.917	20.8548	9.10	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 6.917)								
79.000	20.9178	9.15	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 7.000)								
79.083	20.9811	9.20	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 7.083)								
79.167	21.0448	9.25	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 7.167)								
79.250	21.1088	9.30	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 7.250)								
79.333	21.1732	9.35	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 7.333)								
79.417	21.2380	9.40	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 7.417)								
79.500	21.3031	9.46	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 7.500)								
79.583	21.3686	9.51	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 7.583)								
79.667	21.4345	9.57	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 7.667)								
79.750	21.5007	9.62	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 7.750)								
79.833	21.5674	9.68	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 7.833)								
79.917	21.6344	9.74	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 7.917)								
80.000	21.7019	9.79	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 8.000)								
80.083	21.7698	9.85	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 8.083)								
80.167	21.8381	9.92	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 8.167)								
80.250	21.9068	9.98	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 8.250)								
80.333	21.9759	10.04	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 8.333)								
80.417	22.0455	10.10	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 8.417)								
80.500	22.1155	10.17	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 8.500)								
80.583	22.1860	10.23	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 8.583)								
80.667	22.2569	10.30	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 8.667)								
80.750	22.3283	10.37	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 8.750)								
80.833	22.4002	10.44	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 8.833)								
80.917	22.4726	10.51	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 8.917)								
81.000	22.5455	10.58	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 9.000)								
81.083	22.6188	10.65	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 9.083)								
81.167	22.6927	10.73	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 9.167)								
81.250	22.7671	10.80	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 9.250)								
81.333	22.8421	10.88	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 9.333)								
81.417	22.9175	10.96	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 9.417)								
81.500	22.9936	11.04	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 9.500)								
81.583	23.0702	11.12	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 9.583)								
81.667	23.1473	11.20	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 9.667)								
81.750	23.2251	11.29	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 9.750)								
81.833	23.3034	11.38	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 9.833)								
81.917	23.3824	11.46	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 9.917)								
82.000	23.4619	11.55	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 10.000)								
82.083	23.5421	11.65	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 10.083)								
82.167	23.6230	11.74	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 10.167)								
82.250	23.7045	11.84	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 10.250)								
82.333	23.7867	11.93	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 10.333)								
82.417	23.8696	12.03	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 10.417)								
82.500	23.9532	12.14	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 10.500)								
82.583	24.0375	12.24	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 10.583)								
82.667	24.1225	12.35	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 10.667)								
82.750	24.2083	12.46	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 10.750)								
82.833	24.2949	12.57	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 10.833)								
82.917	24.3823	12.68	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 10.917)								
83.000	24.4704	12.80	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 11.000)								
83.083	24.5594	12.92	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 11.083)								
83.167	24.6493	13.05	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 11.167)								
83.250	24.7400	13.17	Q	V	.	.	.	.
(PEAK DAY 2, HOUR 11.250)								
83.333	24.8316	13.30	Q	V	.	.	.	.

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(PEAK DAY 2, HOUR  11.333)
 83.417     24.9242     13.44  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  11.417)
 83.500     25.0176     13.57  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  11.500)
 83.583     25.1121     13.71  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  11.583)
 83.667     25.2075     13.86  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  11.667)
 83.750     25.3040     14.01  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  11.750)
 83.833     25.4015     14.16  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  11.833)
 83.917     25.5001     14.32  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  11.917)
 84.000     25.5998     14.48  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  12.000)
 84.083     25.7011     14.70  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  12.083)
 84.167     25.8045     15.03  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  12.167)
 84.250     25.9113     15.50  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  12.250)
 84.333     26.0224     16.13  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  12.333)
 84.417     26.1383     16.82  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  12.417)
 84.500     26.2597     17.63  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  12.500)
 84.583     26.3859     18.33  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  12.583)
 84.667     26.5162     18.91  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  12.667)
 84.750     26.6498     19.40  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  12.750)
 84.833     26.7863     19.83  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  12.833)
 84.917     26.9255     20.21  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  12.917)
 85.000     27.0672     20.57  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  13.000)
 85.083     27.2112     20.91  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  13.083)
 85.167     27.3574     21.24  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  13.167)
 85.250     27.5060     21.57  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  13.250)
 85.333     27.6568     21.90  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  13.333)
 85.417     27.8100     22.24  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  13.417)
 85.500     27.9656     22.59  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  13.500)
 85.583     28.1237     22.96  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  13.583)
 85.667     28.2844     23.33  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  13.667)
 85.750     28.4476     23.71  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  13.750)
 85.833     28.6137     24.11  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  13.833)
 85.917     28.7825     24.52  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  13.917)
 86.000     28.9544     24.95  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  14.000)
 86.083     29.1294     25.42  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  14.083)
 86.167     29.3083     25.97  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  14.167)
 86.250     29.4920     26.68  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  14.250)
 86.333     29.6823     27.62  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  14.333)
 86.417     29.8812     28.88  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  14.417)
 86.500     30.0917     30.57  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  14.500)
 86.583     30.3167     32.67  Q  V      .          .          .          .
(PEAK DAY 2, HOUR  14.583)
 86.667     30.5595     35.25  .Q V      .          .          .          .
(PEAK DAY 2, HOUR  14.667)
 86.750     30.8228     38.22  .Q V      .          .          .          .
(PEAK DAY 2, HOUR  14.750)
 86.833     31.1095     41.63  .Q V      .          .          .          .
(PEAK DAY 2, HOUR  14.833)
 86.917     31.4221     45.40  .Q V      .          .          .          .
(PEAK DAY 2, HOUR  14.917)
 87.000     31.7639     49.62  .Q V      .          .          .          .
(PEAK DAY 2, HOUR  15.000)
 87.083     32.1374     54.24  .Q  V     .          .          .          .
(PEAK DAY 2, HOUR  15.083)
 87.167     32.5466     59.41  .Q  V     .          .          .          .
(PEAK DAY 2, HOUR  15.167)
 87.250     32.9950     65.10  .Q  V     .          .          .          .
(PEAK DAY 2, HOUR  15.250)
 87.333     33.4876     71.52  . Q V     .          .          .          .
(PEAK DAY 2, HOUR  15.333)
 87.417     34.0251     78.05  . Q V     .          .          .          .
(PEAK DAY 2, HOUR  15.417)
 87.500     34.6074     84.55  . Q V     .          .          .          .
(PEAK DAY 2, HOUR  15.500)
 87.583     35.2313     90.58  . Q V     .          .          .          .
(PEAK DAY 2, HOUR  15.583)
 87.667     35.8967     96.62  . Q V     .          .          .          .
(PEAK DAY 2, HOUR  15.667)
 87.750     36.6134    104.07  . Q V     .          .          .          .
(PEAK DAY 2, HOUR  15.750)
 87.833     37.3954    113.55  .  QV     .          .          .          .
(PEAK DAY 2, HOUR  15.833)
 87.917     38.2862    129.33  .  QV     .          .          .          .
(PEAK DAY 2, HOUR  15.917)
 88.000     39.3601    155.94  .   Q     .          .          .          .
(PEAK DAY 2, HOUR  16.000)
 88.083     40.8412    215.06  .    VQ   .          .          .          .
(PEAK DAY 2, HOUR  16.083)
 88.167     42.8953    298.25  .    V  Q .          .          .          .
(PEAK DAY 2, HOUR  16.167)
 88.250     45.6294    396.98  .    V    .Q        .          .          .
(PEAK DAY 2, HOUR  16.250)
 88.333     48.9696    485.00  .     V   .  Q      .          .          .
(PEAK DAY 2, HOUR  16.333)
 88.417     52.5586    521.13  .     V   .   Q     .          .          .
(PEAK DAY 2, HOUR  16.417)
 88.500     56.3268    547.14  .      V  .    Q     .          .          .
(PEAK DAY 2, HOUR  16.500)
 88.583     59.5825    472.74  .      V  .  Q       .          .          .
(PEAK DAY 2, HOUR  16.583)
 88.667     62.2319    384.68  .      V  Q          .          .          .
(PEAK DAY 2, HOUR  16.667)
 88.750     64.3624    309.35  .       Q .          .          .          .
(PEAK DAY 2, HOUR  16.750)
 88.833     66.0927    251.25  .      QV .          .          .          .
(PEAK DAY 2, HOUR  16.833)
 88.917     67.5112    205.97  .    Q  V .          .          .          .
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(PEAK DAY 2, HOUR 16.917)
89.000 68.6988 172.43 . Q V . . . .
(PEAK DAY 2, HOUR 17.000)
89.083 69.6865 143.42 . Q V . . . .
(PEAK DAY 2, HOUR 17.083)
89.167 70.5091 119.43 . Q V . . . .
(PEAK DAY 2, HOUR 17.167)
89.250 71.2056 101.14 . Q V . . . .
(PEAK DAY 2, HOUR 17.250)
89.333 71.8225 89.58 . Q V . . . .
(PEAK DAY 2, HOUR 17.333)
89.417 72.3727 79.89 . Q V. . . .
(PEAK DAY 2, HOUR 17.417)
89.500 72.8657 71.58 . Q V. . . .
(PEAK DAY 2, HOUR 17.500)
89.583 73.3120 64.81 .Q V. . . .
(PEAK DAY 2, HOUR 17.583)
89.667 73.7052 57.10 .Q V. . . .
(PEAK DAY 2, HOUR 17.667)
89.750 74.0558 50.89 .Q V. . . .
(PEAK DAY 2, HOUR 17.750)
89.833 74.3826 47.46 .Q V. . . .
(PEAK DAY 2, HOUR 17.833)
89.917 74.6865 44.12 .Q V. . . .
(PEAK DAY 2, HOUR 17.917)
90.000 74.9690 41.01 .Q V. . . .
(PEAK DAY 2, HOUR 18.000)
90.083 75.2346 38.58 .Q V. . . .
(PEAK DAY 2, HOUR 18.083)
90.167 75.4865 36.56 .Q V. . . .
(PEAK DAY 2, HOUR 18.167)
90.250 75.7270 34.93 Q V. . . .
(PEAK DAY 2, HOUR 18.250)
90.333 75.9553 33.14 Q V. . . .
(PEAK DAY 2, HOUR 18.333)
90.417 76.1704 31.24 Q V. . . .
(PEAK DAY 2, HOUR 18.417)
90.500 76.3723 29.32 Q V. . . .
(PEAK DAY 2, HOUR 18.500)
90.583 76.5639 27.81 Q V. . . .
(PEAK DAY 2, HOUR 18.583)
90.667 76.7473 26.64 Q V. . . .
(PEAK DAY 2, HOUR 18.667)
90.750 76.9236 25.59 Q V. . . .
(PEAK DAY 2, HOUR 18.750)
90.833 77.0918 24.43 Q V. . . .
(PEAK DAY 2, HOUR 18.833)
90.917 77.2491 22.84 Q V. . . .
(PEAK DAY 2, HOUR 18.917)
91.000 77.3998 21.88 Q V. . . .
(PEAK DAY 2, HOUR 19.000)
91.083 77.5460 21.23 Q V. . . .
(PEAK DAY 2, HOUR 19.083)
91.167 77.6877 20.58 Q V. . . .
(PEAK DAY 2, HOUR 19.167)
91.250 77.8240 19.79 Q V. . . .
(PEAK DAY 2, HOUR 19.250)
91.333 77.9567 19.26 Q V. . . .
(PEAK DAY 2, HOUR 19.333)
91.417 78.0861 18.79 Q V. . . .
(PEAK DAY 2, HOUR 19.417)
91.500 78.2124 18.33 Q V. . . .
(PEAK DAY 2, HOUR 19.500)
91.583 78.3353 17.85 Q V. . . .
(PEAK DAY 2, HOUR 19.583)
91.667 78.4539 17.22 Q V. . . .
(PEAK DAY 2, HOUR 19.667)
91.750 78.5676 16.51 Q V. . . .
(PEAK DAY 2, HOUR 19.750)
91.833 78.6778 15.99 Q V. . . .
(PEAK DAY 2, HOUR 19.833)
91.917 78.7854 15.62 Q V. . . .
(PEAK DAY 2, HOUR 19.917)
92.000 78.8903 15.24 Q V. . . .
(PEAK DAY 2, HOUR 20.000)
92.083 78.9923 14.81 Q V. . . .
(PEAK DAY 2, HOUR 20.083)
92.167 79.0898 14.16 Q V. . . .
(PEAK DAY 2, HOUR 20.167)
92.250 79.1820 13.38 Q V. . . .
(PEAK DAY 2, HOUR 20.250)
92.333 79.2686 12.58 Q V. . . .
(PEAK DAY 2, HOUR 20.333)
92.417 79.3522 12.14 Q V. . . .
(PEAK DAY 2, HOUR 20.417)
92.500 79.4340 11.88 Q V. . . .
(PEAK DAY 2, HOUR 20.500)
92.583 79.5142 11.65 Q V. . . .
(PEAK DAY 2, HOUR 20.583)
92.667 79.5931 11.45 Q V. . . .
(PEAK DAY 2, HOUR 20.667)
92.750 79.6706 11.26 Q V. . . .
(PEAK DAY 2, HOUR 20.750)
92.833 79.7469 11.08 Q V. . . .
(PEAK DAY 2, HOUR 20.833)
92.917 79.8221 10.92 Q V. . . .
(PEAK DAY 2, HOUR 20.917)
93.000 79.8962 10.76 Q V. . . .
(PEAK DAY 2, HOUR 21.000)
93.083 79.9694 10.62 Q V. . . .
(PEAK DAY 2, HOUR 21.083)
93.167 80.0416 10.49 Q V. . . .
(PEAK DAY 2, HOUR 21.167)
93.250 80.1129 10.36 Q V. . . .
(PEAK DAY 2, HOUR 21.250)
93.333 80.1834 10.24 Q V . . .
(PEAK DAY 2, HOUR 21.333)
93.417 80.2531 10.12 Q V . . .
(PEAK DAY 2, HOUR 21.417)
93.500 80.3220 10.00 Q V . . .
(PEAK DAY 2, HOUR 21.500)
93.583 80.3900 9.88 Q V . . .
(PEAK DAY 2, HOUR 21.583)
93.667 80.4573 9.77 Q V . . .
(PEAK DAY 2, HOUR 21.667)
93.750 80.5238 9.66 Q V . . .
(PEAK DAY 2, HOUR 21.750)
93.833 80.5896 9.55 Q V . . .
(PEAK DAY 2, HOUR 21.833)
93.917 80.6547 9.45 Q V . . .
(PEAK DAY 2, HOUR 21.917)
94.000 80.7190 9.34 Q V . . .
(PEAK DAY 2, HOUR 22.000)
94.083 80.7827 9.24 Q V . . .
(PEAK DAY 2, HOUR 22.083)
94.167 80.8456 9.14 Q V . . .
(PEAK DAY 2, HOUR 22.167)
94.250 80.9079 9.04 Q V . . .
(PEAK DAY 2, HOUR 22.250)
94.333 80.9694 8.94 Q V . . .
(PEAK DAY 2, HOUR 22.333)
94.417 81.0303 8.83 Q V . . .
(PEAK DAY 2, HOUR 22.417)
94.500 81.0903 8.71 Q V . . .

(PEAK DAY 2, HOUR 22.500)							
94.583	81.1493	8.57	Q	V	.	.	.
(PEAK DAY 2, HOUR 22.583)							
94.667	81.2065	8.31	Q	V	.	.	.
(PEAK DAY 2, HOUR 22.667)							
94.750	81.2624	8.12	Q	V	.	.	.
(PEAK DAY 2, HOUR 22.750)							
94.833	81.3177	8.02	Q	V	.	.	.
(PEAK DAY 2, HOUR 22.833)							
94.917	81.3723	7.94	Q	V	.	.	.
(PEAK DAY 2, HOUR 22.917)							
95.000	81.4265	7.86	Q	V	.	.	.
(PEAK DAY 2, HOUR 23.000)							
95.083	81.4800	7.78	Q	V	.	.	.
(PEAK DAY 2, HOUR 23.083)							
95.167	81.5331	7.71	Q	V	.	.	.
(PEAK DAY 2, HOUR 23.167)							
95.250	81.5857	7.64	Q	V	.	.	.
(PEAK DAY 2, HOUR 23.250)							
95.333	81.6378	7.57	Q	V	.	.	.
(PEAK DAY 2, HOUR 23.333)							
95.417	81.6895	7.50	Q	V	.	.	.
(PEAK DAY 2, HOUR 23.417)							
95.500	81.7408	7.44	Q	V	.	.	.
(PEAK DAY 2, HOUR 23.500)							
95.583	81.7916	7.38	Q	V	.	.	.
(PEAK DAY 2, HOUR 23.583)							
95.667	81.8421	7.32	Q	V	.	.	.
(PEAK DAY 2, HOUR 23.667)							
95.750	81.8921	7.27	Q	V	.	.	.
(PEAK DAY 2, HOUR 23.750)							
95.833	81.9418	7.21	Q	V	.	.	.
(PEAK DAY 2, HOUR 23.833)							
95.917	81.9911	7.16	Q	V	.	.	.
(PEAK DAY 2, HOUR 23.917)							
96.000	82.0400	7.11	Q	V	.	.	.
(PEAK DAY 2, HOUR 24.000)							
96.083	82.0910	7.40	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.083)							
96.167	82.1481	8.30	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.167)							
96.250	82.2177	10.09	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.250)							
96.333	82.3059	12.81	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.333)							
96.417	82.4156	15.92	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.417)							
96.500	82.5510	19.66	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.500)							
96.583	82.7077	22.75	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.583)							
96.667	82.8803	25.06	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.667)							
96.750	83.0645	26.76	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.750)							
96.833	83.2574	28.01	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.833)							
96.917	83.4568	28.94	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.917)							
97.000	83.6613	29.69	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.000)							
97.083	83.8698	30.28	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.083)							
97.167	84.0815	30.74	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.167)							
97.250	84.2958	31.11	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.250)							
97.333	84.5124	31.45	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.333)							
97.417	84.7313	31.78	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.417)							
97.500	84.9522	32.09	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.500)							
97.583	85.1753	32.38	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.583)							
97.667	85.4001	32.64	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.667)							
97.750	85.6264	32.86	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.750)							
97.833	85.8541	33.08	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.833)							
97.917	86.0834	33.28	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.917)							
98.000	86.3139	33.48	Q	V	.	.	.
(PEAK DAY 1, HOUR 2.000)							
98.083	86.5457	33.66	Q	V	.	.	.
(PEAK DAY 1, HOUR 2.083)							
98.167	86.7788	33.84	Q	V	.	.	.
(PEAK DAY 1, HOUR 2.167)							
98.250	87.0131	34.02	Q	V	.	.	.
(PEAK DAY 1, HOUR 2.250)							
98.333	87.2487	34.21	Q	V	.	.	.
(PEAK DAY 1, HOUR 2.333)							
98.417	87.4855	34.38	Q	V	.	.	.
(PEAK DAY 1, HOUR 2.417)							
98.500	87.7235	34.56	Q	V	.	.	.
(PEAK DAY 1, HOUR 2.500)							
98.583	87.9627	34.73	Q	V	.	.	.
(PEAK DAY 1, HOUR 2.583)							
98.667	88.2031	34.91	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.667)							
98.750	88.4448	35.08	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.750)							
98.833	88.6876	35.26	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.833)							
98.917	88.9316	35.43	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.917)							
99.000	89.1767	35.59	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.000)							
99.083	89.4230	35.76	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.083)							
99.167	89.6704	35.93	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.167)							
99.250	89.9190	36.09	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.250)							
99.333	90.1687	36.26	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.333)							
99.417	90.4196	36.43	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.417)							
99.500	90.6716	36.60	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.500)							
99.583	90.9248	36.77	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.583)							
99.667	91.1793	36.94	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.667)							
99.750	91.4348	37.11	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.750)							
99.833	91.6916	37.28	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.833)							
99.917	91.9495	37.45	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.917)							
100.000	92.2086	37.62	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.000)							
100.083	92.4689	37.80	.Q	.V	.	.	.

(PEAK DAY 1, HOUR 4.083)								
100.167	92.7304	37.97	.Q	.V	.	.	.	
(PEAK DAY 1, HOUR 4.167)								
100.250	92.9930	38.14	.Q	.V	.	.	.	
(PEAK DAY 1, HOUR 4.250)								
100.333	93.2569	38.31	.Q	.V	.	.	.	
(PEAK DAY 1, HOUR 4.333)								
100.417	93.5218	38.47	.Q	.V	.	.	.	
(PEAK DAY 1, HOUR 4.417)								
100.500	93.7879	38.64	.Q	.V	.	.	.	
(PEAK DAY 1, HOUR 4.500)								
100.583	94.0552	38.81	.Q	.V	.	.	.	
(PEAK DAY 1, HOUR 4.583)								
100.667	94.3237	38.98	.Q	.V	.	.	.	
(PEAK DAY 1, HOUR 4.667)								
100.750	94.5934	39.16	.Q	.V	.	.	.	
(PEAK DAY 1, HOUR 4.750)								
100.833	94.8643	39.33	.Q	.V	.	.	.	
(PEAK DAY 1, HOUR 4.833)								
100.917	95.1364	39.51	.Q	.V	.	.	.	
(PEAK DAY 1, HOUR 4.917)								
101.000	95.4097	39.69	.Q	.V	.	.	.	
(PEAK DAY 1, HOUR 5.000)								
101.083	95.6843	39.87	.Q	.V	.	.	.	
(PEAK DAY 1, HOUR 5.083)								
101.167	95.9602	40.06	.Q	.V	.	.	.	
(PEAK DAY 1, HOUR 5.167)								
101.250	96.2373	40.24	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.250)								
101.333	96.5158	40.43	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.333)								
101.417	96.7955	40.62	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.417)								
101.500	97.0766	40.82	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.500)								
101.583	97.3591	41.01	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.583)								
101.667	97.6429	41.21	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.667)								
101.750	97.9281	41.41	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.750)								
101.833	98.2146	41.61	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.833)								
101.917	98.5026	41.82	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.917)								
102.000	98.7921	42.02	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.000)								
102.083	99.0829	42.23	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.083)								
102.167	99.3753	42.45	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.167)								
102.250	99.6691	42.66	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.250)								
102.333	99.9644	42.88	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.333)								
102.417	100.2613	43.10	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.417)								
102.500	100.5597	43.33	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.500)								
102.583	100.8597	43.56	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.583)								
102.667	101.1612	43.79	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.667)								
102.750	101.4644	44.02	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.750)								
102.833	101.7691	44.25	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.833)								
102.917	102.0755	44.49	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.917)								
103.000	102.3836	44.73	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.000)								
103.083	102.6933	44.97	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.083)								
103.167	103.0047	45.22	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.167)								
103.250	103.3179	45.47	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.250)								
103.333	103.6328	45.73	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.333)								
103.417	103.9495	45.98	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.417)								
103.500	104.2680	46.25	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.500)								
103.583	104.5883	46.51	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.583)								
103.667	104.9105	46.78	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.667)								
103.750	105.2346	47.06	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.750)								
103.833	105.5606	47.34	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.833)								
103.917	105.8886	47.62	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.917)								
104.000	106.2185	47.91	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.000)								
104.083	106.5504	48.20	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.083)								
104.167	106.8844	48.50	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.167)								
104.250	107.2205	48.80	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.250)								
104.333	107.5587	49.10	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.333)								
104.417	107.8990	49.41	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.417)								
104.500	108.2415	49.73	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.500)								
104.583	108.5862	50.05	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.583)								
104.667	108.9331	50.38	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.667)								
104.750	109.2824	50.71	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.750)								
104.833	109.6340	51.05	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.833)								
104.917	109.9880	51.40	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.917)								
105.000	110.3443	51.75	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.000)								
105.083	110.7032	52.10	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.083)								
105.167	111.0645	52.47	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.167)								
105.250	111.4284	52.84	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.250)								
105.333	111.7950	53.22	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.333)								
105.417	112.1641	53.60	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.417)								
105.500	112.5359	53.99	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.500)								
105.583	112.9105	54.39	.Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.583)								
105.667	113.2879	54.80	.Q	. V	.	.	.	

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 (PEAK DAY 1, HOUR   9.667)
105.750    113.6682     55.21  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.750)
105.833    114.0514     55.64  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.833)
105.917    114.4375     56.07  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.917)
106.000    114.8267     56.51  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR  10.000)
106.083    115.2190     56.96  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR  10.083)
106.167    115.6145     57.42  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR  10.167)
106.250    116.0132     57.89  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR  10.250)
106.333    116.4152     58.37  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR  10.333)
106.417    116.8205     58.86  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR  10.417)
106.500    117.2293     59.36  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR  10.500)
106.583    117.6417     59.87  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR  10.583)
106.667    118.0576     60.40  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR  10.667)
106.750    118.4773     60.93  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR  10.750)
106.833    118.9007     61.48  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR  10.833)
106.917    119.3279     62.04  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR  10.917)
107.000    119.7592     62.62  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR  11.000)
107.083    120.1945     63.20  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.083)
107.167    120.6340     63.81  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.167)
107.250    121.0777     64.43  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.250)
107.333    121.5258     65.07  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.333)
107.417    121.9784     65.71  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.417)
107.500    122.4356     66.39  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.500)
107.583    122.8975     67.07  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.583)
107.667    123.3643     67.78  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.667)
107.750    123.8361     68.50  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.750)
107.833    124.3131     69.25  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.833)
107.917    124.7953     70.02  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  11.917)
108.000    125.2830     70.81  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  12.000)
108.083    125.7781     71.90  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  12.083)
108.167    126.2843     73.49  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  12.167)
108.250    126.8064     75.81  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  12.250)
108.333    127.3497     78.89  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  12.333)
108.417    127.9166     82.31  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  12.417)
108.500    128.5111     86.33  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  12.500)
108.583    129.1306     89.95  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  12.583)
108.667    129.7723     93.17  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  12.667)
108.750    130.4342     96.12  . Q       .    V    .         .         .
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108.833    131.1160     99.00  . Q       .    V    .         .         .
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108.917    131.8174    101.84  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  12.917)
109.000    132.5389    104.76  . Q       .    V    .         .         .
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109.083    133.2807    107.71  .  Q      .    V    .         .         .
 (PEAK DAY 1, HOUR  13.083)
109.167    134.0434    110.75  .  Q      .    V    .         .         .
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109.250    134.8274    113.84  .  Q      .    V    .         .         .
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109.333    135.6338    117.09  .  Q      .    V    .         .         .
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109.417    136.4634    120.45  .  Q      .     V   .         .         .
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109.500    137.3173    123.98  .  Q      .     V   .         .         .
 (PEAK DAY 1, HOUR  13.500)
109.583    138.1962    127.63  .  Q      .     V   .         .         .
 (PEAK DAY 1, HOUR  13.583)
109.667    139.1015    131.45  .  Q      .     V   .         .         .
 (PEAK DAY 1, HOUR  13.667)
109.750    140.0340    135.38  .  Q      .     V   .         .         .
 (PEAK DAY 1, HOUR  13.750)
109.833    140.9951    139.55  .  Q      .     V   .         .         .
 (PEAK DAY 1, HOUR  13.833)
109.917    141.9859    143.87  .   Q     .     V   .         .         .
 (PEAK DAY 1, HOUR  13.917)
110.000    143.0083    148.45  .   Q     .     V   .         .         .
 (PEAK DAY 1, HOUR  14.000)
110.083    144.0652    153.46  .   Q     .     V   .         .         .
 (PEAK DAY 1, HOUR  14.083)
110.167    145.1617    159.21  .   Q     .      V  .         .         .
 (PEAK DAY 1, HOUR  14.167)
110.250    146.3037    165.82  .   Q     .      V  .         .         .
 (PEAK DAY 1, HOUR  14.250)
110.333    147.4982    173.44  .   Q     .      V  .         .         .
 (PEAK DAY 1, HOUR  14.333)
110.417    148.7489    181.60  .    Q    .      V  .         .         .
 (PEAK DAY 1, HOUR  14.417)
110.500    150.0618    190.64  .    Q    .      V  .         .         .
 (PEAK DAY 1, HOUR  14.500)
110.583    151.4361    199.54  .    Q    .      V  .         .         .
 (PEAK DAY 1, HOUR  14.583)
110.667    152.8715    208.42  .    Q    .       V.         .         .
 (PEAK DAY 1, HOUR  14.667)
110.750    154.3680    217.30  .     Q   .       V.         .         .
 (PEAK DAY 1, HOUR  14.750)
110.833    155.9280    226.51  .     Q   .       V.         .         .
 (PEAK DAY 1, HOUR  14.833)
110.917    157.5538    236.07  .     Q   .       V.         .         .
 (PEAK DAY 1, HOUR  14.917)
111.000    159.2503    246.33  .      Q  .       V.         .         .
 (PEAK DAY 1, HOUR  15.000)
111.083    161.0219    257.24  .      Q  .        V         .         .
 (PEAK DAY 1, HOUR  15.083)
111.167    162.8757    269.17  .      Q  .        V         .         .
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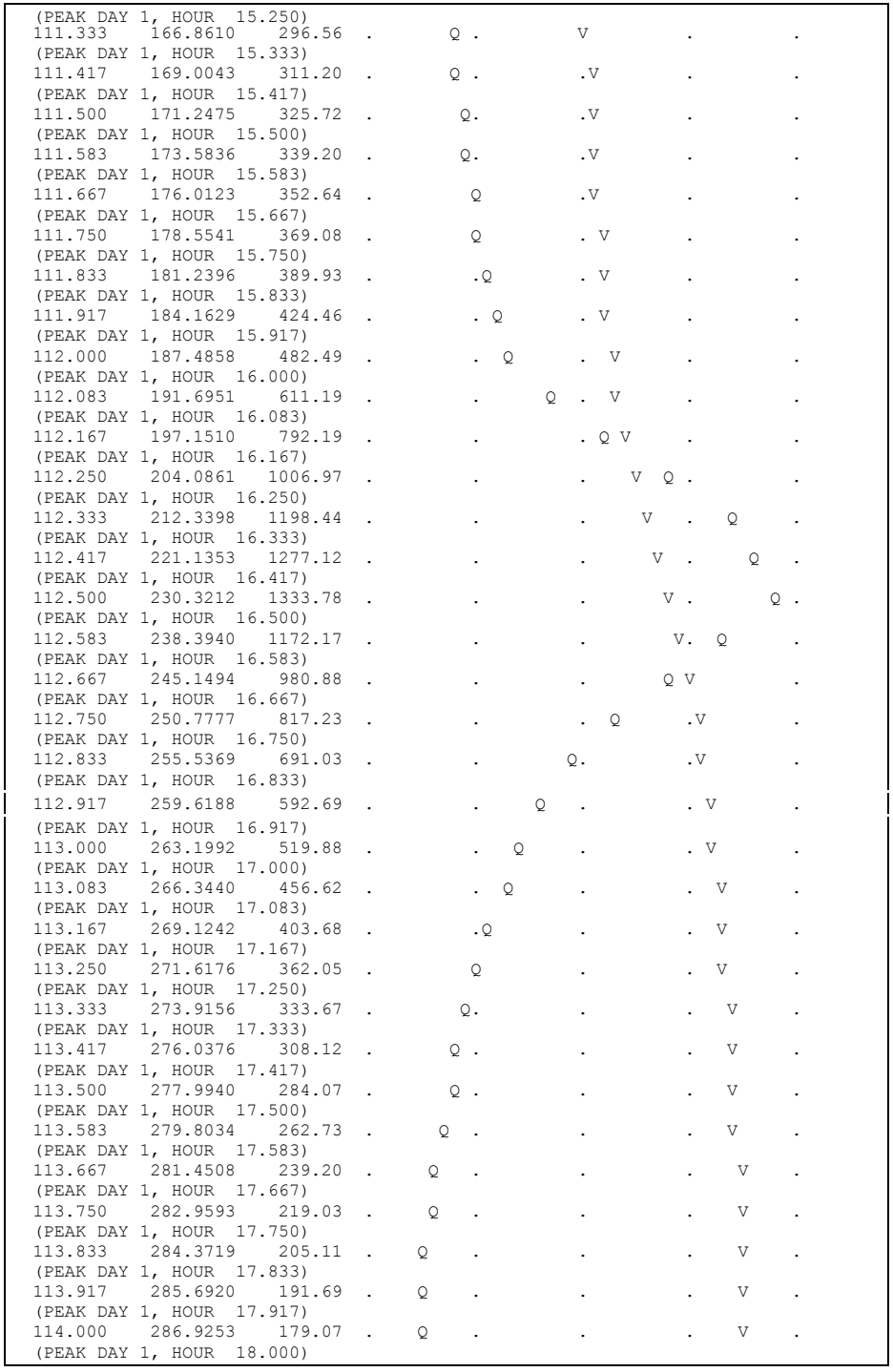
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112.083 191.6951 611.19
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112.500 230.3212 1333.78
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112.833 255.5369 691.03
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(PEAK DAY 1, HOUR 17.000)
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(PEAK DAY 1, HOUR 17.833)
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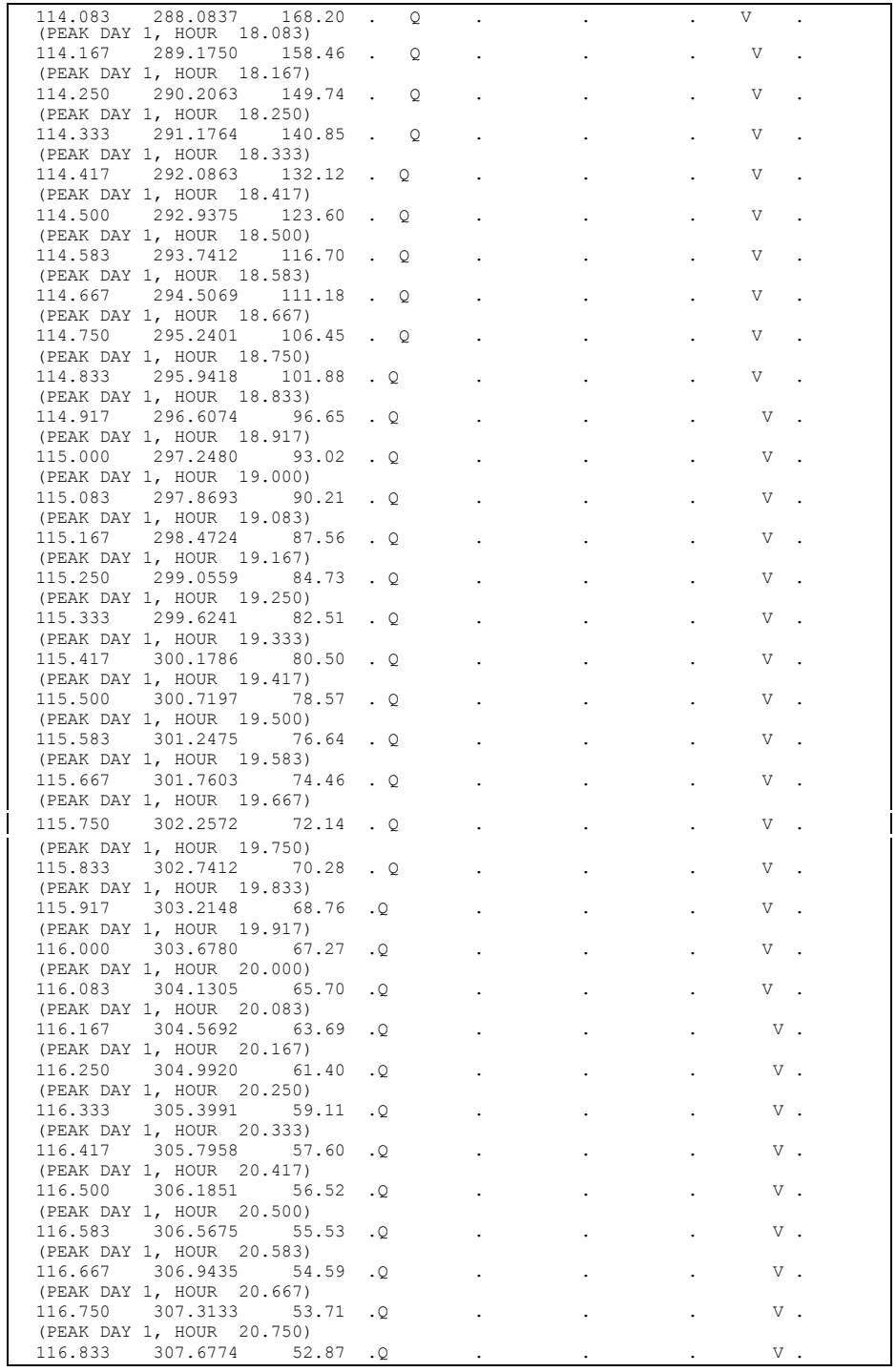
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(PEAK DAY 1, HOUR 18.417)
114.500 292.9375 123.60
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(PEAK DAY 1, HOUR 18.667)
114.750 295.2401 106.45
(PEAK DAY 1, HOUR 18.750)
114.833 295.9418 101.88
(PEAK DAY 1, HOUR 18.833)
114.917 296.6074 96.65
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115.000 297.2480 93.02
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(PEAK DAY 1, HOUR 19.333)
115.417 300.1786 80.50
(PEAK DAY 1, HOUR 19.417)
115.500 300.7197 78.57
(PEAK DAY 1, HOUR 19.500)
115.583 301.2475 76.64
(PEAK DAY 1, HOUR 19.583)
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(PEAK DAY 1, HOUR 19.750)
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(PEAK DAY 1, HOUR 19.833)
115.917 303.2148 68.76
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116.000 303.6780 67.27
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116.083 304.1305 65.70
(PEAK DAY 1, HOUR 20.083)
116.167 304.5692 63.69
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(PEAK DAY 1, HOUR 20.833)
116.917 308.0361 52.08 .Q . . . V .
(PEAK DAY 1, HOUR 20.917)
117.000 308.3896 51.33 .Q . . . V .
(PEAK DAY 1, HOUR 21.000)
117.083 308.7382 50.61 .Q . . . V .
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117.333 309.7563 48.64 .Q . . . V .
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117.417 310.0872 48.03 .Q . . . V .
(PEAK DAY 1, HOUR 21.417)
117.500 310.4139 47.45 .Q . . . V .
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117.833 311.6831 45.28 .Q . . . V .
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(PEAK DAY 1, HOUR 21.917)
118.000 312.2965 44.29 .Q . . . V .
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118.083 312.5982 43.81 .Q . . . V.
(PEAK DAY 1, HOUR 22.083)
118.167 312.8967 43.35 .Q . . . V.
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118.250 313.1921 42.89 .Q . . . V.
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118.417 313.7734 41.98 .Q . . . V.
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118.500 314.0592 41.50 .Q . . . V.
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118.833 315.1606 39.16 .Q . . . V.
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118.917 315.4277 38.79 .Q . . . V.
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119.000 315.6923 38.42 .Q . . . V.
(PEAK DAY 1, HOUR 23.000)
119.083 315.9544 38.06 .Q . . . V.
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119.333 316.7268 37.06 .Q . . . V.
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(PEAK DAY 1, HOUR 23.750)
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119.917 318.4557 35.02 .Q . . . V.
(PEAK DAY 1, HOUR 23.917)
120.000 318.6951 34.76 Q . . . V.
(PEAK DAY 1, HOUR 24.000)
120.083 318.9297 34.07 Q . . . V.
(PEAK DAY 1, HOUR 24.083)
120.167 319.1544 32.63 Q . . . V.
(PEAK DAY 1, HOUR 24.167)
120.250 319.3616 30.08 Q . . . V.
(PEAK DAY 1, HOUR 24.250)
120.333 319.5435 26.42 Q . . . V.
(PEAK DAY 1, HOUR 24.333)
120.417 319.6972 22.31 Q . . . V.
(PEAK DAY 1, HOUR 24.417)
120.500 319.8175 17.46 Q . . . V.
(PEAK DAY 1, HOUR 24.500)
120.583 319.9104 13.50 Q . . . V.
(PEAK DAY 1, HOUR 24.583)
120.667 319.9832 10.56 Q . . . V.
(PEAK DAY 1, HOUR 24.667)
120.750 320.0412 8.43 Q . . . V.
(PEAK DAY 1, HOUR 24.750)
120.833 320.0886 6.88 Q . . . V.
(PEAK DAY 1, HOUR 24.833)
120.917 320.1283 5.76 Q . . . V.
(PEAK DAY 1, HOUR 24.917)
121.000 320.1619 4.88 Q . . . V.
(PEAK DAY 1, HOUR 25.000)
121.083 320.1909 4.22 Q . . . V.
(PEAK DAY 1, HOUR 25.083)
121.167 320.2166 3.73 Q . . . V.
(PEAK DAY 1, HOUR 25.167)
121.250 320.2397 3.36 Q . . . V.
(PEAK DAY 1, HOUR 25.250)
121.333 320.2605 3.02 Q . . . V.
(PEAK DAY 1, HOUR 25.333)
121.417 320.2792 2.72 Q . . . V.
(PEAK DAY 1, HOUR 25.417)
121.500 320.2961 2.44 Q . . . V.
(PEAK DAY 1, HOUR 25.500)
121.583 320.3111 2.18 Q . . . V.
(PEAK DAY 1, HOUR 25.583)
121.667 320.3247 1.98 Q . . . V.
(PEAK DAY 1, HOUR 25.667)
121.750 320.3373 1.83 Q . . . V.
(PEAK DAY 1, HOUR 25.750)
121.833 320.3489 1.68 Q . . . V.
(PEAK DAY 1, HOUR 25.833)
121.917 320.3596 1.55 Q . . . V.
(PEAK DAY 1, HOUR 25.917)
122.000 320.3696 1.44 Q . . . V.
(PEAK DAY 1, HOUR 26.000)
122.083 320.3789 1.35 Q . . . V.
(PEAK DAY 1, HOUR 26.083)
122.167 320.3875 1.26 Q . . . V.
(PEAK DAY 1, HOUR 26.167)
122.250 320.3956 1.17 Q . . . V.
(PEAK DAY 1, HOUR 26.250)
122.333 320.4031 1.09 Q . . . V.
(PEAK DAY 1, HOUR 26.333)
122.417 320.4100 1.01 Q . . . V.

```
(PEAK DAY 1, HOUR  26.417)
122.500    320.4165      0.94  Q          .          .          .          V.
(PEAK DAY 1, HOUR  26.500)
122.583    320.4225      0.87  Q          .          .          .          V.
(PEAK DAY 1, HOUR  26.583)
122.667    320.4280      0.81  Q          .          .          .          V.
(PEAK DAY 1, HOUR  26.667)
122.750    320.4331      0.74  Q          .          .          .          V.
(PEAK DAY 1, HOUR  26.750)
122.833    320.4378      0.68  Q          .          .          .          V.
(PEAK DAY 1, HOUR  26.833)
122.917    320.4421      0.63  Q          .          .          .          V.
(PEAK DAY 1, HOUR  26.917)
123.000    320.4462      0.59  Q          .          .          .          V.
(PEAK DAY 1, HOUR  27.000)
123.083    320.4500      0.54  Q          .          .          .          V.
(PEAK DAY 1, HOUR  27.083)
123.167    320.4534      0.50  Q          .          .          .          V.
(PEAK DAY 1, HOUR  27.167)
123.250    320.4566      0.46  Q          .          .          .          V.
(PEAK DAY 1, HOUR  27.250)
123.333    320.4596      0.43  Q          .          .          .          V.
(PEAK DAY 1, HOUR  27.333)
123.417    320.4623      0.39  Q          .          .          .          V.
(PEAK DAY 1, HOUR  27.417)
123.500    320.4647      0.36  Q          .          .          .          V.
(PEAK DAY 1, HOUR  27.500)
123.583    320.4669      0.32  Q          .          .          .          V.
(PEAK DAY 1, HOUR  27.583)
123.667    320.4689      0.29  Q          .          .          .          V.
(PEAK DAY 1, HOUR  27.667)
123.750    320.4707      0.26  Q          .          .          .          V.
(PEAK DAY 1, HOUR  27.750)
123.833    320.4723      0.24  Q          .          .          .          V.
(PEAK DAY 1, HOUR  27.833)
123.917    320.4738      0.21  Q          .          .          .          V.
(PEAK DAY 1, HOUR  27.917)
124.000    320.4751      0.19  Q          .          .          .          V.
(PEAK DAY 1, HOUR  28.000)
124.083    320.4762      0.16  Q          .          .          .          V.
(PEAK DAY 1, HOUR  28.083)
124.167    320.4772      0.14  Q          .          .          .          V.
(PEAK DAY 1, HOUR  28.167)
124.250    320.4781      0.13  Q          .          .          .          V.
(PEAK DAY 1, HOUR  28.250)
124.333    320.4789      0.12  Q          .          .          .          V.
(PEAK DAY 1, HOUR  28.333)
124.417    320.4797      0.11  Q          .          .          .          V.
(PEAK DAY 1, HOUR  28.417)
124.500    320.4804      0.11  Q          .          .          .          V.
(PEAK DAY 1, HOUR  28.500)
124.583    320.4812      0.10  Q          .          .          .          V.
(PEAK DAY 1, HOUR  28.583)
124.667    320.4819      0.10  Q          .          .          .          V.
(PEAK DAY 1, HOUR  28.667)
124.750    320.4825      0.10  Q          .          .          .          V.
(PEAK DAY 1, HOUR  28.750)
124.833    320.4832      0.09  Q          .          .          .          V.
(PEAK DAY 1, HOUR  28.833)
124.917    320.4838      0.09  Q          .          .          .          V.
(PEAK DAY 1, HOUR  28.917)
125.000    320.4843      0.08  Q          .          .          .          V.
(PEAK DAY 1, HOUR  29.000)
125.083    320.4848      0.08  Q          .          .          .          V.
(PEAK DAY 1, HOUR  29.083)
125.167    320.4853      0.07  Q          .          .          .          V.
(PEAK DAY 1, HOUR  29.167)
125.250    320.4858      0.07  Q          .          .          .          V.
(PEAK DAY 1, HOUR  29.250)
125.333    320.4862      0.06  Q          .          .          .          V.
(PEAK DAY 1, HOUR  29.333)
125.417    320.4866      0.06  Q          .          .          .          V.
(PEAK DAY 1, HOUR  29.417)
125.500    320.4870      0.06  Q          .          .          .          V.
(PEAK DAY 1, HOUR  29.500)
125.583    320.4873      0.05  Q          .          .          .          V.
(PEAK DAY 1, HOUR  29.583)
125.667    320.4876      0.05  Q          .          .          .          V.
(PEAK DAY 1, HOUR  29.667)
125.750    320.4879      0.04  Q          .          .          .          V.
(PEAK DAY 1, HOUR  29.750)
125.833    320.4882      0.04  Q          .          .          .          V.
(PEAK DAY 1, HOUR  29.833)
125.917    320.4884      0.03  Q          .          .          .          V.
(PEAK DAY 1, HOUR  29.917)
126.000    320.4886      0.03  Q          .          .          .          V.
(PEAK DAY 1, HOUR  30.000)
126.083    320.4888      0.03  Q          .          .          .          V.
(PEAK DAY 1, HOUR  30.083)
126.167    320.4890      0.02  Q          .          .          .          V.
(PEAK DAY 1, HOUR  30.167)
126.250    320.4891      0.02  Q          .          .          .          V.
(PEAK DAY 1, HOUR  30.250)
126.333    320.4892      0.01  Q          .          .          .          V.
(PEAK DAY 1, HOUR  30.333)
126.417    320.4893      0.01  Q          .          .          .          V.
(PEAK DAY 1, HOUR  30.417)
================================================================================

  END OF FLOODSCx ROUTING ANALYSIS
```

```
******************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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 ************************* DESCRIPTION OF STUDY *************************
* AREA 13 - PROPOSED (TRAMPAS)                                          *
* 100-YEAR HIGH CONFIDENCE                                              *
* DRAINING TO THE PROPOSED TRAMPAS BASIN                                *
 ************************************************************************

  FILE NAME: CP13100H.DAT
  TIME/DATE OF STUDY: 11:21 05/29/2004
==============================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==============================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *DATA BANK RAINFALL USED*
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                  PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                    0.480
        FOOTHILL                             0.150
        MOUNTAIN                             0.170
        VALLEY(UNDEVELOPED)/DESERT           0.200
        DESERT(UNDEVELOPED)                  0.000
    SIERRA MADRE DEPTH-AREA FACTORS USED.
                     AREA-AVERAGED
        DURATION    RAINFALL(INCH)
        5-MINUTES         0.52
       30-MINUTES         1.09
        1-HOUR            1.45
        3-HOUR            2.43
        6-HOUR            3.36
       24-HOUR            5.63
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


******************************************************************************
  FLOW PROCESS FROM NODE   1300.00 TO NODE   1301.00 IS CODE =  21
------------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
==============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   327.00
  ELEVATION DATA: UPSTREAM(FEET) =    927.00  DOWNSTREAM(FEET) =    750.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    8.090
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.696
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.50      0.25      1.00    75    8.09
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.20      0.20      1.00    83    8.09
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      2.81
  TOTAL AREA(ACRES) =      0.70   PEAK FLOW RATE(CFS) =      2.81

******************************************************************************
  FLOW PROCESS FROM NODE   1301.00 TO NODE   1302.00 IS CODE =  51
------------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    750.00  DOWNSTREAM(FEET) =    715.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    99.00   CHANNEL SLOPE =  0.3535
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      2.81
  FLOW VELOCITY(FEET/SEC.) =   7.67   FLOW DEPTH(FEET) =   0.29
  TRAVEL TIME(MIN.) =   0.22   Tc(MIN.) =   8.30
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1302.00 =   426.00 FEET.

******************************************************************************
  FLOW PROCESS FROM NODE   1301.00 TO NODE   1302.00 IS CODE =  81
------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==============================================================================
  MAINLINE Tc(MIN) =   8.30
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.662
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.20      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        0.80      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.20      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.20      SUBAREA RUNOFF(CFS) =    4.81
  EFFECTIVE AREA(ACRES) =      1.90   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.90       PEAK FLOW RATE(CFS) =       7.60

******************************************************************************
  FLOW PROCESS FROM NODE   1302.00 TO NODE   1303.00 IS CODE =  51
------------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    715.00  DOWNSTREAM(FEET) =    665.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   168.00   CHANNEL SLOPE =  0.2976
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      7.60
  FLOW VELOCITY(FEET/SEC.) =   9.53   FLOW DEPTH(FEET) =   0.52
  TRAVEL TIME(MIN.) =   0.29   Tc(MIN.) =   8.60
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1303.00 =   594.00 FEET.

******************************************************************************
  FLOW PROCESS FROM NODE   1302.00 TO NODE   1303.00 IS CODE =  81
------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==============================================================================
  MAINLINE Tc(MIN) =   8.60
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.575
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
```

```
  "CHAPARRAL,BROADLEAF"      C        0.10      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.10      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.50      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.50      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.20      SUBAREA RUNOFF(CFS) =    4.72
  EFFECTIVE AREA(ACRES) =      3.10   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      3.10       PEAK FLOW RATE(CFS) =      12.16

****************************************************************************
  FLOW PROCESS FROM NODE   1303.00 TO NODE   1304.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    665.00  DOWNSTREAM(FEET) =    635.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   145.00   CHANNEL SLOPE =  0.2069
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     12.16
  FLOW VELOCITY(FEET/SEC.) =   9.40   FLOW DEPTH(FEET) =   0.74
  TRAVEL TIME(MIN.) =   0.26   Tc(MIN.) =   8.86
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1304.00 =   739.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1303.00 TO NODE   1304.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   8.86
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.499
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        0.10      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.80      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.20      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        1.00      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D        0.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    2.20      SUBAREA RUNOFF(CFS) =    8.47
  EFFECTIVE AREA(ACRES) =      5.30   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      5.30       PEAK FLOW RATE(CFS) =      20.42

****************************************************************************
  FLOW PROCESS FROM NODE   1304.00 TO NODE   1305.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    635.00  DOWNSTREAM(FEET) =    605.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   176.00   CHANNEL SLOPE =  0.1705
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     20.42
  FLOW VELOCITY(FEET/SEC.) =   9.74   FLOW DEPTH(FEET) =   0.76
  TRAVEL TIME(MIN.) =   0.30   Tc(MIN.) =   9.16
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1305.00 =   915.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1304.00 TO NODE   1305.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.16
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.409
```

```
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.20      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.50      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.90      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D        0.20      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.80      SUBAREA RUNOFF(CFS) =    6.81
  EFFECTIVE AREA(ACRES) =      7.10   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      7.10       PEAK FLOW RATE(CFS) =      26.81

****************************************************************************
  FLOW PROCESS FROM NODE   1305.00 TO NODE   1306.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    605.00  DOWNSTREAM(FEET) =    603.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    31.00   CHANNEL SLOPE =  0.0645
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     26.81
  FLOW VELOCITY(FEET/SEC.) =   7.36   FLOW DEPTH(FEET) =   1.15
  TRAVEL TIME(MIN.) =   0.07   Tc(MIN.) =   9.23
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1306.00 =   946.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1305.00 TO NODE   1306.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.23
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.389
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        0.40      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.50      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.60      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.30      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    2.80      SUBAREA RUNOFF(CFS) =   10.51
  EFFECTIVE AREA(ACRES) =      9.90   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      9.90       PEAK FLOW RATE(CFS) =      37.19

****************************************************************************
  FLOW PROCESS FROM NODE   1306.00 TO NODE   1307.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    603.00  DOWNSTREAM(FEET) =    600.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    68.00   CHANNEL SLOPE =  0.0441
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     37.19
  FLOW VELOCITY(FEET/SEC.) =   6.98   FLOW DEPTH(FEET) =   1.52
  TRAVEL TIME(MIN.) =   0.16   Tc(MIN.) =   9.39
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1307.00 =  1014.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1306.00 TO NODE   1307.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =   9.39
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.341
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.40      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        0.50      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        3.40      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    4.40      SUBAREA RUNOFF(CFS) =   16.38
  EFFECTIVE AREA(ACRES) =     14.30   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     14.30       PEAK FLOW RATE(CFS) =      53.14

****************************************************************************
  FLOW PROCESS FROM NODE   1307.00 TO NODE   1308.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    600.00  DOWNSTREAM(FEET) =    550.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   598.00   CHANNEL SLOPE =  0.0836
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     53.14
  FLOW VELOCITY(FEET/SEC.) =   9.71   FLOW DEPTH(FEET) =   1.54
  TRAVEL TIME(MIN.) =   1.03   Tc(MIN.) =  10.42
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1308.00 =  1612.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1307.00 TO NODE   1308.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.42
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.077
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.60      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        1.40      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        3.80      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D        1.00      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    6.80      SUBAREA RUNOFF(CFS) =   23.70
  EFFECTIVE AREA(ACRES) =     21.10   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     21.10       PEAK FLOW RATE(CFS) =      73.44

****************************************************************************
  FLOW PROCESS FROM NODE   1308.00 TO NODE   1309.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    550.00  DOWNSTREAM(FEET) =    490.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   952.00   CHANNEL SLOPE =  0.0630
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     73.44
  FLOW VELOCITY(FEET/SEC.) =   9.49   FLOW DEPTH(FEET) =   1.96
  TRAVEL TIME(MIN.) =   1.67   Tc(MIN.) =  12.09
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1309.00 =  2564.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1308.00 TO NODE   1309.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.09
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.742
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        0.10      0.30      1.00    63
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.10      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.20      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.10      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.80      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        4.70      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    6.00      SUBAREA RUNOFF(CFS) =   19.05
  EFFECTIVE AREA(ACRES) =     27.10   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     27.10       PEAK FLOW RATE(CFS) =      86.15

****************************************************************************
  FLOW PROCESS FROM NODE   1308.00 TO NODE   1309.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.09
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.742
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        3.50      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D        1.60      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    5.10      SUBAREA RUNOFF(CFS) =   16.26
  EFFECTIVE AREA(ACRES) =     32.20   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     32.20       PEAK FLOW RATE(CFS) =     102.41

****************************************************************************
  FLOW PROCESS FROM NODE   1309.00 TO NODE   1310.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    490.00  DOWNSTREAM(FEET) =    485.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    83.00   CHANNEL SLOPE =  0.0602
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    102.41
  FLOW VELOCITY(FEET/SEC.) =  10.11   FLOW DEPTH(FEET) =   2.02
  TRAVEL TIME(MIN.) =   0.14   Tc(MIN.) =  12.22
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1310.00 =  2647.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1309.00 TO NODE   1310.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.22
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.715
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        1.80      0.30      1.00    63
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.20      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        8.00      0.25      1.00    75
```

```
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        8.90      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        2.40      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D       22.50      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   43.80      SUBAREA RUNOFF(CFS) =  137.51
  EFFECTIVE AREA(ACRES) =     76.00   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     76.00       PEAK FLOW RATE(CFS) =     239.13

****************************************************************************
  FLOW PROCESS FROM NODE   1309.00 TO NODE   1310.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.22
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.715
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        2.10      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D        2.20      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    4.30      SUBAREA RUNOFF(CFS) =   13.60
  EFFECTIVE AREA(ACRES) =     80.30   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     80.30       PEAK FLOW RATE(CFS) =     252.73

****************************************************************************
  FLOW PROCESS FROM NODE   1310.00 TO NODE   1311.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    485.00  DOWNSTREAM(FEET) =    480.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   108.00   CHANNEL SLOPE =  0.0463
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    252.73
  FLOW VELOCITY(FEET/SEC.) =  11.48   FLOW DEPTH(FEET) =   3.10
  TRAVEL TIME(MIN.) =   0.16   Tc(MIN.) =  12.38
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1311.00 =  2755.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1310.00 TO NODE   1311.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.38
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.684
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     B        0.20      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.40      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.10      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C       12.10      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.60      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        2.60      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   16.00      SUBAREA RUNOFF(CFS) =   49.41
  EFFECTIVE AREA(ACRES) =     96.30   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     96.30       PEAK FLOW RATE(CFS) =     299.88

****************************************************************************
  FLOW PROCESS FROM NODE   1310.00 TO NODE   1311.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.38
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.684
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D       14.50      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        6.90      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D        2.30      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   23.70      SUBAREA RUNOFF(CFS) =   74.31
  EFFECTIVE AREA(ACRES) =    120.00   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    120.00       PEAK FLOW RATE(CFS) =     374.18

****************************************************************************
  FLOW PROCESS FROM NODE   1311.00 TO NODE   1312.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    480.00  DOWNSTREAM(FEET) =    445.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   925.00   CHANNEL SLOPE =  0.0378
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    374.18
  FLOW VELOCITY(FEET/SEC.) =  11.78   FLOW DEPTH(FEET) =   3.98
  TRAVEL TIME(MIN.) =   1.31   Tc(MIN.) =  13.69
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1312.00 =  3680.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1311.00 TO NODE   1312.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  13.69
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.489
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     B        2.70      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.60      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.40      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        8.70      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C        0.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        3.90      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   16.70      SUBAREA RUNOFF(CFS) =   48.51
  EFFECTIVE AREA(ACRES) =    136.70   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    136.70       PEAK FLOW RATE(CFS) =     401.63

****************************************************************************
  FLOW PROCESS FROM NODE   1311.00 TO NODE   1312.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  13.69
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.489
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
```

```
  "WOODLAND"                  C        3.00      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        0.60      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        4.10      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    7.70      SUBAREA RUNOFF(CFS) =   22.66
  EFFECTIVE AREA(ACRES) =    144.40   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    144.40       PEAK FLOW RATE(CFS) =     424.29

****************************************************************************
  FLOW PROCESS FROM NODE   1312.00 TO NODE   1313.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    445.00  DOWNSTREAM(FEET) =    440.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   154.00   CHANNEL SLOPE =  0.0325
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    424.29
  FLOW VELOCITY(FEET/SEC.) =  11.46   FLOW DEPTH(FEET) =   4.08
  TRAVEL TIME(MIN.) =   0.22   Tc(MIN.) =  13.91
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1313.00 =  3834.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1312.00 TO NODE   1313.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  13.91
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.456
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        0.20      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                     B        0.90      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        1.60      0.30      1.00    66
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C       31.60      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C        2.20      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       11.70      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   48.20      SUBAREA RUNOFF(CFS) =  138.97
  EFFECTIVE AREA(ACRES) =    192.60   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    192.60       PEAK FLOW RATE(CFS) =     559.06

****************************************************************************
  FLOW PROCESS FROM NODE   1312.00 TO NODE   1313.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  13.91
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.456
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  C        1.10      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D       31.80      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                     D        0.20      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D       17.60      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D        7.30      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   58.00      SUBAREA RUNOFF(CFS) =  169.93
  EFFECTIVE AREA(ACRES) =    250.60   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    250.60       PEAK FLOW RATE(CFS) =     729.00

****************************************************************************
  FLOW PROCESS FROM NODE   1313.00 TO NODE   1314.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    440.00  DOWNSTREAM(FEET) =    430.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1175.00   CHANNEL SLOPE =  0.0085
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    729.00
  FLOW VELOCITY(FEET/SEC.) =   7.95   FLOW DEPTH(FEET) =   6.69
  TRAVEL TIME(MIN.) =   2.46   Tc(MIN.) =  16.38
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1314.00 =  5009.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1313.00 TO NODE   1314.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.38
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.146
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        4.60      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                     B        2.00      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.70      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.90      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        8.30      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.80      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   17.30      SUBAREA RUNOFF(CFS) =   44.72
  EFFECTIVE AREA(ACRES) =    267.90   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    267.90       PEAK FLOW RATE(CFS) =     729.00
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1313.00 TO NODE   1314.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.38
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.146
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  C        1.10      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        5.30      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        5.30      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   11.70      SUBAREA RUNOFF(CFS) =   30.97
  EFFECTIVE AREA(ACRES) =    279.60   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    279.60       PEAK FLOW RATE(CFS) =     734.65

****************************************************************************
  FLOW PROCESS FROM NODE   1314.00 TO NODE   1315.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
```

```
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    430.00  DOWNSTREAM(FEET) =    385.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1086.00   CHANNEL SLOPE =  0.0414
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    734.65
  FLOW VELOCITY(FEET/SEC.) =  14.34   FLOW DEPTH(FEET) =   4.47
  TRAVEL TIME(MIN.) =   1.26   Tc(MIN.) =  17.64
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1315.00 =  6095.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1314.00 TO NODE   1315.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.64
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.008
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B       21.00      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C       24.90      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        4.30      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        0.20      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D       35.40      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        4.10      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   89.90      SUBAREA RUNOFF(CFS) =  223.96
  EFFECTIVE AREA(ACRES) =    369.50   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    369.50       PEAK FLOW RATE(CFS) =     923.87

****************************************************************************
  FLOW PROCESS FROM NODE   1315.00 TO NODE   1316.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    385.00  DOWNSTREAM(FEET) =    342.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1883.00   CHANNEL SLOPE =  0.0228
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    923.87
  FLOW VELOCITY(FEET/SEC.) =  12.20   FLOW DEPTH(FEET) =   5.88
  TRAVEL TIME(MIN.) =   2.57   Tc(MIN.) =  20.21
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1316.00 =  7978.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1315.00 TO NODE   1316.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  20.21
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.784
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       A       12.40      0.40      1.00    40
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B       28.30      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                     B        3.30      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        8.20      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.40      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C       51.00      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  103.60      SUBAREA RUNOFF(CFS) =  232.78
  EFFECTIVE AREA(ACRES) =    473.10   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    473.10       PEAK FLOW RATE(CFS) =    1082.22

****************************************************************************
  FLOW PROCESS FROM NODE   1315.00 TO NODE   1316.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  20.21
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.784
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     C        5.50      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       58.60      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        4.70      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        2.10      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                     D        2.20      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        1.40      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   74.50      SUBAREA RUNOFF(CFS) =  170.16
  EFFECTIVE AREA(ACRES) =    547.60   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    547.60       PEAK FLOW RATE(CFS) =    1252.38

****************************************************************************
  FLOW PROCESS FROM NODE   1316.00 TO NODE   1317.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    342.00  DOWNSTREAM(FEET) =    324.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1105.00   CHANNEL SLOPE =  0.0163
  CHANNEL BASE(FEET) =    8.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   8.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1252.38
  FLOW VELOCITY(FEET/SEC.) =  11.61   FLOW DEPTH(FEET) =   7.13
  TRAVEL TIME(MIN.) =   1.59   Tc(MIN.) =  21.80
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1317.00 =  9083.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1316.00 TO NODE   1317.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  21.80
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.663
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     A        0.20      0.40      1.00    50
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       A        4.20      0.40      1.00    40
  NATURAL FAIR COVER
  "WOODLAND"                  A        0.50      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        0.70      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        7.40      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.40      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.31
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   13.40      SUBAREA RUNOFF(CFS) =   28.41
  EFFECTIVE AREA(ACRES) =    561.00   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    561.00       PEAK FLOW RATE(CFS) =    1252.38
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
```

```
****************************************************************************
  FLOW PROCESS FROM NODE   1316.00 TO NODE   1317.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  21.80
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.663
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                C        1.10      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"     D        3.40      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                   D        0.20      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"              D        0.20      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    4.90      SUBAREA RUNOFF(CFS) =   10.81
  EFFECTIVE AREA(ACRES) =    565.90   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    565.90       PEAK FLOW RATE(CFS) =    1252.38
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1317.00 TO NODE   1336.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    324.00  DOWNSTREAM(FEET) =    275.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1680.00   CHANNEL SLOPE =  0.0292
  CHANNEL BASE(FEET) =    8.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   8.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1252.38
  FLOW VELOCITY(FEET/SEC.) =  14.41   FLOW DEPTH(FEET) =   6.14
  TRAVEL TIME(MIN.) =   1.94   Tc(MIN.) =  23.74
  LONGEST FLOWPATH FROM NODE   1300.00 TO NODE   1336.00 = 10763.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1317.00 TO NODE   1336.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  23.74
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.536
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"     A        0.20      0.40      1.00    40
  COMMERCIAL                A        0.20      0.40      0.10    32
  NATURAL FAIR COVER
  "WOODLAND"                A        0.90      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"     B        0.40      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                   B        4.90      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"              B        8.20      0.30      1.00    66
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.31
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   14.80      SUBAREA RUNOFF(CFS) =   29.73
  EFFECTIVE AREA(ACRES) =    580.70   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    580.70       PEAK FLOW RATE(CFS) =    1252.38
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1317.00 TO NODE   1336.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  23.74
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.536
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                B        1.20      0.30      0.10    56
  NATURAL FAIR COVER
  "WOODLAND"                B        2.90      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"     C       56.50      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                   C       17.10      0.25      1.00    79
  URBAN FAIR COVER
  "TURF"                    C       12.10      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"              C       49.90      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =  139.70      SUBAREA RUNOFF(CFS) =  287.47
  EFFECTIVE AREA(ACRES) =    720.40   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    720.40       PEAK FLOW RATE(CFS) =    1484.27

****************************************************************************
  FLOW PROCESS FROM NODE   1317.00 TO NODE   1336.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  23.74
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.536
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                C        0.40      0.25      0.10    69
  NATURAL FAIR COVER
  "WOODLAND"                C       26.80      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"     D       17.40      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                   D       25.50      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                    D        0.20      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"              D       66.60      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  136.90      SUBAREA RUNOFF(CFS) =  286.62
  EFFECTIVE AREA(ACRES) =    857.30   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    857.30       PEAK FLOW RATE(CFS) =    1770.89

****************************************************************************
  FLOW PROCESS FROM NODE   1317.00 TO NODE   1336.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  23.74
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.536
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                D        2.60      0.20      0.10    75
  PUBLIC PARK               D        2.30      0.20      0.85    75
  NATURAL FAIR COVER
  "WOODLAND"                D       14.50      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.86
  SUBAREA AREA(ACRES) =   19.40      SUBAREA RUNOFF(CFS) =   41.26
  EFFECTIVE AREA(ACRES) =    876.70   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    876.70       PEAK FLOW RATE(CFS) =    1812.15

****************************************************************************
  FLOW PROCESS FROM NODE   1336.00 TO NODE   1336.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  23.74
  RAINFALL INTENSITY(INCH/HR) =   2.54
```

```
  AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =   876.70
  TOTAL STREAM AREA(ACRES) =   876.70
  PEAK FLOW RATE(CFS) AT CONFLUENCE =   1812.15

****************************************************************************
  FLOW PROCESS FROM NODE   1320.00 TO NODE   1321.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   320.00
  ELEVATION DATA: UPSTREAM(FEET) =    868.00  DOWNSTREAM(FEET) =    775.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    9.082
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.432
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.80      0.25      1.00    77    9.08
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      C        0.10      0.25      1.00    81    9.08
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      3.39
  TOTAL AREA(ACRES) =      0.90   PEAK FLOW RATE(CFS) =      3.39

****************************************************************************
  FLOW PROCESS FROM NODE   1321.00 TO NODE   1322.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    775.00  DOWNSTREAM(FEET) =    750.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   141.00   CHANNEL SLOPE =  0.1773
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      3.39
  FLOW VELOCITY(FEET/SEC.) =   6.33   FLOW DEPTH(FEET) =   0.39
  TRAVEL TIME(MIN.) =   0.37   Tc(MIN.) =   9.45
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1322.00 =   461.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1321.00 TO NODE   1322.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.45
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.322
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.40      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      C        0.70      0.25      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.10      SUBAREA RUNOFF(CFS) =    4.03
  EFFECTIVE AREA(ACRES) =      2.00   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      2.00       PEAK FLOW RATE(CFS) =       7.33

****************************************************************************
  FLOW PROCESS FROM NODE   1322.00 TO NODE   1323.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    750.00  DOWNSTREAM(FEET) =    700.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   365.00   CHANNEL SLOPE =  0.1370
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      7.33
  FLOW VELOCITY(FEET/SEC.) =   7.13   FLOW DEPTH(FEET) =   0.63
  TRAVEL TIME(MIN.) =   0.85   Tc(MIN.) =  10.31
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1323.00 =   826.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1322.00 TO NODE   1323.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.31
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.099
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      C        0.80      0.25      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      D        0.80      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.60      SUBAREA RUNOFF(CFS) =    5.58
  EFFECTIVE AREA(ACRES) =      3.60   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      3.60       PEAK FLOW RATE(CFS) =      12.51

****************************************************************************
  FLOW PROCESS FROM NODE   1323.00 TO NODE   1324.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    700.00  DOWNSTREAM(FEET) =    680.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   265.00   CHANNEL SLOPE =  0.0755
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     12.51
  FLOW VELOCITY(FEET/SEC.) =   6.53   FLOW DEPTH(FEET) =   0.97
  TRAVEL TIME(MIN.) =   0.68   Tc(MIN.) =  10.98
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1324.00 =  1091.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1323.00 TO NODE   1324.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.98
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.963
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      C        1.10      0.25      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      D        1.30      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    2.40      SUBAREA RUNOFF(CFS) =    8.08
  EFFECTIVE AREA(ACRES) =      6.00   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      6.00       PEAK FLOW RATE(CFS) =      20.15

****************************************************************************
  FLOW PROCESS FROM NODE   1324.00 TO NODE   1325.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    680.00  DOWNSTREAM(FEET) =    670.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   111.00   CHANNEL SLOPE =  0.0901
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     20.15
  FLOW VELOCITY(FEET/SEC.) =   7.68   FLOW DEPTH(FEET) =   0.90
  TRAVEL TIME(MIN.) =   0.24   Tc(MIN.) =  11.22
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1325.00 =  1202.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1324.00 TO NODE   1325.00 IS CODE =  81
----------------------------------------------------------------------------
```

```
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==============================================================================
  MAINLINE Tc(MIN) =  11.22
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.915
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        0.90      0.25      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        1.10      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    2.00      SUBAREA RUNOFF(CFS) =    6.65
  EFFECTIVE AREA(ACRES) =      8.00   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      8.00       PEAK FLOW RATE(CFS) =      26.53

******************************************************************************
  FLOW PROCESS FROM NODE   1325.00 TO NODE   1326.00 IS CODE =  51
------------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    670.00  DOWNSTREAM(FEET) =    665.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    82.00   CHANNEL SLOPE =  0.0610
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     26.53
  FLOW VELOCITY(FEET/SEC.) =   7.20   FLOW DEPTH(FEET) =   1.16
  TRAVEL TIME(MIN.) =   0.19   Tc(MIN.) =  11.41
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1326.00 =  1284.00 FEET.

******************************************************************************
  FLOW PROCESS FROM NODE   1325.00 TO NODE   1326.00 IS CODE =  81
------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==============================================================================
  MAINLINE Tc(MIN) =  11.41
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.877
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.60      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        4.70      0.25      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        2.90      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    8.20      SUBAREA RUNOFF(CFS) =   26.90
  EFFECTIVE AREA(ACRES) =     16.20   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     16.20       PEAK FLOW RATE(CFS) =      53.16

******************************************************************************
  FLOW PROCESS FROM NODE   1326.00 TO NODE   1327.00 IS CODE =  51
------------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    665.00  DOWNSTREAM(FEET) =    625.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   826.00   CHANNEL SLOPE =  0.0484
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     53.16
  FLOW VELOCITY(FEET/SEC.) =   7.93   FLOW DEPTH(FEET) =   1.77
  TRAVEL TIME(MIN.) =   1.73   Tc(MIN.) =  13.15
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1327.00 =  2110.00 FEET.

******************************************************************************
  FLOW PROCESS FROM NODE   1326.00 TO NODE   1327.00 IS CODE =  81
------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==============================================================================
  MAINLINE Tc(MIN) =  13.15
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.567
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        1.10      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        2.00      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        2.10      0.25      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.70      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        1.30      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        4.10      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   11.30      SUBAREA RUNOFF(CFS) =   34.00
  EFFECTIVE AREA(ACRES) =     27.50   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     27.50       PEAK FLOW RATE(CFS) =      82.63

******************************************************************************
  FLOW PROCESS FROM NODE   1326.00 TO NODE   1327.00 IS CODE =  81
------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==============================================================================
  MAINLINE Tc(MIN) =  13.15
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.567
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 D        0.90      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.90      SUBAREA RUNOFF(CFS) =    2.73
  EFFECTIVE AREA(ACRES) =     28.40   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     28.40       PEAK FLOW RATE(CFS) =      85.36

******************************************************************************
  FLOW PROCESS FROM NODE   1327.00 TO NODE   1328.00 IS CODE =  51
------------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    625.00  DOWNSTREAM(FEET) =    595.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   794.00   CHANNEL SLOPE =  0.0378
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     85.36
  FLOW VELOCITY(FEET/SEC.) =   8.09   FLOW DEPTH(FEET) =   2.08
  TRAVEL TIME(MIN.) =   1.64   Tc(MIN.) =  14.79
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1328.00 =  2904.00 FEET.

******************************************************************************
  FLOW PROCESS FROM NODE   1327.00 TO NODE   1328.00 IS CODE =  81
------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==============================================================================
  MAINLINE Tc(MIN) =  14.79
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.331
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        1.30      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        3.60      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        5.40      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.20      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.30      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        1.00      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
```

```
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   12.80      SUBAREA RUNOFF(CFS) =   35.60
  EFFECTIVE AREA(ACRES) =     41.20   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     41.20       PEAK FLOW RATE(CFS) =     114.93

****************************************************************************
  FLOW PROCESS FROM NODE   1327.00 TO NODE   1328.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  14.79
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.331
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        6.30      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D        1.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    7.70      SUBAREA RUNOFF(CFS) =   21.70
  EFFECTIVE AREA(ACRES) =     48.90   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     48.90       PEAK FLOW RATE(CFS) =     136.63

****************************************************************************
  FLOW PROCESS FROM NODE   1328.00 TO NODE   1329.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    595.00  DOWNSTREAM(FEET) =    590.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   531.00   CHANNEL SLOPE =  0.0094
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    136.63
  FLOW VELOCITY(FEET/SEC.) =   5.43   FLOW DEPTH(FEET) =   3.40
  TRAVEL TIME(MIN.) =   1.63   Tc(MIN.) =  16.41
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1329.00 =  3435.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1328.00 TO NODE   1329.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.41
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.142
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.80      0.25      1.00    77
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        C        0.20      0.25      0.20    69
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      C        1.60      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                  C        0.20      0.25      1.00    73
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        D        0.50      0.20      0.20    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      D        2.40      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.90
  SUBAREA AREA(ACRES) =    5.70      SUBAREA RUNOFF(CFS) =   15.07
  EFFECTIVE AREA(ACRES) =     54.60   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.99
  TOTAL AREA(ACRES) =     54.60       PEAK FLOW RATE(CFS) =     143.37

****************************************************************************
  FLOW PROCESS FROM NODE   1328.00 TO NODE   1329.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.41
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.142
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 D        0.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.10      SUBAREA RUNOFF(CFS) =    0.26
  EFFECTIVE AREA(ACRES) =     54.70   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.99
  TOTAL AREA(ACRES) =     54.70       PEAK FLOW RATE(CFS) =     143.63

****************************************************************************
  FLOW PROCESS FROM NODE   1329.00 TO NODE   1330.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    590.00  DOWNSTREAM(FEET) =    587.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   296.00   CHANNEL SLOPE =  0.0101
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    143.63
  FLOW VELOCITY(FEET/SEC.) =   5.65   FLOW DEPTH(FEET) =   3.42
  TRAVEL TIME(MIN.) =   0.87   Tc(MIN.) =  17.29
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1330.00 =  3731.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1329.00 TO NODE   1330.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.29
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.044
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        5.80      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        C        0.50      0.25      0.50    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        4.80      0.25      1.00    77
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        C        8.70      0.25      0.20    69
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      C        3.20      0.25      1.00    81
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        0.70      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.70
  SUBAREA AREA(ACRES) =   23.70      SUBAREA RUNOFF(CFS) =   61.25
  EFFECTIVE AREA(ACRES) =     78.40   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.90
  TOTAL AREA(ACRES) =     78.40       PEAK FLOW RATE(CFS) =     200.07

****************************************************************************
  FLOW PROCESS FROM NODE   1329.00 TO NODE   1330.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.29
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.044
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        1.60      0.20      1.00    83
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        D        8.20      0.20      0.20    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      D        4.80      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.55
  SUBAREA AREA(ACRES) =   14.60      SUBAREA RUNOFF(CFS) =   38.55
  EFFECTIVE AREA(ACRES) =     93.00   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.85
  TOTAL AREA(ACRES) =     93.00       PEAK FLOW RATE(CFS) =     238.62
```

```
****************************************************************************
  FLOW PROCESS FROM NODE   1330.00 TO NODE   1331.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    587.00  DOWNSTREAM(FEET) =    570.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1259.00   CHANNEL SLOPE =  0.0135
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    238.62
  FLOW VELOCITY(FEET/SEC.) =   7.13   FLOW DEPTH(FEET) =   3.80
  TRAVEL TIME(MIN.) =   2.94   Tc(MIN.) =  20.23
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1331.00 =  4990.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1330.00 TO NODE   1331.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  20.23
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.782
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        C       31.80      0.25      0.20    69
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      C        0.60      0.25      1.00    81
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        D       24.40      0.20      0.20    75
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      D        0.40      0.20      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.21
  SUBAREA AREA(ACRES) =   57.20      SUBAREA RUNOFF(CFS) =  140.73
  EFFECTIVE AREA(ACRES) =    150.20   AREA-AVERAGED Fm(INCH/HR) =  0.14
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.61
  TOTAL AREA(ACRES) =    150.20       PEAK FLOW RATE(CFS) =     357.47

****************************************************************************
  FLOW PROCESS FROM NODE   1331.00 TO NODE   1332.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    570.00  DOWNSTREAM(FEET) =    565.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   724.00   CHANNEL SLOPE =  0.0069
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    357.47
  FLOW VELOCITY(FEET/SEC.) =   6.15   FLOW DEPTH(FEET) =   5.19
  TRAVEL TIME(MIN.) =   1.96   Tc(MIN.) =  22.19
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1332.00 =  5714.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1331.00 TO NODE   1332.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  22.19
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.633
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        C        1.30      0.25      0.50    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.20      0.25      1.00    77
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        C       23.60      0.25      0.20    69
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D        0.40      0.20      0.50    75
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        D       19.10      0.20      0.20    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.22
  SUBAREA AREA(ACRES) =   44.60      SUBAREA RUNOFF(CFS) =  103.73
  EFFECTIVE AREA(ACRES) =    194.80   AREA-AVERAGED Fm(INCH/HR) =  0.12
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.52
  TOTAL AREA(ACRES) =    194.80       PEAK FLOW RATE(CFS) =     441.04

****************************************************************************
  FLOW PROCESS FROM NODE   1332.00 TO NODE   1333.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   565.00  DOWNSTREAM(FEET) =   435.00
  FLOW LENGTH(FEET) =  3577.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  60.0 INCH PIPE IS  46.1 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  27.26
  ESTIMATED PIPE DIAMETER(INCH) =  60.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =    441.04
  PIPE TRAVEL TIME(MIN.) =   2.19    Tc(MIN.) =  24.38
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1333.00 =  9291.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1332.00 TO NODE   1333.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  24.38
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.497
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        C       24.50      0.25      0.20    69
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        D       25.80      0.20      0.20    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.20
  SUBAREA AREA(ACRES) =   50.30      SUBAREA RUNOFF(CFS) =  111.02
  EFFECTIVE AREA(ACRES) =    245.10   AREA-AVERAGED Fm(INCH/HR) =  0.10
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.45
  TOTAL AREA(ACRES) =    245.10       PEAK FLOW RATE(CFS) =     528.19

****************************************************************************
  FLOW PROCESS FROM NODE   1333.00 TO NODE   1334.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   435.00  DOWNSTREAM(FEET) =   405.00
  FLOW LENGTH(FEET) =  1367.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  69.0 INCH PIPE IS  56.2 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  23.33
  ESTIMATED PIPE DIAMETER(INCH) =  69.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =    528.19
  PIPE TRAVEL TIME(MIN.) =   0.98    Tc(MIN.) =  25.36
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1334.00 = 10658.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1333.00 TO NODE   1334.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  25.36
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.442
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.20      0.25      1.00    75
  COMMERCIAL                  C        0.10      0.25      0.10    69
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        C       68.20      0.25      0.20    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.20      0.20      1.00    83
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        D       63.30      0.20      0.20    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.20
  SUBAREA AREA(ACRES) =  132.00      SUBAREA RUNOFF(CFS) =  284.62
  EFFECTIVE AREA(ACRES) =    377.10   AREA-AVERAGED Fm(INCH/HR) =  0.08
```

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  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.36
  TOTAL AREA(ACRES) =    377.10       PEAK FLOW RATE(CFS) =     800.51

****************************************************************************
  FLOW PROCESS FROM NODE   1334.00 TO NODE   1335.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   405.00  DOWNSTREAM(FEET) =   310.00
  FLOW LENGTH(FEET) =  1320.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  66.0 INCH PIPE IS  50.7 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  40.89
  ESTIMATED PIPE DIAMETER(INCH) =  66.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =    800.51
  PIPE TRAVEL TIME(MIN.) =   0.54    Tc(MIN.) =  25.89
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1335.00 = 11978.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1334.00 TO NODE   1335.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  25.89
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.414
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     C        0.40      0.25      1.00    79
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        C        2.30      0.25      0.20    69
  NATURAL FAIR COVER
  "WOODLAND"                  C        0.30      0.25      1.00    73
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        D        1.40      0.20      0.20    75
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.20      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.36
  SUBAREA AREA(ACRES) =    4.60      SUBAREA RUNOFF(CFS) =    9.64
  EFFECTIVE AREA(ACRES) =    381.70   AREA-AVERAGED Fm(INCH/HR) =  0.08
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.36
  TOTAL AREA(ACRES) =    381.70       PEAK FLOW RATE(CFS) =     800.66

****************************************************************************
  FLOW PROCESS FROM NODE   1335.00 TO NODE   1335.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  25.89
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.414
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                  A        0.20      0.40      1.00    44
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       A       19.70      0.40      1.00    40
  NATURAL FAIR COVER
  "WOODLAND"                  A        0.20      0.40      1.00    36
  COMMERCIAL                  B        0.30      0.30      0.10    56
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B       13.90      0.30      1.00    63
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.10      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.36
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   34.40      SUBAREA RUNOFF(CFS) =   63.70
  EFFECTIVE AREA(ACRES) =    416.10   AREA-AVERAGED Fm(INCH/HR) =  0.11
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.42
  TOTAL AREA(ACRES) =    416.10       PEAK FLOW RATE(CFS) =     864.36

****************************************************************************
  FLOW PROCESS FROM NODE   1335.00 TO NODE   1335.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  25.89
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.414
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     C        0.90      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.20      0.25      1.00    77
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        C        6.40      0.25      0.20    69
  NATURAL FAIR COVER
  "WOODLAND"                  C        2.70      0.25      1.00    73
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        1.80      0.20      1.00    83
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        D        1.90      0.20      0.20    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.52
  SUBAREA AREA(ACRES) =   13.90      SUBAREA RUNOFF(CFS) =   28.66
  EFFECTIVE AREA(ACRES) =    430.00   AREA-AVERAGED Fm(INCH/HR) =  0.11
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.42
  TOTAL AREA(ACRES) =    430.00       PEAK FLOW RATE(CFS) =     893.02

****************************************************************************
  FLOW PROCESS FROM NODE   1335.00 TO NODE   1335.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  25.89
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.414
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        1.60      0.20      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                  D       11.00      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   12.60      SUBAREA RUNOFF(CFS) =   25.10
  EFFECTIVE AREA(ACRES) =    442.60   AREA-AVERAGED Fm(INCH/HR) =  0.11
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.44
  TOTAL AREA(ACRES) =    442.60       PEAK FLOW RATE(CFS) =     918.12

****************************************************************************
  FLOW PROCESS FROM NODE   1335.00 TO NODE   1336.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    310.00  DOWNSTREAM(FEET) =    275.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  4499.00   CHANNEL SLOPE =  0.0078
  CHANNEL BASE(FEET) =   60.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.025   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    918.12
  FLOW VELOCITY(FEET/SEC.) =   7.63   FLOW DEPTH(FEET) =   1.89
  TRAVEL TIME(MIN.) =   9.83   Tc(MIN.) =  35.72
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1336.00 = 16477.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1335.00 TO NODE   1336.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  35.72
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.008
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        A        4.80      0.40      0.20    32
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       A       15.30      0.40      1.00    40
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B       28.30      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                     B        0.70      0.30      1.00    69
  NATURAL FAIR COVER
```

```
  "OPEN BRUSH"                B        0.20      0.30      1.00    66
  COMMERCIAL                  B       31.50      0.30      0.10    56
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.33
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.60
  SUBAREA AREA(ACRES) =   80.80      SUBAREA RUNOFF(CFS) =  131.45
  EFFECTIVE AREA(ACRES) =    523.40   AREA-AVERAGED Fm(INCH/HR) =  0.12
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.46
  TOTAL AREA(ACRES) =    523.40       PEAK FLOW RATE(CFS) =     918.12
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1335.00 TO NODE   1336.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  35.72
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.008
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        B       15.50      0.30      0.20    56
  NATURAL FAIR COVER
  "WOODLAND"                  B        2.20      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C       24.40      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C        0.70      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       16.00      0.25      1.00    77
  COMMERCIAL                  C       37.80      0.25      0.10    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.52
  SUBAREA AREA(ACRES) =   96.60      SUBAREA RUNOFF(CFS) =  163.07
  EFFECTIVE AREA(ACRES) =    620.00   AREA-AVERAGED Fm(INCH/HR) =  0.12
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.47
  TOTAL AREA(ACRES) =    620.00       PEAK FLOW RATE(CFS) =    1051.22

****************************************************************************
  FLOW PROCESS FROM NODE   1335.00 TO NODE   1336.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  35.72
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.008
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        C       15.00      0.25      0.20    69
  NATURAL FAIR COVER
  "WOODLAND"                  C        1.90      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D       12.60      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D        0.40      0.20      0.50    75
  URBAN FAIR COVER
  "TURF"                      D        0.20      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"                D       43.80      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.83
  SUBAREA AREA(ACRES) =   73.90      SUBAREA RUNOFF(CFS) =  122.24
  EFFECTIVE AREA(ACRES) =    693.90   AREA-AVERAGED Fm(INCH/HR) =  0.13
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.51
  TOTAL AREA(ACRES) =    693.90       PEAK FLOW RATE(CFS) =    1173.47

****************************************************************************
  FLOW PROCESS FROM NODE   1335.00 TO NODE   1336.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  35.72
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.008
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                  D       48.60      0.20      0.10    75
  PUBLIC PARK                 D        5.60      0.20      0.85    75
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        D       10.10      0.20      0.20    75
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"        D        1.30      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                  D       10.50      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.30
  SUBAREA AREA(ACRES) =   76.10      SUBAREA RUNOFF(CFS) =  133.42
  EFFECTIVE AREA(ACRES) =    770.00   AREA-AVERAGED Fm(INCH/HR) =  0.12
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.49
  TOTAL AREA(ACRES) =    770.00       PEAK FLOW RATE(CFS) =    1306.89

****************************************************************************
  FLOW PROCESS FROM NODE   1336.00 TO NODE   1336.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  35.72
  RAINFALL INTENSITY(INCH/HR) =   2.01
  AREA-AVERAGED Fm(INCH/HR) =  0.12
  AREA-AVERAGED Fp(INCH/HR) =  0.25
  AREA-AVERAGED Ap =  0.49
  EFFECTIVE STREAM AREA(ACRES) =   770.00
  TOTAL STREAM AREA(ACRES) =   770.00
  PEAK FLOW RATE(CFS) AT CONFLUENCE =   1306.89

  ** CONFLUENCE DATA **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1   1812.15  23.74    2.536  0.24( 0.24) 1.00   876.7    1300.00
      2   1306.89  35.72    2.008  0.25( 0.12) 0.49   770.0    1320.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1   2923.49  23.74    2.536  0.24( 0.20) 0.81  1388.4    1300.00
      2   2703.01  35.72    2.008  0.24( 0.18) 0.76  1646.7    1320.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =   2923.49    Tc(MIN.) =    23.74
  EFFECTIVE AREA(ACRES) =  1388.41   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.81
  TOTAL AREA(ACRES) =   1646.70
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1336.00 = 16477.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1336.00 TO NODE   1337.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    275.00  DOWNSTREAM(FEET) =    260.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2012.00   CHANNEL SLOPE =  0.0075
  CHANNEL BASE(FEET) =   60.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.025   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2923.49
  FLOW VELOCITY(FEET/SEC.) =  11.42   FLOW DEPTH(FEET) =   3.79
  TRAVEL TIME(MIN.) =   2.94   Tc(MIN.) =  26.68
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1337.00 = 18489.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1336.00 TO NODE   1337.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  26.68
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.373
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
```

```
  NATURAL FAIR COVER
  "GRASS"                    A        8.50      0.40      1.00    50
  COMMERCIAL                 A        0.90      0.40      0.10    32
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       A       17.10      0.40      0.20    32
  NATURAL FAIR COVER
  "WOODLAND"                 A        4.00      0.40      1.00    36
  NATURAL FAIR COVER
  "GRASS"                    B        0.20      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        0.10      0.30      1.00    66
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.53
  SUBAREA AREA(ACRES) =   30.80      SUBAREA RUNOFF(CFS) =   59.93
  EFFECTIVE AREA(ACRES) =   1419.21   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.80
  TOTAL AREA(ACRES) =   1677.50       PEAK FLOW RATE(CFS) =    2923.49
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1336.00 TO NODE   1337.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  26.68
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.373
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 B        0.30      0.30      0.10    56
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       B       18.10      0.30      0.20    56
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.20      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       11.60      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        1.20      0.25      1.00    77
  COMMERCIAL                 C        1.80      0.25      0.10    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.51
  SUBAREA AREA(ACRES) =   33.20      SUBAREA RUNOFF(CFS) =   66.94
  EFFECTIVE AREA(ACRES) =   1452.41   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.80
  TOTAL AREA(ACRES) =   1710.70       PEAK FLOW RATE(CFS) =    2923.49
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1336.00 TO NODE   1337.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  26.68
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.373
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       C       14.50      0.25      0.20    69
  NATURAL FAIR COVER
  "WOODLAND"                 C       10.10      0.25      1.00    73
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       22.10      0.20      1.00    83
  PUBLIC PARK                D        0.50      0.20      0.85    75
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D       26.20      0.20      0.20    75
  NATURAL FAIR COVER
  "WOODLAND"                 D        4.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.58
  SUBAREA AREA(ACRES) =   77.80      SUBAREA RUNOFF(CFS) =  157.43
  EFFECTIVE AREA(ACRES) =   1530.21   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.78
  TOTAL AREA(ACRES) =   1788.50       PEAK FLOW RATE(CFS) =    3004.48

****************************************************************************
  FLOW PROCESS FROM NODE   1337.00 TO NODE   1338.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
```

```
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    260.00  DOWNSTREAM(FEET) =    255.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1882.00   CHANNEL SLOPE =  0.0027
  CHANNEL BASE(FEET) =   60.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.025   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3004.48
  FLOW VELOCITY(FEET/SEC.) =   8.22   FLOW DEPTH(FEET) =   5.19
  TRAVEL TIME(MIN.) =   3.82   Tc(MIN.) =  30.49
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1338.00 = 20371.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1337.00 TO NODE   1338.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  30.49
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.201
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A        0.20      0.40      0.50    32
  NATURAL FAIR COVER
  "GRASS"                    A        0.20      0.40      1.00    50
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A       20.20      0.40      1.00    49
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       A       21.20      0.40      0.20    32
  NATURAL FAIR COVER
  "WOODLAND"                 A        0.20      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.20      0.30      1.00    63
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.60
  SUBAREA AREA(ACRES) =   42.20      SUBAREA RUNOFF(CFS) =   74.57
  EFFECTIVE AREA(ACRES) =   1572.41   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.78
  TOTAL AREA(ACRES) =   1830.70       PEAK FLOW RATE(CFS) =    3004.48
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1337.00 TO NODE   1338.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  30.49
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.201
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B        3.00      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        7.60      0.30      1.00    66
  COMMERCIAL                 B        1.50      0.30      0.10    56
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       B       10.00      0.30      0.20    56
  NATURAL FAIR COVER
  "WOODLAND"                 B        5.70      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       23.80      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.82
  SUBAREA AREA(ACRES) =   51.60      SUBAREA RUNOFF(CFS) =   91.89
  EFFECTIVE AREA(ACRES) =   1624.01   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.78
  TOTAL AREA(ACRES) =   1882.30       PEAK FLOW RATE(CFS) =    3004.48
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1337.00 TO NODE   1338.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  30.49
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.201
  SUBAREA LOSS RATE DATA(AMC  II):
```

```
    DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
         LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                      C        0.90      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                 C       12.90      0.25      1.00    77
  COMMERCIAL                   C        1.70      0.25      0.10    69
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"         C        5.60      0.25      0.20    69
  NATURAL FAIR COVER
  "WOODLAND"                   C       10.70      0.25      1.00    73
  NATURAL POOR COVER
  "BARREN"                     D        0.70      0.20      1.00    93
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.82
  SUBAREA AREA(ACRES) =   32.50      SUBAREA RUNOFF(CFS) =   58.46
  EFFECTIVE AREA(ACRES) =   1656.51   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.78
  TOTAL AREA(ACRES) =   1914.80       PEAK FLOW RATE(CFS) =    3004.48
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1337.00 TO NODE   1338.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  30.49
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.201
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                      D        0.90      0.20      1.00    84
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"            D        9.20      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                 D       19.50      0.20      1.00    83
  NATURAL GOOD COVER
  "MEADOWS"                    D        2.00      0.20      1.00    78
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"         D        8.40      0.20      0.20    75
  NATURAL FAIR COVER
  "WOODLAND"                   D        6.20      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.85
  SUBAREA AREA(ACRES) =   46.20      SUBAREA RUNOFF(CFS) =   84.42
  EFFECTIVE AREA(ACRES) =   1702.71   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.78
  TOTAL AREA(ACRES) =   1961.00       PEAK FLOW RATE(CFS) =    3077.59

****************************************************************************
  FLOW PROCESS FROM NODE   1338.00 TO NODE   1375.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    255.00  DOWNSTREAM(FEET) =    240.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1844.00   CHANNEL SLOPE =  0.0081
  CHANNEL BASE(FEET) =   60.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.025   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3077.59
  FLOW VELOCITY(FEET/SEC.) =  11.97   FLOW DEPTH(FEET) =   3.80
  TRAVEL TIME(MIN.) =   2.57   Tc(MIN.) =  33.06
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1375.00 = 22215.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1338.00 TO NODE   1375.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  33.06
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.104
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                      A        2.70      0.40      1.00    50
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"            A       27.70      0.40      1.00    49
  NATURAL FAIR COVER
  "OPEN BRUSH"                 A        0.60      0.40      1.00    46
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"         A        5.30      0.40      0.20    32
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"            A        1.60      0.40      1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                   A        2.70      0.40      1.00    36
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.90
  SUBAREA AREA(ACRES) =   40.60      SUBAREA RUNOFF(CFS) =   63.78
  EFFECTIVE AREA(ACRES) =   1743.31   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.79
  TOTAL AREA(ACRES) =   2001.60       PEAK FLOW RATE(CFS) =    3077.59
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1338.00 TO NODE   1375.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  33.06
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.104
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"        B        6.50      0.30      1.00    63
  NATURAL POOR COVER
  "BARREN"                     B        0.20      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                      B       22.60      0.30      1.00    69
  URBAN FAIR COVER
  "TURF"                       B        0.40      0.30      1.00    65
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"            B        1.80      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                 B       22.20      0.30      1.00    66
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   53.70      SUBAREA RUNOFF(CFS) =   87.18
  EFFECTIVE AREA(ACRES) =   1797.01   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.79
  TOTAL AREA(ACRES) =   2055.30       PEAK FLOW RATE(CFS) =    3079.07

****************************************************************************
  FLOW PROCESS FROM NODE   1338.00 TO NODE   1375.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  33.06
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.104
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                   B        1.90      0.30      0.10    56
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"         B       18.40      0.30      0.20    56
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"         B       18.80      0.30      0.60    56
  NATURAL FAIR COVER
  "WOODLAND"                   B       32.40      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"        C       71.40      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                      C       12.20      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.85
  SUBAREA AREA(ACRES) =  155.10      SUBAREA RUNOFF(CFS) =  262.02
  EFFECTIVE AREA(ACRES) =   1952.11   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.80
  TOTAL AREA(ACRES) =   2210.40       PEAK FLOW RATE(CFS) =    3341.09

****************************************************************************
  FLOW PROCESS FROM NODE   1338.00 TO NODE   1375.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  33.06
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.104
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  URBAN FAIR COVER
  "TURF"                       C        0.50      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"            C        0.20      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                 C       85.10      0.25      1.00    77
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"         C       20.80      0.25      0.20    69
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"         C       60.20      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                   C       78.80      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.83
  SUBAREA AREA(ACRES) =  245.60      SUBAREA RUNOFF(CFS) =  418.92
  EFFECTIVE AREA(ACRES) =   2197.71   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.80
  TOTAL AREA(ACRES) =   2456.00       PEAK FLOW RATE(CFS) =    3760.00

****************************************************************************
  FLOW PROCESS FROM NODE   1338.00 TO NODE   1375.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  33.06
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.104
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  PUBLIC PARK                  D        0.10      0.20      0.85    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"        D        1.70      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                      D       15.10      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                       D        3.30      0.20      1.00    82
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"            D        2.50      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                 D       10.50      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   33.20      SUBAREA RUNOFF(CFS) =   56.89
  EFFECTIVE AREA(ACRES) =   2230.91   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.80
  TOTAL AREA(ACRES) =   2489.20       PEAK FLOW RATE(CFS) =    3816.89

****************************************************************************
  FLOW PROCESS FROM NODE   1338.00 TO NODE   1375.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  33.06
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.104
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"         D       29.60      0.20      0.20    75
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"         D        3.90      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                   D       12.80      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.45
  SUBAREA AREA(ACRES) =   46.30      SUBAREA RUNOFF(CFS) =   83.87
  EFFECTIVE AREA(ACRES) =   2277.21   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.80
  TOTAL AREA(ACRES) =   2535.50       PEAK FLOW RATE(CFS) =    3900.76

****************************************************************************
  FLOW PROCESS FROM NODE   1375.00 TO NODE   1375.00 IS CODE =  10
----------------------------------------------------------------------------
  >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE   1340.00 TO NODE   1341.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   324.00
  ELEVATION DATA: UPSTREAM(FEET) =   1072.00  DOWNSTREAM(FEET) =   1065.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   15.350
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.261
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "GRASS"                      D        0.50      0.20      1.00    84   15.35
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      1.38
  TOTAL AREA(ACRES) =      0.50   PEAK FLOW RATE(CFS) =      1.38

****************************************************************************
  FLOW PROCESS FROM NODE   1341.00 TO NODE   1342.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1065.00  DOWNSTREAM(FEET) =    975.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   273.00   CHANNEL SLOPE =  0.3297
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      1.38
  FLOW VELOCITY(FEET/SEC.) =   5.96   FLOW DEPTH(FEET) =   0.19
  TRAVEL TIME(MIN.) =   0.76   Tc(MIN.) =  16.11
  LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1342.00 =   597.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1341.00 TO NODE   1342.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.11
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.175
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                      C        0.30      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.30      SUBAREA RUNOFF(CFS) =    0.79
  EFFECTIVE AREA(ACRES) =      0.80   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      0.80       PEAK FLOW RATE(CFS) =       2.13

****************************************************************************
  FLOW PROCESS FROM NODE   1342.00 TO NODE   1343.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    975.00  DOWNSTREAM(FEET) =    915.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   202.00   CHANNEL SLOPE =  0.2970
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      2.13
  FLOW VELOCITY(FEET/SEC.) =   6.60   FLOW DEPTH(FEET) =   0.26
  TRAVEL TIME(MIN.) =   0.51   Tc(MIN.) =  16.62
  LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1343.00 =   799.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1342.00 TO NODE   1343.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
```

```
================================================================================
  MAINLINE Tc(MIN) =  16.62
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.118
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     C        0.30      0.25      1.00    79
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"        C        0.30      0.25      0.60    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.80
  SUBAREA AREA(ACRES) =    0.60      SUBAREA RUNOFF(CFS) =    1.58
  EFFECTIVE AREA(ACRES) =      1.40   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.91
  TOTAL AREA(ACRES) =      1.40       PEAK FLOW RATE(CFS) =       3.66

****************************************************************************
  FLOW PROCESS FROM NODE   1343.00 TO NODE   1344.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    925.00  DOWNSTREAM(FEET) =    900.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    83.00   CHANNEL SLOPE =  0.3012
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      3.66
  FLOW VELOCITY(FEET/SEC.) =   7.81   FLOW DEPTH(FEET) =   0.35
  TRAVEL TIME(MIN.) =   0.18   Tc(MIN.) =  16.80
  LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1344.00 =   882.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1343.00 TO NODE   1344.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.80
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.098
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"        C        0.30      0.25      0.60    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.60
  SUBAREA AREA(ACRES) =    0.30      SUBAREA RUNOFF(CFS) =    0.80
  EFFECTIVE AREA(ACRES) =      1.70   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.86
  TOTAL AREA(ACRES) =      1.70       PEAK FLOW RATE(CFS) =       4.43

****************************************************************************
  FLOW PROCESS FROM NODE   1344.00 TO NODE   1345.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    900.00  DOWNSTREAM(FEET) =    875.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   113.00   CHANNEL SLOPE =  0.2212
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      4.43
  FLOW VELOCITY(FEET/SEC.) =   7.38   FLOW DEPTH(FEET) =   0.42
  TRAVEL TIME(MIN.) =   0.26   Tc(MIN.) =  17.06
  LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1345.00 =   995.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1344.00 TO NODE   1345.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.06
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.070
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     C        1.70      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.70      0.25      1.00    77
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"        C        0.80      0.25      0.60    69
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"        D        0.20      0.20      0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.88
  SUBAREA AREA(ACRES) =    3.40      SUBAREA RUNOFF(CFS) =    8.72
  EFFECTIVE AREA(ACRES) =      5.10   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.87
  TOTAL AREA(ACRES) =      5.10       PEAK FLOW RATE(CFS) =      13.11

****************************************************************************
  FLOW PROCESS FROM NODE   1345.00 TO NODE   1346.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    875.00  DOWNSTREAM(FEET) =    800.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   331.00   CHANNEL SLOPE =  0.2266
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     13.11
  FLOW VELOCITY(FEET/SEC.) =   9.95   FLOW DEPTH(FEET) =   0.75
  TRAVEL TIME(MIN.) =   0.55   Tc(MIN.) =  17.61
  LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1346.00 =  1326.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1345.00 TO NODE   1346.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.61
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.010
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     C        0.10      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.40      0.25      1.00    77
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"        C        1.30      0.25      0.60    69
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"        D        1.10      0.20      0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.67
  SUBAREA AREA(ACRES) =    2.90      SUBAREA RUNOFF(CFS) =    7.45
  EFFECTIVE AREA(ACRES) =      8.00   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.80
  TOTAL AREA(ACRES) =      8.00       PEAK FLOW RATE(CFS) =      20.29

****************************************************************************
  FLOW PROCESS FROM NODE   1346.00 TO NODE   1347.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    800.00  DOWNSTREAM(FEET) =    725.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   360.00   CHANNEL SLOPE =  0.2083
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     20.29
  FLOW VELOCITY(FEET/SEC.) =  10.81   FLOW DEPTH(FEET) =   0.96
  TRAVEL TIME(MIN.) =   0.56   Tc(MIN.) =  18.17
  LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1347.00 =  1686.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1346.00 TO NODE   1347.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.17
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.961
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
```

```
  "GRASS"                    C        0.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        1.30      0.25      1.00    77
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        3.40      0.25      0.60    69
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D        1.80      0.20      0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.70
  SUBAREA AREA(ACRES) =    6.90      SUBAREA RUNOFF(CFS) =   17.35
  EFFECTIVE AREA(ACRES) =     14.90   AREA-AVERAGED Fm(INCH/HR) =  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.75
  TOTAL AREA(ACRES) =     14.90       PEAK FLOW RATE(CFS) =      37.29

****************************************************************************
  FLOW PROCESS FROM NODE   1347.00 TO NODE   1348.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    725.00  DOWNSTREAM(FEET) =    675.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   205.00   CHANNEL SLOPE =  0.2439
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     37.29
  FLOW VELOCITY(FEET/SEC.) =  13.05   FLOW DEPTH(FEET) =   0.96
  TRAVEL TIME(MIN.) =   0.26   Tc(MIN.) =  18.43
  LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1348.00 =  1891.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1347.00 TO NODE   1348.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.43
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.938
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        1.20      0.25      0.60    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.10      0.20      1.00    83
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D        1.40      0.20      0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.61
  SUBAREA AREA(ACRES) =    2.70      SUBAREA RUNOFF(CFS) =    6.81
  EFFECTIVE AREA(ACRES) =     17.60   AREA-AVERAGED Fm(INCH/HR) =  0.17
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.73
  TOTAL AREA(ACRES) =     17.60       PEAK FLOW RATE(CFS) =      43.79

****************************************************************************
  FLOW PROCESS FROM NODE   1348.00 TO NODE   1349.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    675.00  DOWNSTREAM(FEET) =    655.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    81.00   CHANNEL SLOPE =  0.2469
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     43.79
  FLOW VELOCITY(FEET/SEC.) =  13.71   FLOW DEPTH(FEET) =   1.05
  TRAVEL TIME(MIN.) =   0.10   Tc(MIN.) =  18.53
  LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1349.00 =  1972.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1348.00 TO NODE   1349.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.53
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.930
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
```

```
  "GRASS"                    C        2.60      0.25      1.00    79
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        2.50      0.25      0.60    69
  NATURAL FAIR COVER
  "GRASS"                    D        2.20      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.20      0.20      1.00    83
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D        8.00      0.20      0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.73
  SUBAREA AREA(ACRES) =   15.50      SUBAREA RUNOFF(CFS) =   38.65
  EFFECTIVE AREA(ACRES) =     33.10   AREA-AVERAGED Fm(INCH/HR) =  0.17
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.73
  TOTAL AREA(ACRES) =     33.10       PEAK FLOW RATE(CFS) =      82.31

****************************************************************************
  FLOW PROCESS FROM NODE   1349.00 TO NODE   1350.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    655.00  DOWNSTREAM(FEET) =    650.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   303.00   CHANNEL SLOPE =  0.0165
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     82.31
  FLOW VELOCITY(FEET/SEC.) =   5.91   FLOW DEPTH(FEET) =   2.52
  TRAVEL TIME(MIN.) =   0.85   Tc(MIN.) =  19.38
  LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1350.00 =  2275.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1349.00 TO NODE   1350.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.38
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.855
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        3.00      0.25      0.60    69
  NATURAL FAIR COVER
  "GRASS"                    D        0.30      0.20      1.00    84
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D        7.70      0.20      0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.61
  SUBAREA AREA(ACRES) =   11.00      SUBAREA RUNOFF(CFS) =   26.97
  EFFECTIVE AREA(ACRES) =     44.10   AREA-AVERAGED Fm(INCH/HR) =  0.16
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.70
  TOTAL AREA(ACRES) =     44.10       PEAK FLOW RATE(CFS) =     107.04

****************************************************************************
  FLOW PROCESS FROM NODE   1350.00 TO NODE   1351.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    650.00  DOWNSTREAM(FEET) =    618.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   561.00   CHANNEL SLOPE =  0.0570
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    107.04
  FLOW VELOCITY(FEET/SEC.) =   9.99   FLOW DEPTH(FEET) =   2.10
  TRAVEL TIME(MIN.) =   0.94   Tc(MIN.) =  20.32
  LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1351.00 =  2836.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1350.00 TO NODE   1351.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  20.32
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.776
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
```

```
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        0.10      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                    C        0.20      0.25      1.00    79
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        8.10      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.40      0.25      1.00    73
  NATURAL FAIR COVER
  "GRASS"                    D        7.80      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.40      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.81
  SUBAREA AREA(ACRES) =   17.00      SUBAREA RUNOFF(CFS) =   39.74
  EFFECTIVE AREA(ACRES) =     61.10   AREA-AVERAGED Fm(INCH/HR) =  0.16
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.73
  TOTAL AREA(ACRES) =     61.10       PEAK FLOW RATE(CFS) =     143.66

****************************************************************************
  FLOW PROCESS FROM NODE   1350.00 TO NODE   1351.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  20.32
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.776
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D       10.10      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D        0.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.60
  SUBAREA AREA(ACRES) =   10.20      SUBAREA RUNOFF(CFS) =   24.37
  EFFECTIVE AREA(ACRES) =     71.30   AREA-AVERAGED Fm(INCH/HR) =  0.16
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.71
  TOTAL AREA(ACRES) =     71.30       PEAK FLOW RATE(CFS) =     168.04

****************************************************************************
  FLOW PROCESS FROM NODE   1351.00 TO NODE   1352.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    618.00  DOWNSTREAM(FEET) =    610.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   358.00   CHANNEL SLOPE =  0.0223
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    168.04
  FLOW VELOCITY(FEET/SEC.) =   7.88   FLOW DEPTH(FEET) =   3.03
  TRAVEL TIME(MIN.) =   0.76   Tc(MIN.) =  21.07
  LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1352.00 =  3194.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1351.00 TO NODE   1352.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  21.07
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.718
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B        5.10      0.30      1.00    69
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        2.10      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                    C        1.90      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        2.10      0.25      1.00    77
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C       22.30      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C        1.10      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.74
  SUBAREA AREA(ACRES) =   34.60      SUBAREA RUNOFF(CFS) =   78.64
  EFFECTIVE AREA(ACRES) =    105.90   AREA-AVERAGED Fm(INCH/HR) =  0.17
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.72
  TOTAL AREA(ACRES) =    105.90       PEAK FLOW RATE(CFS) =     242.99

****************************************************************************
  FLOW PROCESS FROM NODE   1351.00 TO NODE   1352.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  21.07
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.718
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D        4.70      0.20      1.00    84
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D       17.00      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D        1.50      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.71
  SUBAREA AREA(ACRES) =   23.20      SUBAREA RUNOFF(CFS) =   53.81
  EFFECTIVE AREA(ACRES) =    129.10   AREA-AVERAGED Fm(INCH/HR) =  0.16
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.72
  TOTAL AREA(ACRES) =    129.10       PEAK FLOW RATE(CFS) =     296.80

****************************************************************************
  FLOW PROCESS FROM NODE   1352.00 TO NODE   1353.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    610.00  DOWNSTREAM(FEET) =    600.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   576.00   CHANNEL SLOPE =  0.0174
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    296.80
  FLOW VELOCITY(FEET/SEC.) =   8.28   FLOW DEPTH(FEET) =   3.99
  TRAVEL TIME(MIN.) =   1.16   Tc(MIN.) =  22.23
  LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1353.00 =  3770.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1352.00 TO NODE   1353.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  22.23
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.630
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        2.30      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        2.90      0.25      1.00    77
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C       30.90      0.25      0.60    69
  NATURAL FAIR COVER
  "GRASS"                    D        0.40      0.20      1.00    84
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D       13.30      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D        0.50      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.65
  SUBAREA AREA(ACRES) =   50.30      SUBAREA RUNOFF(CFS) =  112.13
  EFFECTIVE AREA(ACRES) =    179.40   AREA-AVERAGED Fm(INCH/HR) =  0.16
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.70
  TOTAL AREA(ACRES) =    179.40       PEAK FLOW RATE(CFS) =     398.70

****************************************************************************
  FLOW PROCESS FROM NODE   1353.00 TO NODE   1354.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
```

```
 ============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    600.00  DOWNSTREAM(FEET) =    580.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   852.00   CHANNEL SLOPE =  0.0235
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    398.70
  FLOW VELOCITY(FEET/SEC.) =  10.00   FLOW DEPTH(FEET) =   4.29
  TRAVEL TIME(MIN.) =   1.42   Tc(MIN.) =  23.65
  LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1354.00 =  4622.00 FEET.

 ****************************************************************************
  FLOW PROCESS FROM NODE   1353.00 TO NODE   1354.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) =  23.65
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.541
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B         1.50      0.30      0.60    56
  NATURAL FAIR COVER
  "GRASS"                    C         2.70      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C         3.00      0.25      1.00    77
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        64.80      0.25      0.60    69
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D         6.40      0.20      0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.63
  SUBAREA AREA(ACRES) =   78.40      SUBAREA RUNOFF(CFS) =  168.31
  EFFECTIVE AREA(ACRES) =   257.80   AREA-AVERAGED Fm(INCH/HR) =  0.16
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.68
  TOTAL AREA(ACRES) =   257.80       PEAK FLOW RATE(CFS) =    552.56

 ****************************************************************************
  FLOW PROCESS FROM NODE   1354.00 TO NODE   1355.00 IS CODE =  51
 ----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
 ============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    580.00  DOWNSTREAM(FEET) =    528.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1057.00   CHANNEL SLOPE =  0.0492
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    552.56
  FLOW VELOCITY(FEET/SEC.) =  14.31   FLOW DEPTH(FEET) =   4.20
  TRAVEL TIME(MIN.) =   1.23   Tc(MIN.) =  24.88
  LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1355.00 =  5679.00 FEET.

 ****************************************************************************
  FLOW PROCESS FROM NODE   1354.00 TO NODE   1355.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) =  24.88
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.467
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B         4.90      0.30      0.60    56
  NATURAL FAIR COVER
  "GRASS"                    C         0.20      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C         0.50      0.25      1.00    77
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        29.40      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C         0.40      0.25      1.00    73
  NATURAL FAIR COVER
  "GRASS"                    D         1.40      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.63
  SUBAREA AREA(ACRES) =   36.80      SUBAREA RUNOFF(CFS) =   76.44
  EFFECTIVE AREA(ACRES) =   294.60   AREA-AVERAGED Fm(INCH/HR) =  0.16
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.67
  TOTAL AREA(ACRES) =   294.60       PEAK FLOW RATE(CFS) =    611.86

 ****************************************************************************
  FLOW PROCESS FROM NODE   1354.00 TO NODE   1355.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) =  24.88
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.467
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D         0.30      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D         0.90      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.90
  SUBAREA AREA(ACRES) =    1.20      SUBAREA RUNOFF(CFS) =    2.47
  EFFECTIVE AREA(ACRES) =   295.80   AREA-AVERAGED Fm(INCH/HR) =  0.16
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.67
  TOTAL AREA(ACRES) =   295.80       PEAK FLOW RATE(CFS) =    614.33

 ****************************************************************************
  FLOW PROCESS FROM NODE   1355.00 TO NODE   1356.00 IS CODE =  51
 ----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
 ============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    528.00  DOWNSTREAM(FEET) =    470.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1455.00   CHANNEL SLOPE =  0.0399
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    614.33
  FLOW VELOCITY(FEET/SEC.) =  13.59   FLOW DEPTH(FEET) =   4.67
  TRAVEL TIME(MIN.) =   1.78   Tc(MIN.) =  26.67
  LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1356.00 =  7134.00 FEET.

 ****************************************************************************
  FLOW PROCESS FROM NODE   1355.00 TO NODE   1356.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) =  26.67
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.373
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B         4.30      0.30      0.60    56
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C         1.90      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C         0.20      0.25      1.00    77
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        48.70      0.25      0.60    69
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D         0.20      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                    D         1.00      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.62
  SUBAREA AREA(ACRES) =   56.30      SUBAREA RUNOFF(CFS) =  112.29
  EFFECTIVE AREA(ACRES) =   352.10   AREA-AVERAGED Fm(INCH/HR) =  0.16
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.66
  TOTAL AREA(ACRES) =   352.10       PEAK FLOW RATE(CFS) =    701.68

 ****************************************************************************
  FLOW PROCESS FROM NODE   1355.00 TO NODE   1356.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) =  26.67
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.373
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
```

```
  "3-4 DWELLINGS/ACRE"       D        2.60      0.20      0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.60
  SUBAREA AREA(ACRES) =    2.60      SUBAREA RUNOFF(CFS) =    5.27
  EFFECTIVE AREA(ACRES) =    354.70   AREA-AVERAGED Fm(INCH/HR) =  0.16
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.66
  TOTAL AREA(ACRES) =    354.70       PEAK FLOW RATE(CFS) =     706.95

****************************************************************************
  FLOW PROCESS FROM NODE   1356.00 TO NODE   1371.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    470.00  DOWNSTREAM(FEET) =    415.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1649.00   CHANNEL SLOPE =  0.0334
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    706.95
  FLOW VELOCITY(FEET/SEC.) =  13.14   FLOW DEPTH(FEET) =   4.92
  TRAVEL TIME(MIN.) =   2.09   Tc(MIN.) =  28.76
  LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1371.00 =  8783.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1356.00 TO NODE   1371.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  28.76
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.275
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B        4.40      0.30      0.60    56
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        0.50      0.25      1.00    75
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C       39.40      0.25      0.60    69
  NATURAL FAIR COVER
  "GRASS"                    D        0.10      0.20      1.00    84
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D        3.80      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D        0.20      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.61
  SUBAREA AREA(ACRES) =   48.40      SUBAREA RUNOFF(CFS) =   92.47
  EFFECTIVE AREA(ACRES) =    403.10   AREA-AVERAGED Fm(INCH/HR) =  0.16
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.66
  TOTAL AREA(ACRES) =    403.10       PEAK FLOW RATE(CFS) =     767.93

****************************************************************************
  FLOW PROCESS FROM NODE   1371.00 TO NODE   1371.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  28.76
  RAINFALL INTENSITY(INCH/HR) =   2.27
  AREA-AVERAGED Fm(INCH/HR) =  0.16
  AREA-AVERAGED Fp(INCH/HR) =  0.24
  AREA-AVERAGED Ap =  0.66
  EFFECTIVE STREAM AREA(ACRES) =   403.10
  TOTAL STREAM AREA(ACRES) =   403.10
  PEAK FLOW RATE(CFS) AT CONFLUENCE =    767.93

****************************************************************************
  FLOW PROCESS FROM NODE   1360.00 TO NODE   1361.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   325.00
  ELEVATION DATA: UPSTREAM(FEET) =   1110.00  DOWNSTREAM(FEET) =   1050.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =   10.007
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.159
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS   Tc
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "GRASS"                    C        0.30      0.25      1.00    79   10.01
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      1.06
  TOTAL AREA(ACRES) =      0.30   PEAK FLOW RATE(CFS) =      1.06

****************************************************************************
  FLOW PROCESS FROM NODE   1361.00 TO NODE   1362.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1050.00  DOWNSTREAM(FEET) =   1025.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    88.00   CHANNEL SLOPE =  0.2841
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      1.06
  FLOW VELOCITY(FEET/SEC.) =   5.21   FLOW DEPTH(FEET) =   0.17
  TRAVEL TIME(MIN.) =   0.28   Tc(MIN.) =  10.29
  LONGEST FLOWPATH FROM NODE   1360.00 TO NODE   1362.00 =   413.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1361.00 TO NODE   1362.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.29
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.102
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        0.20      0.25      1.00    79
  NATURAL FAIR COVER
  "GRASS"                    D        0.30      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.50      SUBAREA RUNOFF(CFS) =    1.75
  EFFECTIVE AREA(ACRES) =      0.80   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      0.80       PEAK FLOW RATE(CFS) =       2.79

****************************************************************************
  FLOW PROCESS FROM NODE   1362.00 TO NODE   1363.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1025.00  DOWNSTREAM(FEET) =   1000.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    99.00   CHANNEL SLOPE =  0.2525
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      2.79
  FLOW VELOCITY(FEET/SEC.) =   6.71   FLOW DEPTH(FEET) =   0.32
  TRAVEL TIME(MIN.) =   0.25   Tc(MIN.) =  10.53
  LONGEST FLOWPATH FROM NODE   1360.00 TO NODE   1363.00 =   512.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1362.00 TO NODE   1363.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.53
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.053
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        0.50      0.25      1.00    79
  NATURAL FAIR COVER
  "GRASS"                    D        0.60      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
```

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  SUBAREA AREA(ACRES) =     1.10      SUBAREA RUNOFF(CFS) =     3.79
  EFFECTIVE AREA(ACRES) =      1.90   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.90       PEAK FLOW RATE(CFS) =       6.54

****************************************************************************
  FLOW PROCESS FROM NODE   1363.00 TO NODE   1364.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1000.00  DOWNSTREAM(FEET) =    950.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   122.00   CHANNEL SLOPE =  0.4098
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      6.54
  FLOW VELOCITY(FEET/SEC.) =  10.34   FLOW DEPTH(FEET) =   0.44
  TRAVEL TIME(MIN.) =   0.20   Tc(MIN.) =  10.73
  LONGEST FLOWPATH FROM NODE   1360.00 TO NODE   1364.00 =   634.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1363.00 TO NODE   1364.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.73
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.014
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        0.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.10      0.25      1.00    77
  NATURAL FAIR COVER
  "GRASS"                    D        0.60      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =     1.10      SUBAREA RUNOFF(CFS) =     3.75
  EFFECTIVE AREA(ACRES) =      3.00   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      3.00       PEAK FLOW RATE(CFS) =      10.23

****************************************************************************
  FLOW PROCESS FROM NODE   1364.00 TO NODE   1365.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    950.00  DOWNSTREAM(FEET) =    875.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   205.00   CHANNEL SLOPE =  0.3659
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     10.23
  FLOW VELOCITY(FEET/SEC.) =  11.09   FLOW DEPTH(FEET) =   0.58
  TRAVEL TIME(MIN.) =   0.31   Tc(MIN.) =  11.04
  LONGEST FLOWPATH FROM NODE   1360.00 TO NODE   1365.00 =   839.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1364.00 TO NODE   1365.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.04
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.952
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        0.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.50      0.25      1.00    77
  NATURAL FAIR COVER
  "GRASS"                    D        0.30      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =     1.20      SUBAREA RUNOFF(CFS) =     4.01
  EFFECTIVE AREA(ACRES) =      4.20   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      4.20       PEAK FLOW RATE(CFS) =      14.08

****************************************************************************
  FLOW PROCESS FROM NODE   1365.00 TO NODE   1366.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    875.00  DOWNSTREAM(FEET) =    850.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   146.00   CHANNEL SLOPE =  0.1712
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     14.08
  FLOW VELOCITY(FEET/SEC.) =   9.16   FLOW DEPTH(FEET) =   0.84
  TRAVEL TIME(MIN.) =   0.27   Tc(MIN.) =  11.30
  LONGEST FLOWPATH FROM NODE   1360.00 TO NODE   1366.00 =   985.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1365.00 TO NODE   1366.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.30
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.899
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        1.20      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        1.20      0.25      1.00    77
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        0.10      0.25      0.60    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =     2.50      SUBAREA RUNOFF(CFS) =     8.22
  EFFECTIVE AREA(ACRES) =      6.70   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.99
  TOTAL AREA(ACRES) =      6.70       PEAK FLOW RATE(CFS) =      22.09

****************************************************************************
  FLOW PROCESS FROM NODE   1366.00 TO NODE   1367.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    850.00  DOWNSTREAM(FEET) =    700.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   545.00   CHANNEL SLOPE =  0.2752
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     22.09
  FLOW VELOCITY(FEET/SEC.) =  12.20   FLOW DEPTH(FEET) =   0.94
  TRAVEL TIME(MIN.) =   0.74   Tc(MIN.) =  12.05
  LONGEST FLOWPATH FROM NODE   1360.00 TO NODE   1367.00 =  1530.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1366.00 TO NODE   1367.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.05
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.750
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        0.50      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.60      0.25      1.00    77
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        3.10      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.40      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.73
  SUBAREA AREA(ACRES) =     4.60      SUBAREA RUNOFF(CFS) =    14.77
  EFFECTIVE AREA(ACRES) =     11.30   AREA-AVERAGED Fm(INCH/HR) =  0.21
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  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.89
  TOTAL AREA(ACRES) =     11.30       PEAK FLOW RATE(CFS) =      35.97

****************************************************************************
  FLOW PROCESS FROM NODE   1367.00 TO NODE   1368.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    700.00  DOWNSTREAM(FEET) =    586.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   607.00   CHANNEL SLOPE =  0.1878
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     35.97
  FLOW VELOCITY(FEET/SEC.) =  11.80   FLOW DEPTH(FEET) =   1.01
  TRAVEL TIME(MIN.) =   0.86   Tc(MIN.) =  12.91
  LONGEST FLOWPATH FROM NODE   1360.00 TO NODE   1368.00 =  2137.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1367.00 TO NODE   1368.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.91
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.602
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        0.20      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.30      0.25      1.00    77
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        8.00      0.25      0.60    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.62
  SUBAREA AREA(ACRES) =    8.50      SUBAREA RUNOFF(CFS) =   26.36
  EFFECTIVE AREA(ACRES) =     19.80   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.77
  TOTAL AREA(ACRES) =     19.80       PEAK FLOW RATE(CFS) =      60.81

****************************************************************************
  FLOW PROCESS FROM NODE   1368.00 TO NODE   1369.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    586.00  DOWNSTREAM(FEET) =    438.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1496.00   CHANNEL SLOPE =  0.0989
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     60.81
  FLOW VELOCITY(FEET/SEC.) =  10.71   FLOW DEPTH(FEET) =   1.58
  TRAVEL TIME(MIN.) =   2.33   Tc(MIN.) =  15.23
  LONGEST FLOWPATH FROM NODE   1360.00 TO NODE   1369.00 =  3633.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1368.00 TO NODE   1369.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  15.23
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.274
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B        1.10      0.30      0.60    56
  NATURAL FAIR COVER
  "GRASS"                    C        1.30      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.70      0.25      1.00    77
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C       21.30      0.25      0.60    69
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D        5.90      0.20      0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.63
  SUBAREA AREA(ACRES) =   30.30      SUBAREA RUNOFF(CFS) =   85.14
  EFFECTIVE AREA(ACRES) =     50.10   AREA-AVERAGED Fm(INCH/HR) =  0.17
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.68
  TOTAL AREA(ACRES) =     50.10       PEAK FLOW RATE(CFS) =     140.11

****************************************************************************
  FLOW PROCESS FROM NODE   1369.00 TO NODE   1370.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    438.00  DOWNSTREAM(FEET) =    422.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1128.00   CHANNEL SLOPE =  0.0142
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    140.11
  FLOW VELOCITY(FEET/SEC.) =   6.36   FLOW DEPTH(FEET) =   3.10
  TRAVEL TIME(MIN.) =   2.95   Tc(MIN.) =  18.19
  LONGEST FLOWPATH FROM NODE   1360.00 TO NODE   1370.00 =  4761.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1369.00 TO NODE   1370.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.19
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.959
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B        1.60      0.30      1.00    69
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B       13.80      0.30      0.60    56
  NATURAL FAIR COVER
  "GRASS"                    C        9.90      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        1.50      0.25      1.00    77
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       C       12.20      0.25      0.20    69
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C      120.50      0.25      0.60    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.60
  SUBAREA AREA(ACRES) =  159.50      SUBAREA RUNOFF(CFS) =  402.79
  EFFECTIVE AREA(ACRES) =    209.60   AREA-AVERAGED Fm(INCH/HR) =  0.16
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.62
  TOTAL AREA(ACRES) =    209.60       PEAK FLOW RATE(CFS) =     528.72

****************************************************************************
  FLOW PROCESS FROM NODE   1369.00 TO NODE   1370.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.19
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.959
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.60      0.25      1.00    73
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D       15.00      0.20      0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.62
  SUBAREA AREA(ACRES) =   15.60      SUBAREA RUNOFF(CFS) =   39.80
  EFFECTIVE AREA(ACRES) =    225.20   AREA-AVERAGED Fm(INCH/HR) =  0.15
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.62
  TOTAL AREA(ACRES) =    225.20       PEAK FLOW RATE(CFS) =     568.52

****************************************************************************
  FLOW PROCESS FROM NODE   1370.00 TO NODE   1371.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    422.00  DOWNSTREAM(FEET) =    415.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   756.00   CHANNEL SLOPE =  0.0093
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
```

```
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   7.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    568.52
 FLOW VELOCITY(FEET/SEC.) =   7.70   FLOW DEPTH(FEET) =   5.78
 TRAVEL TIME(MIN.) =   1.64   Tc(MIN.) =  19.82
 LONGEST FLOWPATH FROM NODE   1360.00 TO NODE   1371.00 =  5517.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1370.00 TO NODE   1371.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  19.82
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.815
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"       B       14.70      0.30      0.60    56
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"       C       29.20      0.25      0.60    69
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"       D        2.00      0.20      0.60    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.60
 SUBAREA AREA(ACRES) =   45.90      SUBAREA RUNOFF(CFS) =  109.77
 EFFECTIVE AREA(ACRES) =    271.10   AREA-AVERAGED Fm(INCH/HR) =  0.16
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.62
 TOTAL AREA(ACRES) =    271.10       PEAK FLOW RATE(CFS) =     649.10

****************************************************************************
 FLOW PROCESS FROM NODE   1371.00 TO NODE   1371.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  19.82
 RAINFALL INTENSITY(INCH/HR) =   2.82
 AREA-AVERAGED Fm(INCH/HR) =  0.16
 AREA-AVERAGED Fp(INCH/HR) =  0.25
 AREA-AVERAGED Ap =  0.62
 EFFECTIVE STREAM AREA(ACRES) =   271.10
 TOTAL STREAM AREA(ACRES) =   271.10
 PEAK FLOW RATE(CFS) AT CONFLUENCE =    649.10

 ** CONFLUENCE DATA **
  STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
  NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
     1    767.93  28.76    2.275  0.24( 0.16) 0.66   403.1    1340.00
     2    649.10  19.82    2.815  0.25( 0.16) 0.62   271.1    1360.00

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
  STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
  NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
     1   1313.70  19.82    2.815  0.25( 0.16) 0.64   549.0    1360.00
     2   1285.06  28.76    2.275  0.24( 0.16) 0.64   674.2    1340.00

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =   1313.70    Tc(MIN.) =    19.82
 EFFECTIVE AREA(ACRES) =   548.96   AREA-AVERAGED Fm(INCH/HR) =  0.16
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.64
 TOTAL AREA(ACRES) =    674.20
 LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1371.00 =  8783.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1371.00 TO NODE   1372.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    415.00  DOWNSTREAM(FEET) =    402.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1049.00   CHANNEL SLOPE =  0.0124
 CHANNEL BASE(FEET) =    8.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   8.00
 CHANNEL FLOW THRU SUBAREA(CFS) =   1313.70
 FLOW VELOCITY(FEET/SEC.) =  10.61   FLOW DEPTH(FEET) =   7.82
 TRAVEL TIME(MIN.) =   1.65   Tc(MIN.) =  21.47
 LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1372.00 =  9832.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1371.00 TO NODE   1372.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  21.47
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.688
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"       B       12.80      0.30      0.60    56
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"       C       21.30      0.25      0.60    69
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"       D        8.80      0.20      0.60    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.60
 SUBAREA AREA(ACRES) =   42.90      SUBAREA RUNOFF(CFS) =   97.89
 EFFECTIVE AREA(ACRES) =    591.86   AREA-AVERAGED Fm(INCH/HR) =  0.16
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.64
 TOTAL AREA(ACRES) =    717.10       PEAK FLOW RATE(CFS) =    1348.67

****************************************************************************
 FLOW PROCESS FROM NODE   1372.00 TO NODE   1373.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    402.00  DOWNSTREAM(FEET) =    325.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1429.00   CHANNEL SLOPE =  0.0539
 CHANNEL BASE(FEET) =    8.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   8.00
 CHANNEL FLOW THRU SUBAREA(CFS) =   1348.67
 FLOW VELOCITY(FEET/SEC.) =  18.43   FLOW DEPTH(FEET) =   5.44
 TRAVEL TIME(MIN.) =   1.29   Tc(MIN.) =  22.76
 LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1373.00 = 11261.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1372.00 TO NODE   1373.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  22.76
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.594
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL POOR COVER
 "BARREN"                   B        0.50      0.30      1.00    86
 NATURAL FAIR COVER
 "GRASS"                    B        0.70      0.30      1.00    69
 NATURAL FAIR COVER
 "OPEN BRUSH"               B        0.20      0.30      1.00    66
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"       B        5.50      0.30      0.60    56
 NATURAL FAIR COVER
 "WOODLAND"                 B        4.00      0.30      1.00    60
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      C        0.20      0.25      1.00    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.80
 SUBAREA AREA(ACRES) =   11.10      SUBAREA RUNOFF(CFS) =   23.52
 EFFECTIVE AREA(ACRES) =    602.96   AREA-AVERAGED Fm(INCH/HR) =  0.16
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.64
 TOTAL AREA(ACRES) =    728.20       PEAK FLOW RATE(CFS) =    1348.67
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE   1372.00 TO NODE   1373.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  22.76
```

```
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.594
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "11+ DWELLINGS/ACRE"        C        1.50      0.25      0.20    69
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        0.60      0.25      1.00    77
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"        C        8.90      0.25      0.60    69
 NATURAL FAIR COVER
 "WOODLAND"                  C        0.60      0.25      1.00    73
 NATURAL FAIR COVER
 "GRASS"                     D        0.40      0.20      1.00    84
 RESIDENTIAL
 "11+ DWELLINGS/ACRE"        D        0.50      0.20      0.20    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.59
 SUBAREA AREA(ACRES) =   12.50      SUBAREA RUNOFF(CFS) =   27.56
 EFFECTIVE AREA(ACRES) =    615.46   AREA-AVERAGED Fm(INCH/HR) =  0.16
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.64
 TOTAL AREA(ACRES) =    740.70       PEAK FLOW RATE(CFS) =    1349.69

****************************************************************************
 FLOW PROCESS FROM NODE   1372.00 TO NODE   1373.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  22.76
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.594
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"        D        0.40      0.20      0.60    75
 NATURAL FAIR COVER
 "WOODLAND"                  D        2.90      0.20      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.95
 SUBAREA AREA(ACRES) =    3.30      SUBAREA RUNOFF(CFS) =    7.14
 EFFECTIVE AREA(ACRES) =    618.76   AREA-AVERAGED Fm(INCH/HR) =  0.16
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.64
 TOTAL AREA(ACRES) =    744.00       PEAK FLOW RATE(CFS) =    1356.83

****************************************************************************
 FLOW PROCESS FROM NODE   1373.00 TO NODE   1374.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    325.00  DOWNSTREAM(FEET) =    290.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1774.00   CHANNEL SLOPE =  0.0197
 CHANNEL BASE(FEET) =    8.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   8.00
 CHANNEL FLOW THRU SUBAREA(CFS) =   1356.83
 FLOW VELOCITY(FEET/SEC.) =  12.72   FLOW DEPTH(FEET) =   7.08
 TRAVEL TIME(MIN.) =   2.32   Tc(MIN.) =  25.09
 LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1374.00 = 13035.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   1373.00 TO NODE   1374.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  25.09
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.455
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                     B        2.80      0.30      1.00    69
 COMMERCIAL                  B        0.10      0.30      0.10    56
 PUBLIC PARK                 B        0.20      0.30      0.85    56
 RESIDENTIAL
 "11+ DWELLINGS/ACRE"        B       13.70      0.30      0.20    56
 NATURAL FAIR COVER
 "OPEN BRUSH"                B        0.40      0.30      1.00    66
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"        B        0.30      0.30      0.60    56
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.36
 SUBAREA AREA(ACRES) =   17.50      SUBAREA RUNOFF(CFS) =   36.97
 EFFECTIVE AREA(ACRES) =    636.26   AREA-AVERAGED Fm(INCH/HR) =  0.16
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.63
 TOTAL AREA(ACRES) =    761.50       PEAK FLOW RATE(CFS) =    1356.83
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE   1373.00 TO NODE   1374.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  25.09
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.455
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "WOODLAND"                  B        2.30      0.30      1.00    60
 NATURAL FAIR COVER
 "GRASS"                     C        0.80      0.25      1.00    79
 RESIDENTIAL
 "11+ DWELLINGS/ACRE"        C       38.30      0.25      0.20    69
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        1.40      0.25      1.00    77
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"        C        0.20      0.25      0.60    69
 NATURAL FAIR COVER
 "WOODLAND"                  C        1.80      0.25      1.00    73
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.31
 SUBAREA AREA(ACRES) =   44.80      SUBAREA RUNOFF(CFS) =   95.73
 EFFECTIVE AREA(ACRES) =    681.06   AREA-AVERAGED Fm(INCH/HR) =  0.15
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.61
 TOTAL AREA(ACRES) =    806.30       PEAK FLOW RATE(CFS) =    1412.27

****************************************************************************
 FLOW PROCESS FROM NODE   1373.00 TO NODE   1374.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  25.09
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.455
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                     D        3.00      0.20      1.00    84
 COMMERCIAL                  D        0.20      0.20      0.10    75
 PUBLIC PARK                 D        1.10      0.20      0.85    75
 RESIDENTIAL
 "11+ DWELLINGS/ACRE"        D        4.20      0.20      0.20    75
 NATURAL FAIR COVER
 "OPEN BRUSH"                D        0.20      0.20      1.00    83
 NATURAL FAIR COVER
 "WOODLAND"                  D        2.10      0.20      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.66
 SUBAREA AREA(ACRES) =   10.80      SUBAREA RUNOFF(CFS) =   22.59
 EFFECTIVE AREA(ACRES) =    691.86   AREA-AVERAGED Fm(INCH/HR) =  0.15
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.61
 TOTAL AREA(ACRES) =    817.10       PEAK FLOW RATE(CFS) =    1434.85

****************************************************************************
 FLOW PROCESS FROM NODE   1374.00 TO NODE   1375.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    290.00  DOWNSTREAM(FEET) =    240.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   681.00   CHANNEL SLOPE =  0.0734
 CHANNEL BASE(FEET) =    8.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   8.00
 CHANNEL FLOW THRU SUBAREA(CFS) =   1434.85
 FLOW VELOCITY(FEET/SEC.) =  21.00   FLOW DEPTH(FEET) =   5.18
 TRAVEL TIME(MIN.) =   0.54   Tc(MIN.) =  25.63
 LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1375.00 = 13716.00 FEET.
```

```
****************************************************************************
  FLOW PROCESS FROM NODE   1374.00 TO NODE   1375.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  25.63
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.427
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                A        0.10      0.40      1.00    46
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.10      0.30      1.00    66
  NATURAL FAIR COVER
  "GRASS"                     C        0.50      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.50      0.25      1.00    77
  COMMERCIAL                  C        0.60      0.25      0.10    69
  NATURAL FAIR COVER
  "WOODLAND"                  C        1.50      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.84
  SUBAREA AREA(ACRES) =    3.30      SUBAREA RUNOFF(CFS) =    6.57
  EFFECTIVE AREA(ACRES) =    695.16   AREA-AVERAGED Fm(INCH/HR) =  0.15
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.61
  TOTAL AREA(ACRES) =    820.40       PEAK FLOW RATE(CFS) =    1434.85
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1374.00 TO NODE   1375.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  25.63
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.427
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  PUBLIC PARK                 D        0.10      0.20      0.85    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        2.10      0.20      1.00    83
  COMMERCIAL                  D        0.20      0.20      0.10    75
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.20      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
  SUBAREA AREA(ACRES) =    2.60      SUBAREA RUNOFF(CFS) =    5.25
  EFFECTIVE AREA(ACRES) =    697.76   AREA-AVERAGED Fm(INCH/HR) =  0.15
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.61
  TOTAL AREA(ACRES) =    823.00       PEAK FLOW RATE(CFS) =    1434.85
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1375.00 TO NODE   1375.00 IS CODE =  11
----------------------------------------------------------------------------
  >>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
============================================================================

  ** MAIN STREAM CONFLUENCE DATA **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)        (ACRES)    NODE
      1   1434.85  25.63    2.427  0.25( 0.15) 0.61   697.8    1360.00
      2   1407.61  34.59    2.046  0.25( 0.15) 0.62   823.0    1340.00
  LONGEST FLOWPATH FROM NODE   1340.00 TO NODE   1375.00 = 13716.00 FEET.

  ** MEMORY BANK #  1 CONFLUENCE DATA **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)        (ACRES)    NODE
      1   3900.76  33.06    2.104  0.25( 0.20) 0.80  2277.2    1300.00
      2   3574.16  45.27    1.759  0.25( 0.19) 0.77  2535.5    1320.00
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1375.00 = 22215.00 FEET.

  ** PEAK FLOW RATE TABLE **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)        (ACRES)    NODE
      1   4972.97  25.63    2.427  0.25( 0.19) 0.74  2463.2    1360.00
      2   5313.03  33.06    2.104  0.25( 0.19) 0.75  3078.8    1300.00
      3   5267.41  34.59    2.046  0.25( 0.19) 0.75  3132.6    1340.00
      4   4768.56  45.27    1.759  0.25( 0.18) 0.73  3358.5    1320.00
    TOTAL AREA(ACRES) =   3358.50

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     5313.03  Tc(MIN.) =   33.059
  EFFECTIVE AREA(ACRES) =   3078.81  AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.75
  TOTAL AREA(ACRES) =   3358.50
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1375.00 = 22215.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1375.00 TO NODE   1375.00 IS CODE =  12
----------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE   1375.00 TO NODE   1395.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    240.00  DOWNSTREAM(FEET) =    216.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  3182.00   CHANNEL SLOPE =  0.0075
  CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   5313.03
  FLOW VELOCITY(FEET/SEC.) =  11.45   FLOW DEPTH(FEET) =   4.90
  TRAVEL TIME(MIN.) =   4.63   Tc(MIN.) =  37.69
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1395.00 = 25397.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1375.00 TO NODE   1395.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  37.69
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.949
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  PUBLIC PARK                 A        5.40      0.40      0.85    32
  NATURAL POOR COVER
  "BARREN"                    A        0.20      0.40      1.00    78
  NATURAL FAIR COVER
  "GRASS"                     A        0.20      0.40      1.00    50
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           A       40.70      0.40      1.00    49
  NATURAL FAIR COVER
  "OPEN BRUSH"                A        2.40      0.40      1.00    46
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        A        0.60      0.40      0.20    32
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =   49.50      SUBAREA RUNOFF(CFS) =   69.48
  EFFECTIVE AREA(ACRES) =   3128.31   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.75
  TOTAL AREA(ACRES) =   3408.00       PEAK FLOW RATE(CFS) =    5313.03
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1375.00 TO NODE   1395.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  37.69
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.949
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       A        0.70      0.40      1.00    40
  NATURAL FAIR COVER
  "WOODLAND"                  A        0.40      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        3.50      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C        0.80      0.25      1.00    79
```

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  NATURAL FAIR COVER
  "OPEN BRUSH"                C        3.00      0.25      1.00    77
  COMMERCIAL                  C        2.70      0.25      0.10    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.78
  SUBAREA AREA(ACRES) =   11.10      SUBAREA RUNOFF(CFS) =   17.37
  EFFECTIVE AREA(ACRES) =   3139.41   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.75
  TOTAL AREA(ACRES) =   3419.10       PEAK FLOW RATE(CFS) =    5313.03
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1375.00 TO NODE   1395.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  37.69
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.949
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  C       11.70      0.25      1.00    73
  PUBLIC PARK                 D       20.40      0.20      0.85    75
  NATURAL FAIR COVER
  "GRASS"                     D        4.20      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                      D        0.20      0.20      1.00    82
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        0.30      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        6.10      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
  SUBAREA AREA(ACRES) =   42.90      SUBAREA RUNOFF(CFS) =   67.56
  EFFECTIVE AREA(ACRES) =   3182.31   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.76
  TOTAL AREA(ACRES) =   3462.00       PEAK FLOW RATE(CFS) =    5313.03
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1395.00 TO NODE   1395.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  37.69
  RAINFALL INTENSITY(INCH/HR) =  1.95
  AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.25
  AREA-AVERAGED Ap =  0.76
  EFFECTIVE STREAM AREA(ACRES) =  3182.31
  TOTAL STREAM AREA(ACRES) =  3462.00
  PEAK FLOW RATE(CFS) AT CONFLUENCE =   5313.03

****************************************************************************
  FLOW PROCESS FROM NODE   1380.00 TO NODE   1381.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   295.00
  ELEVATION DATA: UPSTREAM(FEET) =    970.00  DOWNSTREAM(FEET) =    960.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    6.201
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.570
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        D        1.30      0.20      0.20    75    6.20
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.20
  SUBAREA RUNOFF(CFS) =      6.47
  TOTAL AREA(ACRES) =      1.30   PEAK FLOW RATE(CFS) =      6.47

****************************************************************************
```

```
  FLOW PROCESS FROM NODE   1381.00 TO NODE   1382.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    960.00  DOWNSTREAM(FEET) =    907.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   424.00   CHANNEL SLOPE =  0.1250
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      6.47
  FLOW VELOCITY(FEET/SEC.) =   6.63   FLOW DEPTH(FEET) =   0.61
  TRAVEL TIME(MIN.) =   1.07   Tc(MIN.) =   7.27
  LONGEST FLOWPATH FROM NODE   1380.00 TO NODE   1382.00 =   719.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1381.00 TO NODE   1382.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   7.27
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.020
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        D        5.80      0.20      0.20    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.20
  SUBAREA AREA(ACRES) =    5.80      SUBAREA RUNOFF(CFS) =   26.00
  EFFECTIVE AREA(ACRES) =      7.10   AREA-AVERAGED Fm(INCH/HR) =  0.04
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.20
  TOTAL AREA(ACRES) =      7.10       PEAK FLOW RATE(CFS) =      31.82

****************************************************************************
  FLOW PROCESS FROM NODE   1382.00 TO NODE   1383.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    907.00  DOWNSTREAM(FEET) =    903.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   295.00   CHANNEL SLOPE =  0.0136
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     31.82
  FLOW VELOCITY(FEET/SEC.) =   4.33   FLOW DEPTH(FEET) =   1.89
  TRAVEL TIME(MIN.) =   1.14   Tc(MIN.) =   8.40
  LONGEST FLOWPATH FROM NODE   1380.00 TO NODE   1383.00 =  1014.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1382.00 TO NODE   1383.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   8.40
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.633
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        D        6.00      0.20      0.20    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.20
  SUBAREA AREA(ACRES) =    6.00      SUBAREA RUNOFF(CFS) =   24.80
  EFFECTIVE AREA(ACRES) =     13.10   AREA-AVERAGED Fm(INCH/HR) =  0.04
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.20
  TOTAL AREA(ACRES) =     13.10       PEAK FLOW RATE(CFS) =      54.15

****************************************************************************
  FLOW PROCESS FROM NODE   1383.00 TO NODE   1384.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    903.00  DOWNSTREAM(FEET) =    900.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   247.00   CHANNEL SLOPE =  0.0121
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     54.15
  FLOW VELOCITY(FEET/SEC.) =   4.73   FLOW DEPTH(FEET) =   2.20
```

```
  TRAVEL TIME(MIN.) =   0.87   Tc(MIN.) =   9.27
  LONGEST FLOWPATH FROM NODE   1380.00 TO NODE   1384.00 =  1261.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1383.00 TO NODE   1384.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.27
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.375
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D        7.20      0.20      0.20    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.20
  SUBAREA AREA(ACRES) =    7.20      SUBAREA RUNOFF(CFS) =   28.09
  EFFECTIVE AREA(ACRES) =     20.30   AREA-AVERAGED Fm(INCH/HR) =  0.04
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.20
  TOTAL AREA(ACRES) =     20.30       PEAK FLOW RATE(CFS) =      79.20

****************************************************************************
  FLOW PROCESS FROM NODE   1384.00 TO NODE   1385.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    900.00  DOWNSTREAM(FEET) =    790.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   349.00   CHANNEL SLOPE =  0.3152
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     79.20
  FLOW VELOCITY(FEET/SEC.) =  17.19   FLOW DEPTH(FEET) =   1.12
  TRAVEL TIME(MIN.) =   0.34   Tc(MIN.) =   9.61
  LONGEST FLOWPATH FROM NODE   1380.00 TO NODE   1385.00 =  1610.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1384.00 TO NODE   1385.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.61
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.275
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D        2.10      0.20      0.20    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.20
  SUBAREA AREA(ACRES) =    2.10      SUBAREA RUNOFF(CFS) =    8.00
  EFFECTIVE AREA(ACRES) =     22.40   AREA-AVERAGED Fm(INCH/HR) =  0.04
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.20
  TOTAL AREA(ACRES) =     22.40       PEAK FLOW RATE(CFS) =      85.38

****************************************************************************
  FLOW PROCESS FROM NODE   1385.00 TO NODE   1386.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    790.00  DOWNSTREAM(FEET) =    755.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   362.00   CHANNEL SLOPE =  0.0967
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     85.38
  FLOW VELOCITY(FEET/SEC.) =  11.46   FLOW DEPTH(FEET) =   1.61
  TRAVEL TIME(MIN.) =   0.53   Tc(MIN.) =  10.14
  LONGEST FLOWPATH FROM NODE   1380.00 TO NODE   1386.00 =  1972.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1385.00 TO NODE   1386.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.14
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.132
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       C        4.90      0.25      0.20    69
  NATURAL FAIR COVER
  "GRASS"                    D        0.30      0.20      1.00    84
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D       29.30      0.20      0.20    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.21
  SUBAREA AREA(ACRES) =   34.50      SUBAREA RUNOFF(CFS) =  126.98
  EFFECTIVE AREA(ACRES) =     56.90   AREA-AVERAGED Fm(INCH/HR) =  0.04
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.20
  TOTAL AREA(ACRES) =     56.90       PEAK FLOW RATE(CFS) =     209.48

****************************************************************************
  FLOW PROCESS FROM NODE   1386.00 TO NODE   1387.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    755.00  DOWNSTREAM(FEET) =    670.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   960.00   CHANNEL SLOPE =  0.0885
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    209.48
  FLOW VELOCITY(FEET/SEC.) =  13.99   FLOW DEPTH(FEET) =   2.65
  TRAVEL TIME(MIN.) =   1.14   Tc(MIN.) =  11.28
  LONGEST FLOWPATH FROM NODE   1380.00 TO NODE   1387.00 =  2932.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1386.00 TO NODE   1387.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.28
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.904
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       C        7.90      0.25      0.20    69
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D        0.30      0.20      0.20    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.20
  SUBAREA AREA(ACRES) =    8.20      SUBAREA RUNOFF(CFS) =   28.44
  EFFECTIVE AREA(ACRES) =     65.10   AREA-AVERAGED Fm(INCH/HR) =  0.04
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  0.20
  TOTAL AREA(ACRES) =     65.10       PEAK FLOW RATE(CFS) =     226.21

****************************************************************************
  FLOW PROCESS FROM NODE   1387.00 TO NODE   1388.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    670.00  DOWNSTREAM(FEET) =    588.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   663.00   CHANNEL SLOPE =  0.1237
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    226.21
  FLOW VELOCITY(FEET/SEC.) =  16.17   FLOW DEPTH(FEET) =   2.53
  TRAVEL TIME(MIN.) =   0.68   Tc(MIN.) =  11.97
  LONGEST FLOWPATH FROM NODE   1380.00 TO NODE   1388.00 =  3595.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1387.00 TO NODE   1388.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.97
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.767
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       C       30.00      0.25      0.20    69
  NATURAL FAIR COVER
```

```
  "GRASS"                    D        0.10      0.20      1.00    84
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D       12.20      0.20      0.20    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.20
  SUBAREA AREA(ACRES) =   42.30      SUBAREA RUNOFF(CFS) =  141.60
  EFFECTIVE AREA(ACRES) =    107.40   AREA-AVERAGED Fm(INCH/HR) =  0.04
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.20
  TOTAL AREA(ACRES) =    107.40       PEAK FLOW RATE(CFS) =     359.80

****************************************************************************
  FLOW PROCESS FROM NODE   1388.00 TO NODE   1389.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    588.00  DOWNSTREAM(FEET) =    545.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   716.00   CHANNEL SLOPE =  0.0601
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    359.80
  FLOW VELOCITY(FEET/SEC.) =  13.86   FLOW DEPTH(FEET) =   3.47
  TRAVEL TIME(MIN.) =   0.86   Tc(MIN.) =  12.83
  LONGEST FLOWPATH FROM NODE   1380.00 TO NODE   1389.00 =  4311.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1388.00 TO NODE   1389.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.83
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.613
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        3.90      0.25      1.00    79
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       C       28.60      0.25      0.20    69
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        1.80      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C        2.80      0.25      1.00    73
  NATURAL FAIR COVER
  "GRASS"                    D        4.10      0.20      1.00    84
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D        4.80      0.20      0.20    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.40
  SUBAREA AREA(ACRES) =   46.00      SUBAREA RUNOFF(CFS) =  145.63
  EFFECTIVE AREA(ACRES) =    153.40   AREA-AVERAGED Fm(INCH/HR) =  0.06
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.26
  TOTAL AREA(ACRES) =    153.40       PEAK FLOW RATE(CFS) =     490.55

****************************************************************************
  FLOW PROCESS FROM NODE   1389.00 TO NODE   1390.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    545.00  DOWNSTREAM(FEET) =    480.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   853.00   CHANNEL SLOPE =  0.0762
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    490.55
  FLOW VELOCITY(FEET/SEC.) =  16.39   FLOW DEPTH(FEET) =   3.83
  TRAVEL TIME(MIN.) =   0.87   Tc(MIN.) =  13.69
  LONGEST FLOWPATH FROM NODE   1380.00 TO NODE   1390.00 =  5164.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1389.00 TO NODE   1390.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  13.69
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.488
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       C        8.30      0.25      0.20    69
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D        0.50      0.20      0.20    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.20
  SUBAREA AREA(ACRES) =    8.80      SUBAREA RUNOFF(CFS) =   27.23
  EFFECTIVE AREA(ACRES) =    162.20   AREA-AVERAGED Fm(INCH/HR) =  0.06
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.26
  TOTAL AREA(ACRES) =    162.20       PEAK FLOW RATE(CFS) =     500.54

****************************************************************************
  FLOW PROCESS FROM NODE   1390.00 TO NODE   1391.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    480.00  DOWNSTREAM(FEET) =    396.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1352.00   CHANNEL SLOPE =  0.0621
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    500.54
  FLOW VELOCITY(FEET/SEC.) =  15.22   FLOW DEPTH(FEET) =   3.76
  TRAVEL TIME(MIN.) =   1.48   Tc(MIN.) =  15.17
  LONGEST FLOWPATH FROM NODE   1380.00 TO NODE   1391.00 =  6516.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1390.00 TO NODE   1391.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  15.17
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.280
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       B        4.60      0.30      0.20    56
  NATURAL POOR COVER
  "BARREN"                   C        0.70      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C        0.20      0.25      1.00    79
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       C       51.50      0.25      0.20    69
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C       33.80      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.20      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.36
  SUBAREA AREA(ACRES) =   91.00      SUBAREA RUNOFF(CFS) =  261.29
  EFFECTIVE AREA(ACRES) =    253.20   AREA-AVERAGED Fm(INCH/HR) =  0.07
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.30
  TOTAL AREA(ACRES) =    253.20       PEAK FLOW RATE(CFS) =     731.52

****************************************************************************
  FLOW PROCESS FROM NODE   1390.00 TO NODE   1391.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  15.17
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.280
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D        8.70      0.20      0.20    75
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D        2.10      0.20      0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.28
  SUBAREA AREA(ACRES) =   10.80      SUBAREA RUNOFF(CFS) =   31.35
  EFFECTIVE AREA(ACRES) =    264.00   AREA-AVERAGED Fm(INCH/HR) =  0.07
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.29
  TOTAL AREA(ACRES) =    264.00       PEAK FLOW RATE(CFS) =     762.86

****************************************************************************
  FLOW PROCESS FROM NODE   1391.00 TO NODE   1392.00 IS CODE =  31
----------------------------------------------------------------------------
```

```
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   396.00  DOWNSTREAM(FEET) =   313.00
  FLOW LENGTH(FEET) =  1067.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  63.0 INCH PIPE IS  50.1 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  41.31
  ESTIMATED PIPE DIAMETER(INCH) =  63.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =    762.86
  PIPE TRAVEL TIME(MIN.) =   0.43    Tc(MIN.) =  15.61
  LONGEST FLOWPATH FROM NODE   1380.00 TO NODE   1392.00 =  7583.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1391.00 TO NODE   1392.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  15.61
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.232
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        0.10      0.30      1.00    63
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        B        8.40      0.30      0.20    56
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.20      0.30      1.00    66
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        C       26.10      0.25      0.20    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        3.40      0.25      1.00    77
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        D        0.20      0.20      0.20    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.28
  SUBAREA AREA(ACRES) =   38.40      SUBAREA RUNOFF(CFS) =  109.22
  EFFECTIVE AREA(ACRES) =    302.40   AREA-AVERAGED Fm(INCH/HR) =  0.07
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.29
  TOTAL AREA(ACRES) =    302.40       PEAK FLOW RATE(CFS) =     860.63

****************************************************************************
  FLOW PROCESS FROM NODE   1391.00 TO NODE   1392.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  15.61
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.232
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.30      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.30      SUBAREA RUNOFF(CFS) =    0.82
  EFFECTIVE AREA(ACRES) =    302.70   AREA-AVERAGED Fm(INCH/HR) =  0.07
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.29
  TOTAL AREA(ACRES) =    302.70       PEAK FLOW RATE(CFS) =     861.45

****************************************************************************
  FLOW PROCESS FROM NODE   1392.00 TO NODE   1393.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    313.00  DOWNSTREAM(FEET) =    280.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   670.00   CHANNEL SLOPE =  0.0493
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    861.45
  FLOW VELOCITY(FEET/SEC.) =  15.98   FLOW DEPTH(FEET) =   4.93
  TRAVEL TIME(MIN.) =   0.70   Tc(MIN.) =  16.30
  LONGEST FLOWPATH FROM NODE   1380.00 TO NODE   1393.00 =  8253.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1392.00 TO NODE   1393.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.30
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.154
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        0.10      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                     B        0.10      0.30      1.00    69
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        B        0.30      0.30      0.20    56
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        2.20      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                  B        1.10      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.10      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.94
  SUBAREA AREA(ACRES) =    3.90      SUBAREA RUNOFF(CFS) =   10.09
  EFFECTIVE AREA(ACRES) =    306.60   AREA-AVERAGED Fm(INCH/HR) =  0.07
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.30
  TOTAL AREA(ACRES) =    306.60       PEAK FLOW RATE(CFS) =     861.45
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1392.00 TO NODE   1393.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.30
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.154
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.30      0.25      1.00    77
  NATURAL FAIR COVER
  "GRASS"                     D        0.60      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.90      SUBAREA RUNOFF(CFS) =    2.38
  EFFECTIVE AREA(ACRES) =    307.50   AREA-AVERAGED Fm(INCH/HR) =  0.07
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.30
  TOTAL AREA(ACRES) =    307.50       PEAK FLOW RATE(CFS) =     861.45
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1393.00 TO NODE   1394.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    280.00  DOWNSTREAM(FEET) =    265.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   457.00   CHANNEL SLOPE =  0.0328
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    861.45
  FLOW VELOCITY(FEET/SEC.) =  13.75   FLOW DEPTH(FEET) =   5.47
  TRAVEL TIME(MIN.) =   0.55   Tc(MIN.) =  16.86
  LONGEST FLOWPATH FROM NODE   1380.00 TO NODE   1394.00 =  8710.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1393.00 TO NODE   1394.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.86
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.092
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     B        1.20      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        3.30      0.30      1.00    66
  COMMERCIAL                  B        0.50      0.30      0.10    56
  NATURAL FAIR COVER
```

```
  "WOODLAND"                  B        2.80      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        4.80      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C        2.60      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =   15.20      SUBAREA RUNOFF(CFS) =   38.65
  EFFECTIVE AREA(ACRES) =    322.70   AREA-AVERAGED Fm(INCH/HR) =  0.08
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.33
  TOTAL AREA(ACRES) =    322.70       PEAK FLOW RATE(CFS) =     874.07

****************************************************************************
  FLOW PROCESS FROM NODE   1393.00 TO NODE   1394.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.86
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.092
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        9.50      0.25      1.00    77
  COMMERCIAL                  C        0.20      0.25      0.10    69
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        C       55.90      0.25      0.20    69
  NATURAL FAIR COVER
  "WOODLAND"                  C        3.20      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        0.70      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                     D        2.20      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.37
  SUBAREA AREA(ACRES) =   71.70      SUBAREA RUNOFF(CFS) =  193.62
  EFFECTIVE AREA(ACRES) =    394.40   AREA-AVERAGED Fm(INCH/HR) =  0.08
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.34
  TOTAL AREA(ACRES) =    394.40       PEAK FLOW RATE(CFS) =    1067.69

****************************************************************************
  FLOW PROCESS FROM NODE   1393.00 TO NODE   1394.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.86
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.092
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.30      0.20      1.00    83
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        D        3.60      0.20      0.20    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.26
  SUBAREA AREA(ACRES) =    3.90      SUBAREA RUNOFF(CFS) =   10.67
  EFFECTIVE AREA(ACRES) =    398.30   AREA-AVERAGED Fm(INCH/HR) =  0.08
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.34
  TOTAL AREA(ACRES) =    398.30       PEAK FLOW RATE(CFS) =    1078.36

****************************************************************************
  FLOW PROCESS FROM NODE   1394.00 TO NODE   1395.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    265.00  DOWNSTREAM(FEET) =    216.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1573.00   CHANNEL SLOPE =  0.0312
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1078.36
  FLOW VELOCITY(FEET/SEC.) =  14.25   FLOW DEPTH(FEET) =   5.88
  TRAVEL TIME(MIN.) =   1.84   Tc(MIN.) =  18.70
  LONGEST FLOWPATH FROM NODE   1380.00 TO NODE   1395.00 = 10283.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1394.00 TO NODE   1395.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.70
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.915
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                  B        1.00      0.30      0.10    56
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        B        0.40      0.30      0.20    56
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.50      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                  B        1.30      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.10      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C        3.60      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.82
  SUBAREA AREA(ACRES) =    6.90      SUBAREA RUNOFF(CFS) =   16.73
  EFFECTIVE AREA(ACRES) =    405.20   AREA-AVERAGED Fm(INCH/HR) =  0.09
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.35
  TOTAL AREA(ACRES) =    405.20       PEAK FLOW RATE(CFS) =    1078.36
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1394.00 TO NODE   1395.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.70
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.915
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        2.60      0.25      1.00    77
  COMMERCIAL                  C        1.10      0.25      0.10    69
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        C        0.50      0.25      0.20    69
  NATURAL FAIR COVER
  "WOODLAND"                  C        4.30      0.25      1.00    73
  PUBLIC PARK                 D        5.80      0.20      0.85    75
  NATURAL FAIR COVER
  "GRASS"                     D        1.50      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.86
  SUBAREA AREA(ACRES) =   15.80      SUBAREA RUNOFF(CFS) =   38.69
  EFFECTIVE AREA(ACRES) =    421.00   AREA-AVERAGED Fm(INCH/HR) =  0.09
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.37
  TOTAL AREA(ACRES) =    421.00       PEAK FLOW RATE(CFS) =    1078.36
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1394.00 TO NODE   1395.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.70
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.915
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                D       12.00      0.20      1.00    83
  COMMERCIAL                  D        0.40      0.20      0.10    75
  NATURAL FAIR COVER
  "WOODLAND"                  D        1.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =   13.50      SUBAREA RUNOFF(CFS) =   33.05
  EFFECTIVE AREA(ACRES) =    434.50   AREA-AVERAGED Fm(INCH/HR) =  0.09
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.39
  TOTAL AREA(ACRES) =    434.50       PEAK FLOW RATE(CFS) =    1103.25

****************************************************************************
  FLOW PROCESS FROM NODE   1395.00 TO NODE   1395.00 IS CODE =   1
----------------------------------------------------------------------------
```

```
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
================================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  18.70
  RAINFALL INTENSITY(INCH/HR) =   2.91
  AREA-AVERAGED Fm(INCH/HR) =  0.09
  AREA-AVERAGED Fp(INCH/HR) =  0.24
  AREA-AVERAGED Ap =  0.39
  EFFECTIVE STREAM AREA(ACRES) =   434.50
  TOTAL STREAM AREA(ACRES) =   434.50
  PEAK FLOW RATE(CFS) AT CONFLUENCE =   1103.25

  ** CONFLUENCE DATA **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1   4972.97  30.37    2.206  0.25( 0.19) 0.75  2566.7    1360.00
      1   5313.03  37.69    1.949  0.25( 0.19) 0.76  3182.3    1300.00
      1   5267.41  39.24    1.903  0.25( 0.19) 0.75  3236.1    1340.00
      1   4768.56  50.08    1.649  0.25( 0.19) 0.74  3462.0    1320.00
      2   1103.25  18.70    2.915  0.24( 0.09) 0.39   434.5    1380.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1   5241.60  18.70    2.915  0.25( 0.17) 0.67  2014.7    1380.00
      2   5799.10  30.37    2.206  0.25( 0.18) 0.70  3001.2    1360.00
      3   6038.81  37.69    1.949  0.25( 0.18) 0.71  3616.8    1300.00
      4   5975.06  39.24    1.903  0.25( 0.18) 0.71  3670.6    1340.00
      5   5376.78  50.08    1.649  0.25( 0.18) 0.70  3896.5    1320.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =   6038.81    Tc(MIN.) =    37.69
  EFFECTIVE AREA(ACRES) =  3616.81   AREA-AVERAGED Fm(INCH/HR) =  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.71
  TOTAL AREA(ACRES) =   3896.50
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1395.00 = 25397.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1395.00 TO NODE   1396.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    216.00  DOWNSTREAM(FEET) =    214.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    60.00   CHANNEL SLOPE =  0.0333
  CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   6038.81
  FLOW VELOCITY(FEET/SEC.) =  19.31   FLOW DEPTH(FEET) =   3.41
  TRAVEL TIME(MIN.) =   0.05   Tc(MIN.) =  37.74
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1396.00 = 25457.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1395.00 TO NODE   1396.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  37.74
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.948
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  PUBLIC PARK                A        1.60      0.40      0.85    32
  NATURAL POOR COVER
  "BARREN"                   A        0.20      0.40      1.00    78
  NATURAL FAIR COVER
  "GRASS"                    A        2.10      0.40      1.00    50
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A        9.50      0.40      1.00    49
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       A        3.30      0.40      0.20    32
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      A        0.20      0.40      1.00    40
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.83
  SUBAREA AREA(ACRES) =   16.90      SUBAREA RUNOFF(CFS) =   24.58
  EFFECTIVE AREA(ACRES) =   3633.71   AREA-AVERAGED Fm(INCH/HR) =  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.71
  TOTAL AREA(ACRES) =   3913.40       PEAK FLOW RATE(CFS) =    6038.81
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1395.00 TO NODE   1396.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  37.74
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.948
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 A        0.70      0.40      1.00    36
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       B       22.80      0.30      0.20    56
  NATURAL FAIR COVER
  "GRASS"                    C        0.40      0.25      1.00    79
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        1.40      0.25      1.00    79
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       C       13.20      0.25      0.20    69
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 D        0.40      0.20      1.00    82
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.26
  SUBAREA AREA(ACRES) =   38.90      SUBAREA RUNOFF(CFS) =   65.64
  EFFECTIVE AREA(ACRES) =   3672.61   AREA-AVERAGED Fm(INCH/HR) =  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.71
  TOTAL AREA(ACRES) =   3952.30       PEAK FLOW RATE(CFS) =    6038.81
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1395.00 TO NODE   1396.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  37.74
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.948
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.20      0.20      1.00    83
  PUBLIC PARK                D        0.40      0.20      0.85    75
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D       45.50      0.20      0.20    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.21
  SUBAREA AREA(ACRES) =   46.10      SUBAREA RUNOFF(CFS) =   79.08
  EFFECTIVE AREA(ACRES) =   3718.71   AREA-AVERAGED Fm(INCH/HR) =  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.70
  TOTAL AREA(ACRES) =   3998.40       PEAK FLOW RATE(CFS) =    6038.81
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   1396.00 TO NODE   1066.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    214.00  DOWNSTREAM(FEET) =    213.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  3053.00   CHANNEL SLOPE =  0.0003
  CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   6038.81
  FLOW VELOCITY(FEET/SEC.) =   4.18   FLOW DEPTH(FEET) =  13.00
  TRAVEL TIME(MIN.) =  12.16   Tc(MIN.) =  49.91
  LONGEST FLOWPATH FROM NODE   1320.00 TO NODE   1066.00 = 28510.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   1396.00 TO NODE   1066.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
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 ============================================================================
  MAINLINE Tc(MIN) =  49.91
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.652
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  PUBLIC PARK                A        8.80      0.40      0.85    32
  NATURAL FAIR COVER
  "GRASS"                    A       22.30      0.40      1.00    50
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       A        1.20      0.40      0.20    32
  NATURAL FAIR COVER
  "WOODLAND"                 A        4.90      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.20      0.30      1.00    63
  NATURAL POOR COVER
  "BARREN"                   B        0.20      0.30      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.94
  SUBAREA AREA(ACRES) =   37.60      SUBAREA RUNOFF(CFS) =   43.23
  EFFECTIVE AREA(ACRES) =   3756.31   AREA-AVERAGED Fm(INCH/HR) =  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.70
  TOTAL AREA(ACRES) =   4036.00       PEAK FLOW RATE(CFS) =    6038.81
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

 ****************************************************************************
  FLOW PROCESS FROM NODE   1396.00 TO NODE   1066.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) =  49.91
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.652
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B        3.50      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        3.70      0.30      1.00    66
  COMMERCIAL                 B        0.70      0.30      0.10    56
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B        1.60      0.30      1.00    69
  PUBLIC PARK                B        0.40      0.30      0.85    56
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       B       17.40      0.30      0.20    56
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.46
  SUBAREA AREA(ACRES) =   27.30      SUBAREA RUNOFF(CFS) =   37.17
  EFFECTIVE AREA(ACRES) =   3783.61   AREA-AVERAGED Fm(INCH/HR) =  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.70
  TOTAL AREA(ACRES) =   4063.30       PEAK FLOW RATE(CFS) =    6038.81
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

 ****************************************************************************
  FLOW PROCESS FROM NODE   1396.00 TO NODE   1066.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) =  49.91
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.652
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 B        4.70      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        6.80      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        4.80      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C       20.60      0.25      1.00    79
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        1.30      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.50      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   38.70      SUBAREA RUNOFF(CFS) =   48.63
  EFFECTIVE AREA(ACRES) =   3822.31   AREA-AVERAGED Fm(INCH/HR) =  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.71
  TOTAL AREA(ACRES) =   4102.00       PEAK FLOW RATE(CFS) =    6038.81
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

 ****************************************************************************
  FLOW PROCESS FROM NODE   1396.00 TO NODE   1066.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) =  49.91
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.652
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                 C        2.20      0.25      0.10    69
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       C       21.10      0.25      0.20    69
  NATURAL FAIR COVER
  "WOODLAND"                 C       10.70      0.25      1.00    73
  NATURAL FAIR COVER
  "GRASS"                    D        6.70      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       14.50      0.20      1.00    83
  PUBLIC PARK                D       16.00      0.20      0.85    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.70
  SUBAREA AREA(ACRES) =   71.20      SUBAREA RUNOFF(CFS) =   96.20
  EFFECTIVE AREA(ACRES) =   3893.51   AREA-AVERAGED Fm(INCH/HR) =  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.71
  TOTAL AREA(ACRES) =   4173.20       PEAK FLOW RATE(CFS) =    6038.81
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

 ****************************************************************************
  FLOW PROCESS FROM NODE   1396.00 TO NODE   1066.00 IS CODE =  81
 ----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ============================================================================
  MAINLINE Tc(MIN) =  49.91
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.652
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL GOOD COVER
  "MEADOWS"                  D        1.60      0.20      1.00    78
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D        0.70      0.20      0.20    75
  NATURAL FAIR COVER
  "WOODLAND"                 D        6.50      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.94
  SUBAREA AREA(ACRES) =    8.80      SUBAREA RUNOFF(CFS) =   11.60
  EFFECTIVE AREA(ACRES) =   3902.31   AREA-AVERAGED Fm(INCH/HR) =  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.71
  TOTAL AREA(ACRES) =   4182.00       PEAK FLOW RATE(CFS) =    6038.81
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
 ============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   4182.00  TC(MIN.) =     49.91
  EFFECTIVE AREA(ACRES) =   3902.31  AREA-AVERAGED Fm(INCH/HR)=  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.71
  PEAK FLOW RATE(CFS)   =   6038.81

  ** PEAK FLOW RATE TABLE **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1   5241.60  31.46    2.165  0.26( 0.17) 0.67  2300.2    1380.00
      2   5799.10  42.74    1.817  0.25( 0.18) 0.69  3286.7    1360.00
      3   6038.81  49.91    1.652  0.25( 0.18) 0.71  3902.3    1300.00
      4   5975.06  51.49    1.626  0.25( 0.18) 0.70  3956.1    1340.00
      5   5376.78  62.74    1.454  0.25( 0.18) 0.69  4182.0    1320.00
 ============================================================================
 ============================================================================
  END OF RATIONAL METHOD ANALYSIS
```
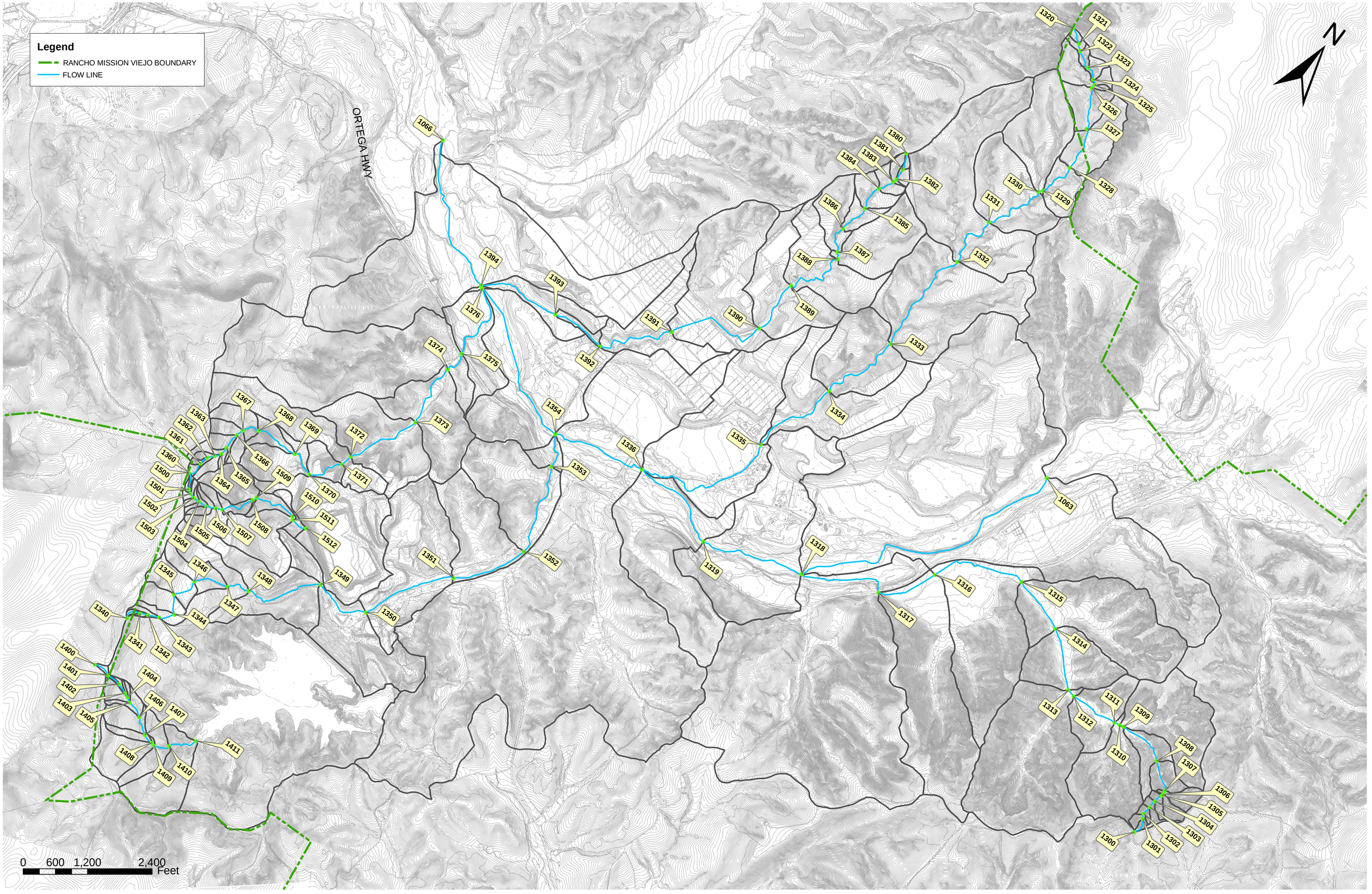



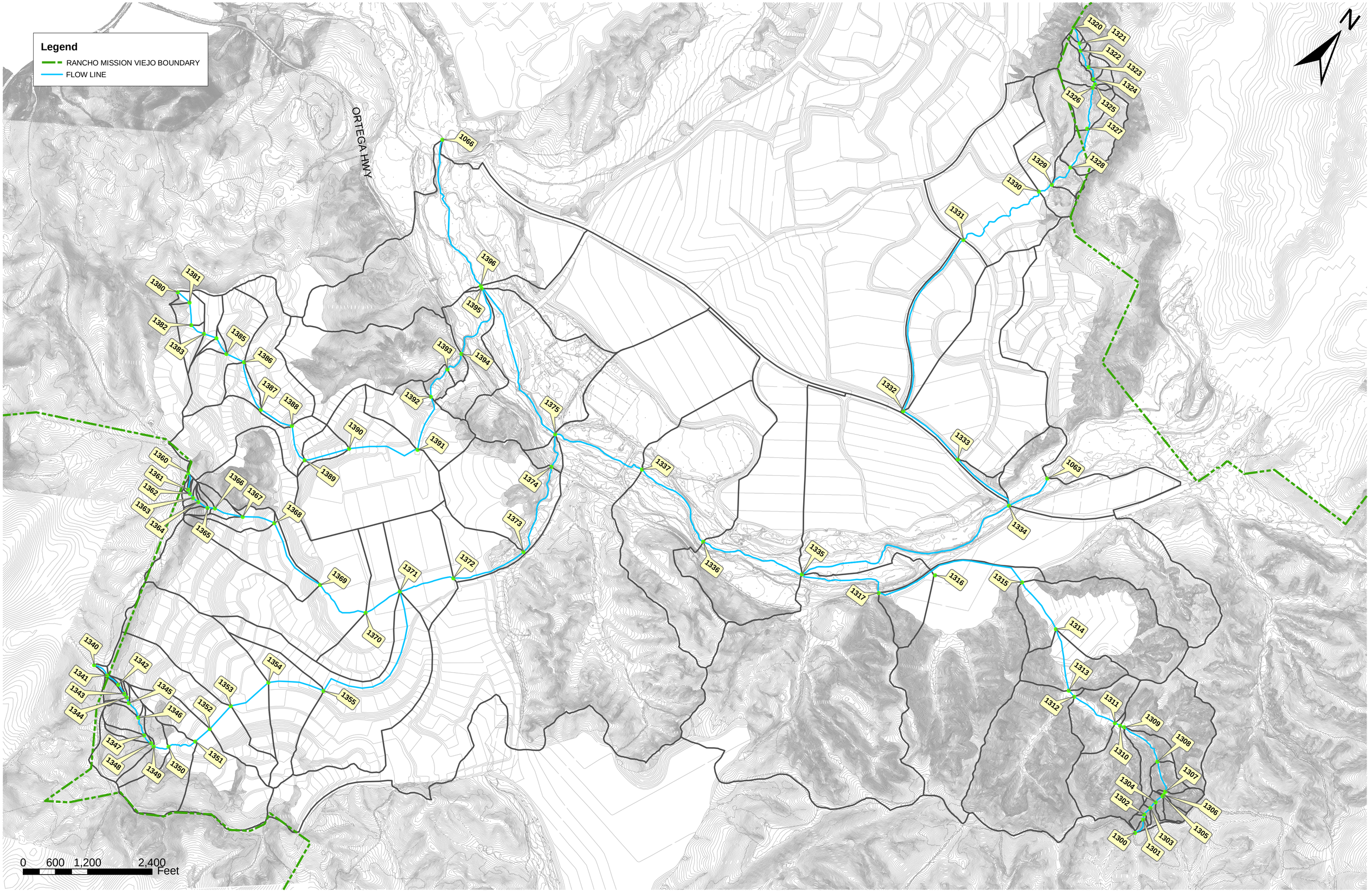
HYDROLOGIC MAP FOR EXISTING CONDITION

TRAMPAS CANYON

DATE: MARCH 31, 2004

H:/10075501/PH801/RMV WATERSHED/EX/SUBAREA EXISTING 13.MXD

HUITT~ZOLLARS
(714) 734-5100
430 EXCHANGE, SUITE 200
IRVINE, CA 92602



DATE: APRIL 1, 2004

H:/10075501/PH801/RMV WATERSHED/EX/SUBAREA PROPOSED 13.MXD

HYDROLOGIC MAP FOR PROPOSED CONDITION

TRAMPAS CANYON CREEK CHANNEL

HUITT~ZOLLARS
(714) 734-5100
430 EXCHANGE, SUITE 200
IRVINE, CA 92602

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

HYDROLOGIC REPORT

TO

THE BASELINE HYDROLOGIC CONDITIONS

CAÑADA GOBERNADORA

PREPARED FOR

RANCHO MISSION VIEJO

APRIL 2, 2004



VOLUME IV

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INTRODUCTION

A Hydrology Report for Canada Gobernadora of the San Juan Creek system has been completed to the confluence with San Juan Creek. The watershed will be significantly altered by proposed development. In the existing condition, Canada Gobernadora conveys flows from 6,963 acres to San Juan Creek. In the proposed condition, Canada Gobernadora conveys flows from 7,291 acres to San Juan Creek and a basin is proposed to mitigate increased flows. The watershed elevations range from approximately 210 feet above sea level at the downstream confluence to approximately 1,240 feet above sea level at the headwaters.

A 100-Year High Confidence analysis was prepared. The hydrologic analysis was completed in accordance with the 1986 Orange County Hydrology Manual and 1995 Orange County Hydrology Manual Addendum No. 1. The application of the procedures outlined in these two documents and the assumptions used to develop hydrologic parameters are described in this report.

MODEL OVERVIEW

Rational method models were completed for both the existing and proposed condition models. Additionally, hydrograph models, including a multi-day analysis to evaluate the basin requirements were also prepared for both drainage conditions.

To model the 100-Year High Confidence analysis, both the Advanced Engineering Software RATSCx and FLOODSCx programs were utilized. The RATSCx program was used to develop the rational method analysis and the FLOODSCx program was used to develop the hydrograph, both single- and multi-day, analyses. The hydrographs were based on data calculated both from the rational method analysis and from other tabulations of rainfall and land use / soil type combinations. The time of concentration (Tc) from the rational method was used to calculate the basin lag at the hydrograph location. A five day storm pattern was developed for the multi-day analysis based on the guidelines from the Orange County Hydrology Manual.

For all models, information from the Hunsaker & Associates report titled "Hydrology & Hydraulic Analysis for Facility L07-701-02 at the Crossing of Vista Del Verde" was used for the upstream, Coto de Caza, area. A complete copy of the calculations for this report was never located, however, based on the available information, some assumptions could be made. This report indicates that there are 4,741 acres draining through the Coto de Caza site. The site produces a 100-Year High Confidence rational method peak flow rate of 7,547 cfs and a hydrograph peak flow rate of 7,283 cfs. Additionally, the report and map indicate that the Tc is 36.19 minutes and also provide hydrograph data such as S-graph and loss rates for the concentration node upstream of the Coto de Caza boundary. Based on this information, data for the development of both

rational method and hydrograph analyses was determined.

A basin is proposed at the Coto de Caza / Ranch boundary. Therefore, the area and flow determined in the above mentioned report is the area and flow that will enter the basin. Several basin alternatives were evaluated. The basin rating curves are based on the Horno Basin rating curves with outflow or storage ratio to meet specific criteria.

With a basin proposed, a complex hydrologic model was required that included basin and channel routing to San Juan Creek. As a comparison, the complex model was compared to a single-area model. The complex model produced a smaller peak flow rate at San Juan Creek, so in accordance with the Hydrology Manual, the rainfall was increased to 111.5% in the complex model in order to match the single-area hydrograph peak flow rate.

In addition to the 100-Year High Confidence basin analysis complex model, a 100-Year Expected Value basin analysis was estimated for basin sizing purposes. This model did not include flood routing downstream of the basin to San Juan Creek. Since a 100-Year Expected Value analysis was not completed as part of the above mentioned report, several hydrologic parameters were estimated based on other canyon analyses in the San Juan Creek system

ASSUMPTIONS

Base Maps and Topographic Data

The base map for the existing condition model was created using aerial topography with 2-, 5-, and 10-foot contours. The base map for the proposed condition utilized mass grade topographic information that was spliced into existing aerial topography for each of the proposed development bubbles.

Rainfall

100-Year High Confidence rainfall intensities and depths were derived from the Orange County Hydrology Manual. The Non-Mountainous rainfall zone, for areas below the 2000' elevation, was utilized.

Land Use

As part of the Philip Williams & Associates (PWA) report titled "Baseline Hydrologic Conditions – San Juan & Upper San Mateo Watersheds", dated May 30, 2001, PWA developed "Land Use Sub-Categories" for the HEC-1 model. Based on descriptions of these subcategories, the land uses were mapped to hydrologic land uses for input into the models according to Table 1. PWA prepared land use mapping for both the existing and several proposed development conditions. For the proposed condition hydrologic analysis, only one, the Ranch Plan Alternative (B4G), land use plan was evaluated.

Hydrologic Soils

Hydrologic soils were assigned based on the Orange County Hydrology Manual.

Antecedent Moisture Condition

As outlined in the Orange County Hydrology Manual Addendum No. 1, Antecedent Moisture Condition (AMC) II was used for all analyses.

Depth Area Adjustments

As outlined in the Orange County Hydrology Manual, Sierra Madre depth area adjustments were chosen for all calculations.

LAND USE MAPPING

Land Use Sub-Category	Hydrologic Land Use
General Transportation	Commercial
General Urban Commercial	Commercial
Multiple Family Residential	11+ Dwellings/Acre
General Developed Areas	5-7 Dwellings/Acre
Single Family Residential	3-4 Dwellings/Acre
Fluctuating Shoreline	Public Park
Lakes/Open Water	Public Park
General Disturbed Areas	Barren (Poor)
Broadleaf Chaparral	Chaparral, Broadleaf (Fair)
Broadleaf Chaparral and Sage	Chaparral, Broadleaf (Fair)
Chaparral – Sage Scrub	Chaparral, Broadleaf (Fair)
General Chaparral	Chaparral, Broadleaf (Fair)
Rural Residential	Chaparral, Broadleaf (Fair)
Narrowleaf Chaparral	Chaparral, Narrowleaf (Fair)
General Grassland	Grass (Fair)
Live Oak Savanna	Grass (Fair)
Sumac Savanna	Grass (Fair)
Sumac Disturbed	Meadows or Cienegas (Fair)
Meadow and Marsh Flood Control Channels	Meadows or Cienegas (Good)
General Sage Scrub	Open Brush (Fair)
Riparian Willow Rock with Plants	Open Brush (Fair)
Sage Scrub- Grassland	Open Brush (Fair)
Streams and Creeks	Open Brush (Fair)
Forest	Woodland (Fair)
Woodland and Riparian	Woodland (Fair)
General Agriculture	Fallow (Poor)
General Nurseries	Orchards, Evergreen (Fair)
General Orchards	Orchards, Evergreen (Fair)
Irrigated Row Crops	Pasture, Dryland (Fair)
Row Crops	Pasture, Dryland (Fair)
General Parks	Turf (Fair)

Table 1 – Land Use Mapping

S-Graphs

S-Graph proportions were assigned based on a review of topographic and land use data, as well as aerial photography. Generally, the rugged terrain in the upper portions of the watershed was assigned to a "Mountain" S-Graph, while the lower portions were assigned "Foothill" and "Valley" S-Graphs. For the proposed condition analysis, development bubble areas were assumed to change from "Valley – Undeveloped" to "Valley – Developed".

Channel Geometry

Channel geometry was determined based on estimated cross-sections taken from the topographic data at several locations. Channel sizes were incrementally increased as the model moved downstream. Channels were sized to convey the 100-Year High Confidence peak flow rates without overtopping. Additionally, travel times for individual reaches meet the County criteria outlined in the Hydrology Manual on Pages D-12 and D-15.

Sub-Areas

In general, sub-areas were developed so that the sub-area sizes gradually increased as the study progressed downstream. Concentration nodes were located at major confluences or other points of significance. Generally, these concentration nodes defined the sub-areas rather than the sub-area size defining a concentration node.

CONCLUSIONS

Hydrologic Results

The results of the hydrologic analyses at several points of significance along Canada Gobernadora are presented in Tables 2 through 5.

Impact of Proposed Development

The proposed development increases the free-flowing canyon flows by approximately 10%. However, the proposed basin at the Coto de Caza/Ranch boundary mitigates the increased 100-Year High Confidence flows for all of the basin configurations that have been considered.

HYDROLOGIC SUMMARY – 100-YEAR – HIGH CONFIDENCE

Existing Condition

Node	Location	Total Area (ac)	Total Area (sq. mi.)	Lag (hr)	Peak Flow Rate (cfs)	Runoff Volume (ac-ft)
6374	San Juan Creek	6,983	10.88	0.72	7,379	1,918

Proposed Condition – Single Area Model

Node	Location	Total Area (ac)	Total Area (sq. mi.)	Lag (hr)	Peak Flow Rate (cfs)	Runoff Volume (ac-ft)
6395	San Juan Creek	7,291	11.39	0.72	8,092	2.206

Proposed Condition – Complex Model
Rainfall Adjusted to 111.5%-No Basin

Node	Location	Total Area (ac)	Total Area (sq. mi.)	Lag (hr)	Peak Flow Rate (cfs)	Runoff Volume (ac-ft)
780	Basin Inflow	4,741	7.41	0.48	8,096	1,464
780	Basin Inflow	4,741	7.41	0.48	8,096	1,464
6311		5,041	7.88	0.25	7,658	1,553
6330		5,341	8.35	.029	7,714	1,650
6355		6,039	9.44	0.34	7,772	1,876
6371		6,962	10.88	0.25	7,984	2,191
6395	San Juan Creek	7,291	11.39	0.33	8,087	2,299

Table 2 – Hydrologic Summary – 100-Year High Confidence

HYDROLOGIC SUMMARY – 100-YEAR – HIGH CONFIDENCE
Single Day Event

Proposed Condition – Complex Model
Rainfall Adjusted to 111.5% - Single Day

Node	Location	Total Area (ac)	Total Area (sq. mi.)	Subbasin Lagh (hr)	Peak Flow Rate (cfs)	Runoff Volume (ac-ft))	Basin Volume (ac-ft)
780	Basin Inflow	4,741	7.41	0.48	8,096	1,464	
780	Basin Outflow	4,741	7.41	0.48	6,155	1,464	73
6311		5,041	7.88	0.25	6,275	1,553	
6330		5,341	8.35	0.29	6,363	1,650	
6355		6,039	9.44	0.34	6,604	1,876	
6371		6,962	10.88	0.25	6,976	2,191	
6395	San Juan Creek	7,291	11.39	0.33	7,085	2,299	

Table 3 – Hydrologic Summary – 100-Year High Confidence Single Day Event

Hydrologic Summary - 100-Year - High Confidence Multi-Day Event

Proposed Condition - Complex Model - Rainfall Adjusted to 111.5% Multi-Day - 400 ac-ft Basin

Node	Location	Total Area (ac)	Total Area (sq. mi.)	Subbasin Lag (hr)	Peak Flow Rate (cfs)	Runoff Volume (ac-ft)	Basin Volume (ac-ft)
780	Basin Inflow	4,741	7.41	0.48	8,096	1,991	
780	Basin Outflow	4,741	7.41	0.48	1,935	1,991	400
6311		5,041	7.88	0.25	2,186	2,117	
6330		5,341	8.35	0.29	2,764	2,257	
6355		6,039	9.44	0.34	4,255	2,579	
6371		6,962	10.88	0.25	5,667	3,033	
6395	San Juan Creek	7,291	11.39	0.33	6,406	3,188	

Proposed Condition - Complex Model - Rainfall Adjusted to 111.5% - Multi-Day - 600 ac-ft Basin

Node	Location	Total Area (ac)	Total Area (sq. mi.)	Subbasin Lag (hr)	Peak Flow Rate (cfs)	Runoff Volume (ac-ft)	Basin Volume (ac-ft)
780	Basin Inflow	4,741	7.41	0.48	8,096	1,991	
780	Basin Outflow	4,741	7.41	0.48	1,127	1,991	600
6311		5,041	7.88	0.25	1,579	2,117	
6330		5,341	8.35	0.29	2,156	2,257	
6355		6,039	9.44	0.34	3,621	2,579	
6371		6,962	10.88	0.25	5,028	3,033	
6395	San Juan Creek	7,291	11.39	0.33	5,746	3,188	

Proposed Condition - Complex Model - Rainfall Adjusted to 111.5% - Multi-Day - 800 cfs Outflow

Node	Location	Total Area (ac)	Total Area (sq. mi.)	Subbasin Lag (hr)	Peak Flow Rate (cfs)	Runoff Volume (ac-ft)	Basin Volume (ac-ft)
780	Basin Inflow	4,741	7.41	0.48	8,096	1,991	
780	Basin Outflow	4,741	7.41	0.48	800	1,991	714
6311		5,041	7.88	0.25	1,324	2,117	
6330		5,341	8.35	0.29	1,898	2,257	
6355		6,039	9.44	0.34	3,354	2,579	
6371		6,962	10.88	0.25	4,766	3,033	
6395	San Juan Creek	7,291	11.39	0.33	5,477	3,188	

Proposed Condition - Complex Model - Rainfall Adjusted to 111.5% - Multi-Day - 500 cfs Outflow

Node	Location	(ac)	Total Area (sq. mi.)	Subbasin Lag (hr)	Peak Flow Rate (cfs)	Runoff Volume (ac-ft)	Basin Volume (ac-ft)
780	Basin Inflow	4,741	7.41	0.48	8,096	1,991	
780	Basin Outflow	4,741	7.41	0.48	500	1,991	882
6311		5,041	7.88	0.25	1,088	2,117	
6330		5,341	8.35	0.29	1,660	2,257	
6355		6,039	9.44	0.34	3,114	2,579	
6371		6,962	10.88	0.25	4,525	3,033	
6395	San Juan Creek	7,291	11.39	0.33	5,231	3,188	

Table 4 - Hydrologic Summary - 100-Year - High Confidence - Multi-Day Event

Hydrologic Summary - 100-Year - Expected Value Multi-Day Event

Proposed Condition - Complex Model - Rainfall Adjusted to 111.5% - Multi-Day - 800 cfs Outflow

Node	Location	(ac)	Total Area (sq. mi.)	Subbasin Lag (hr)	Peak Flow Rate (cfs)	Runoff Volume (ac-ft)	Basin Volume (ac-ft)
780	Basin Inflow	4,741	7.41	0.52	5,921	1,351	
780	Basin Outflow	4,741	7.41	0.52	800	1,351	445

Proposed Condition - Complex Model - Rainfall Adjusted to 111.5% - Multi-Day - 500 cfs Outflow

Node	Location	(ac)	Total Area (sq. mi.)	Subbasin Lag (hr)	Peak Flow Rate (cfs)	Runoff Volume (ac-ft)	Basin Volume (ac-ft)
780	Basin Inflow	4,741	7.41	0.52	5,921	1,351	
780	Basin Outflow	4,741	7.41	0.52	500	1,351	555

Table 5 - Hydrologic Summary - 100-Year - Expected Value - Multi-Day Event

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

TECHNICAL APPENDIX IV-A
HYDROLOGIC ANALYSIS
EXISTING CONDITION

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

HYDROLOGY ANALYSIS FOR CANADA GOBERNADORA EXISTING CONDITION 100-YEAR HIGH CONFIDENCE STORM EVENT

Losses

Node	E6374
Total Area (ac)	6,963.2
24-Hour Rainfall Depth (in)	5.63
Fm (in/hr)	0.21
Y-Bar	0.44

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.6	9.3	6.4	0.2	0.6	54.4	71.2	11.2
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	896.8	0.0
2 Dwellings / Acre	70	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	1,034.3	0.0
1 Dwelling / 2.5 Acre	90	32	56	69	75	0.0	0.0	0.0	0.0	0.0	28.7	1,593.6	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.9	0.0	0.0	1,067.0	0.9
Barren (Poor)	100	78	86	91	93	47.3	157.3	51.9	4.7	47.3	157.3	51.9	4.7
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	9.5	99.5	95.1	0.0	9.5	99.5	95.1
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	9.1	10.9	0.0	0.0	9.1	10.9
Grass (Fair)	100	50	69	79	84	2.5	41.5	46.5	37.8	2.5	41.5	46.5	37.8
Meadows or Cienegas (Good)	100	30	58	71	78	0.4	0.0	4.0	0.0	0.4	0.0	4.0	0.0
Open Brush (Fair)	100	46	66	77	83	1.3	46.1	402.1	298.8	1.3	46.1	402.1	298.8
Woodland (Fair)	100	36	60	73	79	8.6	52.7	106.5	32.5	8.6	52.7	106.5	32.5
Fallow (Poor)	100	77	86	91	94	1.3	11.5	31.8	37.4	1.3	11.5	31.8	37.4
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	17.7	2.2	23.5	0.0	17.7	2.2	23.5
Pasture, Dryland (Fair)	100	49	69	79	84	37.7	103.5	106.8	263.0	37.7	103.5	106.8	263.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	1.3	0.2	0.0	0.0	1.3	0.2

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
2 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
1 Dwelling / 2.5 Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.58	0.72	0.82	0.86
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.07	0.34	0.53	0.63
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.23	0.48	0.63	0.72
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.17	0.43	0.60	0.68
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.01	0.27	0.46	0.58
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.13	0.39	0.56	0.67
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.04	0.30	0.49	0.60
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.56	0.72	0.82	0.88
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.11	0.37	0.56	0.65
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.16	0.43	0.60	0.68
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.11	0.37	0.56	0.65

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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             Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                          Analysis prepared by:

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                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

 ************************* DESCRIPTION OF STUDY *************************
*                                                                      *
*                                                                      *
*                                                                      *
 ************************************************************************

  FILE NAME: CE63100H.DAT
  TIME/DATE OF STUDY: 12:34 05/29/2004
========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *DATA BANK RAINFALL USED*
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

************************************************************************
  FLOW PROCESS FROM NODE    780.00 TO NODE    780.00 IS CODE =   7
------------------------------------------------------------------------
  >>>>>USER SPECIFIED HYDROLOGY INFORMATION AT NODE<<<<<
========================================================================
  USER-SPECIFIED VALUES ARE AS FOLLOWS:
  TC(MIN.) =  36.19   RAINFALL INTENSITY(INCH/HR) =  1.99
  EFFECTIVE AREA(ACRES) =  4741.30
  TOTAL AREA(ACRES) =  4741.30        PEAK FLOW RATE(CFS) =   7547.37
  AREA-AVERAGED Fm(INCH/HR) =   0.19  AREA-AVERAGED Fp(INCH/HR) =   0.30
  AREA-AVERAGED Ap =  0.63
  NOTE: EFFECTIVE AREA IS USED AS THE TOTAL CONTRIBUTING AREA FOR ALL
        CONFLUENCE ANALYSES.

************************************************************************
  FLOW PROCESS FROM NODE    780.00 TO NODE   6311.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    408.00  DOWNSTREAM(FEET) =    382.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2533.00   CHANNEL SLOPE =  0.0103
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   7547.37
  FLOW VELOCITY(FEET/SEC.) =  15.25   FLOW DEPTH(FEET) =  14.39
  TRAVEL TIME(MIN.) =   2.77   Tc(MIN.) =  38.96
  LONGEST FLOWPATH FROM NODE    780.00 TO NODE   6311.00 =  2533.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE    780.00 TO NODE   6311.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  38.96
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.911
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   A        1.30      0.40      1.00    77
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A        0.60      0.40      0.50    32
  NATURAL POOR COVER
  "BARREN"                   A        1.60      0.40      1.00    78
  NATURAL FAIR COVER
  "GRASS"                    A        2.30      0.40      1.00    50
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A       29.80      0.40      1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A        5.10      0.40      1.00    36
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   40.70      SUBAREA RUNOFF(CFS) =   55.46
  EFFECTIVE AREA(ACRES) =   4782.00   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.30  AREA-AVERAGED Ap =  0.63
  TOTAL AREA(ACRES) =   4782.00       PEAK FLOW RATE(CFS) =    7547.37
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

************************************************************************
  FLOW PROCESS FROM NODE    780.00 TO NODE   6311.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  38.96
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.911
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   B        1.10      0.30      1.00    86
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B        9.30      0.30      0.50    56
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.80      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B       12.20      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.20      0.30      1.00    60
  AGRICULTURAL POOR COVER
  "FALLOW"                   C        0.20      0.25      1.00    91
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.81
  SUBAREA AREA(ACRES) =   24.80      SUBAREA RUNOFF(CFS) =   37.23
  EFFECTIVE AREA(ACRES) =   4806.80   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.30  AREA-AVERAGED Ap =  0.63
  TOTAL AREA(ACRES) =   4806.80       PEAK FLOW RATE(CFS) =    7547.37
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

************************************************************************
  FLOW PROCESS FROM NODE    780.00 TO NODE   6311.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  38.96
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.911
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        1.60      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        6.40      0.25      0.50    69
  NATURAL FAIR COVER
  "GRASS"                    C        0.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       26.30      0.25      1.00    77
  AGRICULTURAL FAIR COVER
```

```
  "PASTURE,DRYLAND"          C       13.20      0.25      1.00    79
  NATURAL FAIR COVER
  "WOODLAND"                 C        1.30      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
  SUBAREA AREA(ACRES) =   49.20      SUBAREA RUNOFF(CFS) =   74.28
  EFFECTIVE AREA(ACRES) =   4856.00   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.30  AREA-AVERAGED Ap =  0.64
  TOTAL AREA(ACRES) =   4856.00       PEAK FLOW RATE(CFS) =    7547.37
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE    780.00 TO NODE   6311.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  38.96
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.911
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   D        0.20      0.20      1.00    94
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.20      0.20      0.50    75
  NATURAL FAIR COVER
  "GRASS"                    D        0.20      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        4.50      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D       16.90      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   22.00      SUBAREA RUNOFF(CFS) =   33.90
  EFFECTIVE AREA(ACRES) =   4878.00   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.30  AREA-AVERAGED Ap =  0.64
  TOTAL AREA(ACRES) =   4878.00       PEAK FLOW RATE(CFS) =    7549.97

****************************************************************************
  FLOW PROCESS FROM NODE   6311.00 TO NODE   6311.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  38.96
  RAINFALL INTENSITY(INCH/HR) =   1.91
  AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.30
  AREA-AVERAGED Ap =  0.64
  EFFECTIVE STREAM AREA(ACRES) =  4878.00
  TOTAL STREAM AREA(ACRES) =  4878.00
  PEAK FLOW RATE(CFS) AT CONFLUENCE =   7549.97

****************************************************************************
  FLOW PROCESS FROM NODE   6300.00 TO NODE   6301.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   317.00
  ELEVATION DATA: UPSTREAM(FEET) =    801.00  DOWNSTREAM(FEET) =    685.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    8.641
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.562
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.40      0.25      1.00    77    8.64
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.50      0.20      1.00    81    8.64
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.30      0.20      1.00    83    8.64
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      4.69
  TOTAL AREA(ACRES) =      1.20   PEAK FLOW RATE(CFS) =      4.69

****************************************************************************
  FLOW PROCESS FROM NODE   6301.00 TO NODE   6302.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    685.00  DOWNSTREAM(FEET) =    655.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   135.00   CHANNEL SLOPE =  0.2222
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      4.69
  FLOW VELOCITY(FEET/SEC.) =   7.46   FLOW DEPTH(FEET) =   0.44
  TRAVEL TIME(MIN.) =   0.30   Tc(MIN.) =   8.94
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6302.00 =   452.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6301.00 TO NODE   6302.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   8.94
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.473
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.20      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.50      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.50      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.20      SUBAREA RUNOFF(CFS) =    4.61
  EFFECTIVE AREA(ACRES) =      2.40   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      2.40       PEAK FLOW RATE(CFS) =       9.20

****************************************************************************
  FLOW PROCESS FROM NODE   6302.00 TO NODE   6303.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    655.00  DOWNSTREAM(FEET) =    630.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   203.00   CHANNEL SLOPE =  0.1232
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      9.20
  FLOW VELOCITY(FEET/SEC.) =   7.21   FLOW DEPTH(FEET) =   0.74
  TRAVEL TIME(MIN.) =   0.47   Tc(MIN.) =   9.41
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6303.00 =   655.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6302.00 TO NODE   6303.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.41
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.334
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.20      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.40      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        1.70      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    2.30      SUBAREA RUNOFF(CFS) =    8.55
  EFFECTIVE AREA(ACRES) =      4.70   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      4.70       PEAK FLOW RATE(CFS) =      17.45
```

```
****************************************************************************
  FLOW PROCESS FROM NODE   6303.00 TO NODE   6304.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    630.00  DOWNSTREAM(FEET) =    605.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   321.00   CHANNEL SLOPE =  0.0779
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     17.45
  FLOW VELOCITY(FEET/SEC.) =   7.02   FLOW DEPTH(FEET) =   0.87
  TRAVEL TIME(MIN.) =   0.76   Tc(MIN.) =  10.17
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6304.00 =   976.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6303.00 TO NODE   6304.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.17
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.125
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.20      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.90      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        0.10      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        2.30      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.50      SUBAREA RUNOFF(CFS) =   12.32
  EFFECTIVE AREA(ACRES) =      8.20   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      8.20       PEAK FLOW RATE(CFS) =      28.88

****************************************************************************
  FLOW PROCESS FROM NODE   6304.00 TO NODE   6305.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    605.00  DOWNSTREAM(FEET) =    585.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   288.00   CHANNEL SLOPE =  0.0694
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     28.88
  FLOW VELOCITY(FEET/SEC.) =   7.72   FLOW DEPTH(FEET) =   1.18
  TRAVEL TIME(MIN.) =   0.62   Tc(MIN.) =  10.80
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6305.00 =  1264.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6304.00 TO NODE   6305.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.80
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.001
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.40      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        2.90      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        0.90      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        2.20      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    6.40      SUBAREA RUNOFF(CFS) =   21.74
  EFFECTIVE AREA(ACRES) =     14.60   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     14.60       PEAK FLOW RATE(CFS) =      49.71

****************************************************************************
  FLOW PROCESS FROM NODE   6305.00 TO NODE   6306.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    585.00  DOWNSTREAM(FEET) =    560.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   344.00   CHANNEL SLOPE =  0.0727
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     49.71
  FLOW VELOCITY(FEET/SEC.) =   9.07   FLOW DEPTH(FEET) =   1.55
  TRAVEL TIME(MIN.) =   0.63   Tc(MIN.) =  11.43
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6306.00 =  1608.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6305.00 TO NODE   6306.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.43
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.874
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        0.40      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        3.60      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        1.80      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        1.40      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        3.70      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   10.90      SUBAREA RUNOFF(CFS) =   35.77
  EFFECTIVE AREA(ACRES) =     25.50   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     25.50       PEAK FLOW RATE(CFS) =      83.82

****************************************************************************
  FLOW PROCESS FROM NODE   6306.00 TO NODE   6307.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    560.00  DOWNSTREAM(FEET) =    530.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   619.00   CHANNEL SLOPE =  0.0485
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     83.82
  FLOW VELOCITY(FEET/SEC.) =   8.84   FLOW DEPTH(FEET) =   1.93
  TRAVEL TIME(MIN.) =   1.17   Tc(MIN.) =  12.59
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6307.00 =  2227.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6306.00 TO NODE   6307.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.59
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.646
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        2.10      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        5.30      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        4.30      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        1.50      0.20      1.00    81
  NATURAL FAIR COVER
```

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  "OPEN BRUSH"                D        1.90      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   15.10      SUBAREA RUNOFF(CFS) =   46.21
  EFFECTIVE AREA(ACRES) =     40.60   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     40.60       PEAK FLOW RATE(CFS) =     124.79

****************************************************************************
  FLOW PROCESS FROM NODE   6307.00 TO NODE   6308.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    530.00  DOWNSTREAM(FEET) =    515.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   377.00   CHANNEL SLOPE =  0.0398
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    124.79
  FLOW VELOCITY(FEET/SEC.) =   9.12   FLOW DEPTH(FEET) =   2.49
  TRAVEL TIME(MIN.) =   0.69   Tc(MIN.) =  13.28
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6308.00 =  2604.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6307.00 TO NODE   6308.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  13.28
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.547
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        0.90      0.30      1.00    63
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.20      0.30      1.00    66
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        7.80      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        4.40      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        1.60      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        3.30      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   18.20      SUBAREA RUNOFF(CFS) =   54.18
  EFFECTIVE AREA(ACRES) =     58.80   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     58.80       PEAK FLOW RATE(CFS) =     175.35

****************************************************************************
  FLOW PROCESS FROM NODE   6308.00 TO NODE   6309.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    515.00  DOWNSTREAM(FEET) =    490.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   520.00   CHANNEL SLOPE =  0.0481
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    175.35
  FLOW VELOCITY(FEET/SEC.) =  10.65   FLOW DEPTH(FEET) =   2.83
  TRAVEL TIME(MIN.) =   0.81   Tc(MIN.) =  14.10
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6309.00 =  3124.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6308.00 TO NODE   6309.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  14.10
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.430
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        1.40      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                     B        3.10      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        1.50      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                  B        1.00      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        7.30      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C        0.20      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   14.50      SUBAREA RUNOFF(CFS) =   41.18
  EFFECTIVE AREA(ACRES) =     73.30   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     73.30       PEAK FLOW RATE(CFS) =     210.33

****************************************************************************
  FLOW PROCESS FROM NODE   6308.00 TO NODE   6309.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  14.10
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.430
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       11.10      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        8.00      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        3.10      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        8.30      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D        2.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   32.90      SUBAREA RUNOFF(CFS) =   94.78
  EFFECTIVE AREA(ACRES) =    106.20   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    106.20       PEAK FLOW RATE(CFS) =     305.11

****************************************************************************
  FLOW PROCESS FROM NODE   6309.00 TO NODE   6310.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    490.00  DOWNSTREAM(FEET) =    432.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1420.00   CHANNEL SLOPE =  0.0408
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    305.11
  FLOW VELOCITY(FEET/SEC.) =  11.52   FLOW DEPTH(FEET) =   3.52
  TRAVEL TIME(MIN.) =   2.05   Tc(MIN.) =  16.15
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6310.00 =  4544.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6309.00 TO NODE   6310.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.15
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.171
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        0.20      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                     B        0.70      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        1.30      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        0.90      0.30      1.00    69
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  NATURAL FAIR COVER
  "WOODLAND"                B        5.50      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"     C        2.70      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   11.30      SUBAREA RUNOFF(CFS) =   29.32
  EFFECTIVE AREA(ACRES) =    117.50   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    117.50       PEAK FLOW RATE(CFS) =     309.67

****************************************************************************
  FLOW PROCESS FROM NODE   6309.00 TO NODE   6310.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.15
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.171
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                   C        0.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"              C       11.60      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"         C        8.10      0.25      1.00    79
  NATURAL FAIR COVER
  "WOODLAND"                C        3.10      0.25      1.00    73
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"         D        0.90      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   24.10      SUBAREA RUNOFF(CFS) =   63.40
  EFFECTIVE AREA(ACRES) =    141.60   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    141.60       PEAK FLOW RATE(CFS) =     373.06

****************************************************************************
  FLOW PROCESS FROM NODE   6310.00 TO NODE   6311.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    432.00  DOWNSTREAM(FEET) =    382.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1847.00   CHANNEL SLOPE =  0.0271
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    373.06
  FLOW VELOCITY(FEET/SEC.) =  10.36   FLOW DEPTH(FEET) =   4.00
  TRAVEL TIME(MIN.) =   2.97   Tc(MIN.) =  19.12
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6311.00 =  6391.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6310.00 TO NODE   6311.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.12
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.877
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                  A        4.90      0.40      1.00    78
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"         A        0.60      0.40      1.00    49
  NATURAL FAIR COVER
  "OPEN BRUSH"              B        0.70      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"         B        2.90      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                B        0.40      0.30      1.00    60
  NATURAL FAIR COVER
  "OPEN BRUSH"              C        0.10      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.36
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    9.60      SUBAREA RUNOFF(CFS) =   21.78
  EFFECTIVE AREA(ACRES) =    151.20   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    151.20       PEAK FLOW RATE(CFS) =     373.06
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6310.00 TO NODE   6311.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.12
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.877
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"         C        7.40      0.25      1.00    79
  NATURAL FAIR COVER
  "WOODLAND"                C        0.60      0.25      1.00    73
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"         D        3.60      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   11.60      SUBAREA RUNOFF(CFS) =   27.59
  EFFECTIVE AREA(ACRES) =    162.80   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    162.80       PEAK FLOW RATE(CFS) =     384.99

****************************************************************************
  FLOW PROCESS FROM NODE   6311.00 TO NODE   6311.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  19.12
  RAINFALL INTENSITY(INCH/HR) =   2.88
  AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =   162.80
  TOTAL STREAM AREA(ACRES) =   162.80
  PEAK FLOW RATE(CFS) AT CONFLUENCE =    384.99

  ** CONFLUENCE DATA **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1   7549.97  38.96    1.911  0.30( 0.19) 0.64  4878.0     780.00
      2    384.99  19.12    2.877  0.25( 0.25) 1.00   162.8    6300.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1   6172.55  19.12    2.877  0.30( 0.20) 0.66  2557.3    6300.00
      2   7793.44  38.96    1.911  0.30( 0.19) 0.65  5040.8     780.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =   7793.44    Tc(MIN.) =    38.96
  EFFECTIVE AREA(ACRES) =  5040.80   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.30  AREA-AVERAGED Ap =  0.65
  TOTAL AREA(ACRES) =   5040.80
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6311.00 =  6391.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6311.00 TO NODE   6330.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    382.00  DOWNSTREAM(FEET) =    375.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1141.00   CHANNEL SLOPE =  0.0061
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   7793.44
```

```
  FLOW VELOCITY(FEET/SEC.) =  12.50   FLOW DEPTH(FEET) =  14.12
  TRAVEL TIME(MIN.) =   1.52   Tc(MIN.) =  40.48
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6330.00 =  7532.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6311.00 TO NODE   6330.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  40.48
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.869
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   A       13.20      0.40      1.00    78
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A        0.90      0.40      1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A        0.60      0.40      1.00    36
  NATURAL POOR COVER
  "BARREN"                   B        4.60      0.30      1.00    86
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B       12.60      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.10      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.35
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   32.00      SUBAREA RUNOFF(CFS) =   43.86
  EFFECTIVE AREA(ACRES) =   5072.80   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.30  AREA-AVERAGED Ap =  0.65
  TOTAL AREA(ACRES) =   5072.80       PEAK FLOW RATE(CFS) =    7793.44
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6311.00 TO NODE   6330.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  40.48
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.869
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   C        0.20      0.25      1.00    91
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        6.90      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        8.00      0.25      1.00    79
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.50      0.25      1.00    73
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.20      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D       12.30      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   28.10      SUBAREA RUNOFF(CFS) =   41.51
  EFFECTIVE AREA(ACRES) =   5100.90   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.30  AREA-AVERAGED Ap =  0.65
  TOTAL AREA(ACRES) =   5100.90       PEAK FLOW RATE(CFS) =    7793.44
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6311.00 TO NODE   6330.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  40.48
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.869
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 D        0.70      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.70      SUBAREA RUNOFF(CFS) =    1.05
  EFFECTIVE AREA(ACRES) =   5101.60   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.30  AREA-AVERAGED Ap =  0.65
  TOTAL AREA(ACRES) =   5101.60       PEAK FLOW RATE(CFS) =    7793.44
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6330.00 TO NODE   6330.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  40.48
  RAINFALL INTENSITY(INCH/HR) =   1.87
  AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.30
  AREA-AVERAGED Ap =  0.65
  EFFECTIVE STREAM AREA(ACRES) =  5101.60
  TOTAL STREAM AREA(ACRES) =  5101.60
  PEAK FLOW RATE(CFS) AT CONFLUENCE =   7793.44

****************************************************************************
  FLOW PROCESS FROM NODE   6320.00 TO NODE   6321.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   305.00
  ELEVATION DATA: UPSTREAM(FEET) =    715.00  DOWNSTREAM(FEET) =    660.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    9.802
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.219
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.20      0.25      1.00    77    9.80
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        0.30      0.25      1.00    79    9.80
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D        0.30      0.20      1.00    84    9.80
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      2.87
  TOTAL AREA(ACRES) =      0.80   PEAK FLOW RATE(CFS) =      2.87

****************************************************************************
  FLOW PROCESS FROM NODE   6321.00 TO NODE   6322.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    660.00  DOWNSTREAM(FEET) =    650.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   148.00   CHANNEL SLOPE =  0.0676
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      2.87
  FLOW VELOCITY(FEET/SEC.) =   4.27   FLOW DEPTH(FEET) =   0.46
  TRAVEL TIME(MIN.) =   0.58   Tc(MIN.) =  10.38
  LONGEST FLOWPATH FROM NODE   6320.00 TO NODE   6322.00 =   453.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6321.00 TO NODE   6322.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.38
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.084
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.40      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        0.60      0.25      1.00    79
  NATURAL FAIR COVER
```

```
  "OPEN BRUSH"                D        0.20      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        0.80      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =     2.00      SUBAREA RUNOFF(CFS) =     6.95
  EFFECTIVE AREA(ACRES) =      2.80   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      2.80       PEAK FLOW RATE(CFS) =       9.72

****************************************************************************
  FLOW PROCESS FROM NODE   6322.00 TO NODE   6323.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    650.00  DOWNSTREAM(FEET) =    620.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   262.00   CHANNEL SLOPE =  0.1145
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      9.72
  FLOW VELOCITY(FEET/SEC.) =   7.16   FLOW DEPTH(FEET) =   0.77
  TRAVEL TIME(MIN.) =   0.61   Tc(MIN.) =  10.99
  LONGEST FLOWPATH FROM NODE   6320.00 TO NODE   6323.00 =   715.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6322.00 TO NODE   6323.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.99
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.962
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.80      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        0.60      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.30      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        1.30      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =     3.00      SUBAREA RUNOFF(CFS) =    10.09
  EFFECTIVE AREA(ACRES) =      5.80   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      5.80       PEAK FLOW RATE(CFS) =      19.51

****************************************************************************
  FLOW PROCESS FROM NODE   6323.00 TO NODE   6324.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    620.00  DOWNSTREAM(FEET) =    610.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   193.00   CHANNEL SLOPE =  0.0518
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     19.51
  FLOW VELOCITY(FEET/SEC.) =   6.23   FLOW DEPTH(FEET) =   1.03
  TRAVEL TIME(MIN.) =   0.52   Tc(MIN.) =  11.51
  LONGEST FLOWPATH FROM NODE   6320.00 TO NODE   6324.00 =   908.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6323.00 TO NODE   6324.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.51
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.859
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        1.30      0.25      1.00    77
  AGRICULTURAL FAIR COVER
```

```
  "PASTURE,DRYLAND"           C        1.50      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =     2.80      SUBAREA RUNOFF(CFS) =     9.09
  EFFECTIVE AREA(ACRES) =      8.60   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      8.60       PEAK FLOW RATE(CFS) =      28.06

****************************************************************************
  FLOW PROCESS FROM NODE   6324.00 TO NODE   6325.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    610.00  DOWNSTREAM(FEET) =    580.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   384.00   CHANNEL SLOPE =  0.0781
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     28.06
  FLOW VELOCITY(FEET/SEC.) =   7.99   FLOW DEPTH(FEET) =   1.12
  TRAVEL TIME(MIN.) =   0.80   Tc(MIN.) =  12.31
  LONGEST FLOWPATH FROM NODE   6320.00 TO NODE   6325.00 =  1292.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6324.00 TO NODE   6325.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.31
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.699
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.20      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        0.70      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        2.90      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        3.20      0.25      1.00    79
  NATURAL FAIR COVER
  "WOODLAND"                  C        0.20      0.25      1.00    73
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        1.10      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =     8.30      SUBAREA RUNOFF(CFS) =    25.77
  EFFECTIVE AREA(ACRES) =     16.90   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     16.90       PEAK FLOW RATE(CFS) =      52.59

****************************************************************************
  FLOW PROCESS FROM NODE   6324.00 TO NODE   6325.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.31
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.699
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        0.50      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =     0.50      SUBAREA RUNOFF(CFS) =     1.57
  EFFECTIVE AREA(ACRES) =     17.40   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     17.40       PEAK FLOW RATE(CFS) =      54.17

****************************************************************************
  FLOW PROCESS FROM NODE   6325.00 TO NODE   6326.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    580.00  DOWNSTREAM(FEET) =    530.00
```

```
  CHANNEL LENGTH THRU SUBAREA(FEET) =   805.00   CHANNEL SLOPE =  0.0621
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     54.17
  FLOW VELOCITY(FEET/SEC.) =   8.74   FLOW DEPTH(FEET) =   1.68
  TRAVEL TIME(MIN.) =   1.54   Tc(MIN.) =  13.84
  LONGEST FLOWPATH FROM NODE   6320.00 TO NODE   6326.00 =  2097.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6325.00 TO NODE   6326.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  13.84
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.467
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.20      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        6.10      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        4.60      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        2.80      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        2.40      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   16.10      SUBAREA RUNOFF(CFS) =   46.56
  EFFECTIVE AREA(ACRES) =     33.50   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     33.50       PEAK FLOW RATE(CFS) =      97.09

****************************************************************************
  FLOW PROCESS FROM NODE   6326.00 TO NODE   6327.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    530.00  DOWNSTREAM(FEET) =    490.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   946.00   CHANNEL SLOPE =  0.0423
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     97.09
  FLOW VELOCITY(FEET/SEC.) =   8.73   FLOW DEPTH(FEET) =   2.16
  TRAVEL TIME(MIN.) =   1.81   Tc(MIN.) =  15.65
  LONGEST FLOWPATH FROM NODE   6320.00 TO NODE   6327.00 =  3043.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6326.00 TO NODE   6327.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  15.65
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.227
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        3.70      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.70      0.30      1.00    60
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        0.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        2.30      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D       15.20      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.70      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   23.00      SUBAREA RUNOFF(CFS) =   62.25
  EFFECTIVE AREA(ACRES) =     56.50   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     56.50       PEAK FLOW RATE(CFS) =     152.13

****************************************************************************
  FLOW PROCESS FROM NODE   6327.00 TO NODE   6328.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    490.00  DOWNSTREAM(FEET) =    470.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   938.00   CHANNEL SLOPE =  0.0213
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    152.13
  FLOW VELOCITY(FEET/SEC.) =   7.56   FLOW DEPTH(FEET) =   2.91
  TRAVEL TIME(MIN.) =   2.07   Tc(MIN.) =  17.72
  LONGEST FLOWPATH FROM NODE   6320.00 TO NODE   6328.00 =  3981.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6327.00 TO NODE   6328.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.72
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.001
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        1.10      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B       14.40      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.90      0.30      1.00    60
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        5.50      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        1.10      0.25      1.00    79
  NATURAL FAIR COVER
  "GRASS"                     D        0.40      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   23.40      SUBAREA RUNOFF(CFS) =   57.22
  EFFECTIVE AREA(ACRES) =     79.90   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     79.90       PEAK FLOW RATE(CFS) =     197.83

****************************************************************************
  FLOW PROCESS FROM NODE   6328.00 TO NODE   6329.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.72
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.001
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        6.60      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D       27.30      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.20      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   34.10      SUBAREA RUNOFF(CFS) =   85.96
  EFFECTIVE AREA(ACRES) =    114.00   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    114.00       PEAK FLOW RATE(CFS) =     283.80

****************************************************************************
  FLOW PROCESS FROM NODE   6328.00 TO NODE   6329.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    470.00  DOWNSTREAM(FEET) =    405.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1687.00   CHANNEL SLOPE =  0.0385
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    283.80
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 FLOW VELOCITY(FEET/SEC.) =  11.06   FLOW DEPTH(FEET) =   3.45
 TRAVEL TIME(MIN.) =   2.54   Tc(MIN.) =  20.26
 LONGEST FLOWPATH FROM NODE   6320.00 TO NODE   6329.00 =  5668.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   6328.00 TO NODE   6329.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  20.26
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.780
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"                A        0.20      0.40      1.00    46
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           A        0.10      0.40      1.00    49
 NATURAL FAIR COVER
 "WOODLAND"                  A        0.40      0.40      1.00    36
 NATURAL FAIR COVER
 "OPEN BRUSH"                B        2.50      0.30      1.00    66
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           B        6.40      0.30      1.00    69
 NATURAL FAIR COVER
 "WOODLAND"                  B        0.80      0.30      1.00    60
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.31
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   10.40      SUBAREA RUNOFF(CFS) =   23.15
 EFFECTIVE AREA(ACRES) =    124.40   AREA-AVERAGED Fm(INCH/HR) =  0.24
 AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    124.40       PEAK FLOW RATE(CFS) =     284.32

****************************************************************************
 FLOW PROCESS FROM NODE   6328.00 TO NODE   6329.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  20.26
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.780
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"                C       15.00      0.25      1.00    77
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           C        0.20      0.25      1.00    79
 NATURAL FAIR COVER
 "GRASS"                     D        0.20      0.20      1.00    84
 NATURAL FAIR COVER
 "OPEN BRUSH"                D        4.80      0.20      1.00    83
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           D        2.70      0.20      1.00    84
 NATURAL FAIR COVER
 "WOODLAND"                  D        2.00      0.20      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   24.90      SUBAREA RUNOFF(CFS) =   57.14
 EFFECTIVE AREA(ACRES) =    149.30   AREA-AVERAGED Fm(INCH/HR) =  0.24
 AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    149.30       PEAK FLOW RATE(CFS) =     341.46

****************************************************************************
 FLOW PROCESS FROM NODE   6329.00 TO NODE   6330.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    405.00  DOWNSTREAM(FEET) =    375.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1040.00   CHANNEL SLOPE =  0.0288
 CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    341.46
 FLOW VELOCITY(FEET/SEC.) =  10.37   FLOW DEPTH(FEET) =   3.76
 TRAVEL TIME(MIN.) =   1.67   Tc(MIN.) =  21.93
 LONGEST FLOWPATH FROM NODE   6320.00 TO NODE   6330.00 =  6708.00 FEET.

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 FLOW PROCESS FROM NODE   6329.00 TO NODE   6330.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  21.93
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.653
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL POOR COVER
 "BARREN"                    A        0.10      0.40      1.00    78
 NATURAL FAIR COVER
 "OPEN BRUSH"                A        1.10      0.40      1.00    46
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           A        4.10      0.40      1.00    49
 NATURAL FAIR COVER
 "WOODLAND"                  A        0.50      0.40      1.00    36
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       B        0.20      0.30      1.00    63
 NATURAL FAIR COVER
 "OPEN BRUSH"                B        5.30      0.30      1.00    66
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.35
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   11.30      SUBAREA RUNOFF(CFS) =   23.41
 EFFECTIVE AREA(ACRES) =    160.60   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    160.60       PEAK FLOW RATE(CFS) =     347.81

****************************************************************************
 FLOW PROCESS FROM NODE   6329.00 TO NODE   6330.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  21.93
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.653
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           B        3.80      0.30      1.00    69
 NATURAL FAIR COVER
 "WOODLAND"                  B        1.30      0.30      1.00    60
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        2.60      0.25      1.00    77
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           C        0.10      0.25      1.00    79
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       D        6.90      0.20      1.00    81
 NATURAL FAIR COVER
 "GRASS"                     D        3.10      0.20      1.00    84
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   17.80      SUBAREA RUNOFF(CFS) =   38.72
 EFFECTIVE AREA(ACRES) =    178.40   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    178.40       PEAK FLOW RATE(CFS) =     386.53

****************************************************************************
 FLOW PROCESS FROM NODE   6329.00 TO NODE   6330.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  21.93
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.653
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"                D       27.90      0.20      1.00    83
 PUBLIC PARK                 D        0.90      0.20      0.85    75
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           D       16.30      0.20      1.00    84
 NATURAL FAIR COVER
 "WOODLAND"                  D        3.80      0.20      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   48.90      SUBAREA RUNOFF(CFS) =  108.00
 EFFECTIVE AREA(ACRES) =    227.30   AREA-AVERAGED Fm(INCH/HR) =  0.24
 AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
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```
  TOTAL AREA(ACRES) =    227.30       PEAK FLOW RATE(CFS) =     494.53

****************************************************************************
  FLOW PROCESS FROM NODE   6330.00 TO NODE   6330.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  21.93
  RAINFALL INTENSITY(INCH/HR) =   2.65
  AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =   227.30
  TOTAL STREAM AREA(ACRES) =   227.30
  PEAK FLOW RATE(CFS) AT CONFLUENCE =    494.53

  ** CONFLUENCE DATA **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)        (ACRES)    NODE
      1   6172.55  20.75    2.743  0.29( 0.20) 0.67  2618.1    6300.00
      1   7793.44  40.48    1.869  0.30( 0.19) 0.65  5101.6     780.00
      2    494.53  21.93    2.653  0.24( 0.24) 1.00   227.3    6320.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM     Q     Tc    Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)        (ACRES)    NODE
      1   6657.80  20.75    2.743  0.29( 0.20) 0.69  2833.1    6300.00
      2   6764.24  21.93    2.653  0.29( 0.20) 0.69  2994.2    6320.00
      3   8127.50  40.48    1.869  0.29( 0.20) 0.67  5328.9     780.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =   8127.50    Tc(MIN.) =    40.48
  EFFECTIVE AREA(ACRES) =  5328.90   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.67
  TOTAL AREA(ACRES) =   5328.90
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6330.00 =  7532.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6330.00 TO NODE   6331.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    375.00  DOWNSTREAM(FEET) =    360.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1470.00   CHANNEL SLOPE =  0.0102
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   8127.50
  FLOW VELOCITY(FEET/SEC.) =  15.21   FLOW DEPTH(FEET) =  12.56
  TRAVEL TIME(MIN.) =   1.61   Tc(MIN.) =  42.09
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6331.00 =  9002.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6330.00 TO NODE   6331.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  42.09
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.832
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                    A        0.40      0.40      1.00    78
  NATURAL FAIR COVER
  "WOODLAND"                  A        0.70      0.40      1.00    36
  NATURAL POOR COVER
  "BARREN"                    B       18.00      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                     B        3.30      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.90      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        3.40      0.30      1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   26.70      SUBAREA RUNOFF(CFS) =   36.71
  EFFECTIVE AREA(ACRES) =   5355.60   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.67
  TOTAL AREA(ACRES) =   5355.60       PEAK FLOW RATE(CFS) =    8127.50
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6330.00 TO NODE   6331.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  42.09
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.832
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  B        3.70      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.10      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        1.70      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        2.50      0.25      1.00    79
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        3.70      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                     D        3.80      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   15.50      SUBAREA RUNOFF(CFS) =   22.24
  EFFECTIVE AREA(ACRES) =   5371.10   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.67
  TOTAL AREA(ACRES) =   5371.10       PEAK FLOW RATE(CFS) =    8127.50
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6330.00 TO NODE   6331.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  42.09
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.832
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                D       14.30      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        9.50      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                  D        2.90      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   26.70      SUBAREA RUNOFF(CFS) =   39.22
  EFFECTIVE AREA(ACRES) =   5397.80   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.67
  TOTAL AREA(ACRES) =   5397.80       PEAK FLOW RATE(CFS) =    8127.50
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6331.00 TO NODE   6332.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    360.00  DOWNSTREAM(FEET) =    355.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   724.00   CHANNEL SLOPE =  0.0069
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   8127.50
  FLOW VELOCITY(FEET/SEC.) =  13.21   FLOW DEPTH(FEET) =  13.99
  TRAVEL TIME(MIN.) =   0.91   Tc(MIN.) =  43.00
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6332.00 =  9726.00 FEET.
```

```
****************************************************************************
  FLOW PROCESS FROM NODE   6331.00 TO NODE   6332.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  43.00
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.811
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   B       13.40      0.30      1.00    86
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        2.70      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B        5.60      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B        1.20      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        2.40      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       29.00      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   54.30      SUBAREA RUNOFF(CFS) =   76.66
  EFFECTIVE AREA(ACRES) =   5452.10   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.68
  TOTAL AREA(ACRES) =   5452.10       PEAK FLOW RATE(CFS) =    8127.50
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6331.00 TO NODE   6332.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  43.00
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.811
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D       24.70      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                 D        0.90      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   25.60      SUBAREA RUNOFF(CFS) =   37.12
  EFFECTIVE AREA(ACRES) =   5477.70   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.68
  TOTAL AREA(ACRES) =   5477.70       PEAK FLOW RATE(CFS) =    8127.50
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6332.00 TO NODE   6333.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    355.00  DOWNSTREAM(FEET) =    350.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   875.00   CHANNEL SLOPE =  0.0057
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   8127.50
  FLOW VELOCITY(FEET/SEC.) =  12.33   FLOW DEPTH(FEET) =  14.74
  TRAVEL TIME(MIN.) =   1.18   Tc(MIN.) =  44.19
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6333.00 = 10601.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6332.00 TO NODE   6333.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  44.19
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.784
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   A        7.10      0.40      1.00    78
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A        2.20      0.40      1.00    49
  NATURAL POOR COVER
  "BARREN"                   B       10.90      0.30      1.00    86
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.80      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B       11.80      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B        1.40      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.33
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   35.20      SUBAREA RUNOFF(CFS) =   46.17
  EFFECTIVE AREA(ACRES) =   5512.90   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.68
  TOTAL AREA(ACRES) =   5512.90       PEAK FLOW RATE(CFS) =    8127.50
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6332.00 TO NODE   6333.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  44.19
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.784
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        3.00      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                    C        1.00      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       13.90      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C       14.00      0.25      1.00    79
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.00      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        4.40      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   37.30      SUBAREA RUNOFF(CFS) =   51.73
  EFFECTIVE AREA(ACRES) =   5550.20   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.68
  TOTAL AREA(ACRES) =   5550.20       PEAK FLOW RATE(CFS) =    8127.50
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6332.00 TO NODE   6333.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  44.19
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.784
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D       14.30      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                 D        1.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   15.40      SUBAREA RUNOFF(CFS) =   21.95
  EFFECTIVE AREA(ACRES) =   5565.60   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.68
  TOTAL AREA(ACRES) =   5565.60       PEAK FLOW RATE(CFS) =    8127.50
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6333.00 TO NODE   6334.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    350.00  DOWNSTREAM(FEET) =    342.00
```

```
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1171.00   CHANNEL SLOPE =  0.0068
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   8127.50
  FLOW VELOCITY(FEET/SEC.) =  13.15   FLOW DEPTH(FEET) =  14.03
  TRAVEL TIME(MIN.) =   1.48   Tc(MIN.) =  45.67
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6334.00 = 11772.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6333.00 TO NODE   6334.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  45.67
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.750
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                    A        8.20      0.40      1.00    78
  NATURAL FAIR COVER
  "WOODLAND"                  A        0.70      0.40      1.00    36
  NATURAL POOR COVER
  "BARREN"                    B        5.50      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                     B        1.10      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        0.90      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.20      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.35
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   16.60      SUBAREA RUNOFF(CFS) =   20.86
  EFFECTIVE AREA(ACRES) =   5582.20   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.68
  TOTAL AREA(ACRES) =   5582.20       PEAK FLOW RATE(CFS) =    8127.50
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6333.00 TO NODE   6334.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  45.67
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.750
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     C        1.60      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        7.00      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        2.10      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.90      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   11.60      SUBAREA RUNOFF(CFS) =   15.70
  EFFECTIVE AREA(ACRES) =   5593.80   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.68
  TOTAL AREA(ACRES) =   5593.80       PEAK FLOW RATE(CFS) =    8127.50
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6334.00 TO NODE   6354.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    342.00  DOWNSTREAM(FEET) =    314.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1846.00   CHANNEL SLOPE =  0.0152
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   8127.50
  FLOW VELOCITY(FEET/SEC.) =  17.53   FLOW DEPTH(FEET) =  11.24
  TRAVEL TIME(MIN.) =   1.75   Tc(MIN.) =  47.43
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6354.00 = 13618.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6334.00 TO NODE   6354.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  47.43
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.709
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                    A        8.00      0.40      1.00    78
  NATURAL FAIR COVER
  "WOODLAND"                  A        0.40      0.40      1.00    36
  NATURAL POOR COVER
  "BARREN"                    B        0.70      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                     B        1.50      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.20      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                  B        1.10      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.37
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   11.90      SUBAREA RUNOFF(CFS) =   14.34
  EFFECTIVE AREA(ACRES) =   5605.70   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.69
  TOTAL AREA(ACRES) =   5605.70       PEAK FLOW RATE(CFS) =    8127.50
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6334.00 TO NODE   6354.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  47.43
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.709
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                    C        7.60      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                     C        1.30      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        4.40      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        2.90      0.25      1.00    73
  NATURAL FAIR COVER
  "GRASS"                     D        0.20      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        1.20      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   17.60      SUBAREA RUNOFF(CFS) =   23.18
  EFFECTIVE AREA(ACRES) =   5623.30   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.69
  TOTAL AREA(ACRES) =   5623.30       PEAK FLOW RATE(CFS) =    8127.50
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6334.00 TO NODE   6354.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  47.43
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.709
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.10      SUBAREA RUNOFF(CFS) =    0.14
  EFFECTIVE AREA(ACRES) =   5623.40   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.69
  TOTAL AREA(ACRES) =   5623.40       PEAK FLOW RATE(CFS) =    8127.50
```

```
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6354.00 TO NODE   6354.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  47.43
  RAINFALL INTENSITY(INCH/HR) =   1.71
  AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29
  AREA-AVERAGED Ap =  0.69
  EFFECTIVE STREAM AREA(ACRES) =  5623.40
  TOTAL STREAM AREA(ACRES) =  5623.40
  PEAK FLOW RATE(CFS) AT CONFLUENCE =   8127.50

****************************************************************************
  FLOW PROCESS FROM NODE   6340.00 TO NODE   6341.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   303.00
  ELEVATION DATA: UPSTREAM(FEET) =    769.00  DOWNSTREAM(FEET) =    695.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    9.201
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.397
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "OPEN BRUSH"                 C        1.00      0.25      1.00    77    9.20
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      3.73
  TOTAL AREA(ACRES) =      1.00   PEAK FLOW RATE(CFS) =      3.73

****************************************************************************
  FLOW PROCESS FROM NODE   6341.00 TO NODE   6342.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    695.00  DOWNSTREAM(FEET) =    665.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   167.00   CHANNEL SLOPE =  0.1796
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      3.73
  FLOW VELOCITY(FEET/SEC.) =   6.51   FLOW DEPTH(FEET) =   0.41
  TRAVEL TIME(MIN.) =   0.43   Tc(MIN.) =   9.63
  LONGEST FLOWPATH FROM NODE   6340.00 TO NODE   6342.00 =   470.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6341.00 TO NODE   6342.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.63
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.270
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                 C        0.30      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                   C        0.60      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.90      SUBAREA RUNOFF(CFS) =    3.26
  EFFECTIVE AREA(ACRES) =      1.90   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.90       PEAK FLOW RATE(CFS) =       6.87

****************************************************************************
  FLOW PROCESS FROM NODE   6342.00 TO NODE   6343.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    665.00  DOWNSTREAM(FEET) =    645.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   110.00   CHANNEL SLOPE =  0.1818
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      6.87
  FLOW VELOCITY(FEET/SEC.) =   7.73   FLOW DEPTH(FEET) =   0.57
  TRAVEL TIME(MIN.) =   0.24   Tc(MIN.) =   9.87
  LONGEST FLOWPATH FROM NODE   6340.00 TO NODE   6343.00 =   580.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6342.00 TO NODE   6343.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.87
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                 C        0.40      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                   C        0.60      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.00      SUBAREA RUNOFF(CFS) =    3.55
  EFFECTIVE AREA(ACRES) =      2.90   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      2.90       PEAK FLOW RATE(CFS) =      10.31

****************************************************************************
  FLOW PROCESS FROM NODE   6343.00 TO NODE   6344.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    645.00  DOWNSTREAM(FEET) =    630.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   152.00   CHANNEL SLOPE =  0.0987
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     10.31
  FLOW VELOCITY(FEET/SEC.) =   6.89   FLOW DEPTH(FEET) =   0.82
  TRAVEL TIME(MIN.) =   0.37   Tc(MIN.) =  10.23
  LONGEST FLOWPATH FROM NODE   6340.00 TO NODE   6344.00 =   732.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6343.00 TO NODE   6344.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.23
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.113
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                 C        2.00      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                   C        1.30      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.30      SUBAREA RUNOFF(CFS) =   11.47
  EFFECTIVE AREA(ACRES) =      6.20   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      6.20       PEAK FLOW RATE(CFS) =      21.56

****************************************************************************
  FLOW PROCESS FROM NODE   6344.00 TO NODE   6345.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    630.00  DOWNSTREAM(FEET) =    600.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   329.00   CHANNEL SLOPE =  0.0912
```

```
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     21.56
  FLOW VELOCITY(FEET/SEC.) =   7.87   FLOW DEPTH(FEET) =   0.93
  TRAVEL TIME(MIN.) =   0.70   Tc(MIN.) =  10.93
  LONGEST FLOWPATH FROM NODE   6340.00 TO NODE   6345.00 =  1061.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6344.00 TO NODE   6345.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.93
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.974
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        6.60      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        0.40      0.25      1.00    73
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.10      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =     7.10      SUBAREA RUNOFF(CFS) =   23.80
  EFFECTIVE AREA(ACRES) =     13.30   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     13.30       PEAK FLOW RATE(CFS) =      44.58

****************************************************************************
  FLOW PROCESS FROM NODE   6345.00 TO NODE   6346.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    600.00  DOWNSTREAM(FEET) =    585.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   297.00   CHANNEL SLOPE =  0.0505
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     44.58
  FLOW VELOCITY(FEET/SEC.) =   7.69   FLOW DEPTH(FEET) =   1.61
  TRAVEL TIME(MIN.) =   0.64   Tc(MIN.) =  11.57
  LONGEST FLOWPATH FROM NODE   6340.00 TO NODE   6346.00 =  1358.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6345.00 TO NODE   6346.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.57
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.845
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        3.90      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        6.60      0.25      1.00    73
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.20      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   10.80      SUBAREA RUNOFF(CFS) =   34.96
  EFFECTIVE AREA(ACRES) =     24.10   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     24.10       PEAK FLOW RATE(CFS) =      78.00

****************************************************************************
  FLOW PROCESS FROM NODE   6346.00 TO NODE   6347.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    585.00  DOWNSTREAM(FEET) =    540.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   903.00   CHANNEL SLOPE =  0.0498
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     78.00
  FLOW VELOCITY(FEET/SEC.) =   8.75   FLOW DEPTH(FEET) =   1.84
  TRAVEL TIME(MIN.) =   1.72   Tc(MIN.) =  13.29
  LONGEST FLOWPATH FROM NODE   6340.00 TO NODE   6347.00 =  2261.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6346.00 TO NODE   6347.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  13.29
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.546
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.90      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       11.50      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        4.10      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   16.50      SUBAREA RUNOFF(CFS) =   48.94
  EFFECTIVE AREA(ACRES) =     40.60   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     40.60       PEAK FLOW RATE(CFS) =     120.45

****************************************************************************
  FLOW PROCESS FROM NODE   6347.00 TO NODE   6348.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    540.00  DOWNSTREAM(FEET) =    500.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   905.00   CHANNEL SLOPE =  0.0442
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    120.45
  FLOW VELOCITY(FEET/SEC.) =   9.39   FLOW DEPTH(FEET) =   2.38
  TRAVEL TIME(MIN.) =   1.61   Tc(MIN.) =  14.90
  LONGEST FLOWPATH FROM NODE   6340.00 TO NODE   6348.00 =  3166.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6347.00 TO NODE   6348.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  14.90
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.314
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        2.20      0.30      1.00    63
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        1.10      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        2.20      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B        1.60      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        2.90      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C        0.70      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   10.70      SUBAREA RUNOFF(CFS) =   29.19
  EFFECTIVE AREA(ACRES) =     51.30   AREA-AVERAGED Fm(INCH/HR) =  0.26
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     51.30       PEAK FLOW RATE(CFS) =     141.18

****************************************************************************
  FLOW PROCESS FROM NODE   6347.00 TO NODE   6348.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  14.90
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.314
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       17.90      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        2.40      0.25      1.00    79
  NATURAL FAIR COVER
  "WOODLAND"                  C        2.20      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   22.50      SUBAREA RUNOFF(CFS) =   62.05
  EFFECTIVE AREA(ACRES) =     73.80   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     73.80       PEAK FLOW RATE(CFS) =     203.24

****************************************************************************
  FLOW PROCESS FROM NODE   6348.00 TO NODE   6349.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    500.00  DOWNSTREAM(FEET) =    470.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   844.00   CHANNEL SLOPE =  0.0355
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    203.24
  FLOW VELOCITY(FEET/SEC.) =   9.85   FLOW DEPTH(FEET) =   2.96
  TRAVEL TIME(MIN.) =   1.43   Tc(MIN.) =  16.33
  LONGEST FLOWPATH FROM NODE   6340.00 TO NODE   6349.00 =  4010.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6348.00 TO NODE   6349.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.33
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.151
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.60      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        2.40      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B        1.30      0.30      1.00    60
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        4.00      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        2.00      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   10.30      SUBAREA RUNOFF(CFS) =   26.70
  EFFECTIVE AREA(ACRES) =     84.10   AREA-AVERAGED Fm(INCH/HR) =  0.26
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     84.10       PEAK FLOW RATE(CFS) =     219.10

****************************************************************************
  FLOW PROCESS FROM NODE   6349.00 TO NODE   6350.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    470.00  DOWNSTREAM(FEET) =    445.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   667.00   CHANNEL SLOPE =  0.0375
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    219.10
  FLOW VELOCITY(FEET/SEC.) =  10.24   FLOW DEPTH(FEET) =   3.04
  TRAVEL TIME(MIN.) =   1.09   Tc(MIN.) =  17.41
  LONGEST FLOWPATH FROM NODE   6340.00 TO NODE   6350.00 =  4677.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6349.00 TO NODE   6350.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.41
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.030
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        1.10      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                     B        0.70      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        3.60      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        4.20      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.70      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        9.40      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   19.70      SUBAREA RUNOFF(CFS) =   48.82
  EFFECTIVE AREA(ACRES) =    103.80   AREA-AVERAGED Fm(INCH/HR) =  0.26
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    103.80       PEAK FLOW RATE(CFS) =     258.72

****************************************************************************
  FLOW PROCESS FROM NODE   6349.00 TO NODE   6350.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.41
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.030
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       23.40      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      C        7.20      0.25      1.00    81
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        0.80      0.25      1.00    79
  NATURAL FAIR COVER
  "WOODLAND"                  C        3.40      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        0.80      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        5.60      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   41.20      SUBAREA RUNOFF(CFS) =  103.36
  EFFECTIVE AREA(ACRES) =    145.00   AREA-AVERAGED Fm(INCH/HR) =  0.26
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    145.00       PEAK FLOW RATE(CFS) =     362.08

****************************************************************************
  FLOW PROCESS FROM NODE   6349.00 TO NODE   6350.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.41
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.030
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      D        4.20      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    4.60      SUBAREA RUNOFF(CFS) =   11.71
  EFFECTIVE AREA(ACRES) =    149.60   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    149.60       PEAK FLOW RATE(CFS) =     373.79

****************************************************************************
  FLOW PROCESS FROM NODE   6350.00 TO NODE   6351.00 IS CODE =  51
----------------------------------------------------------------------------
```

```
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    445.00  DOWNSTREAM(FEET) =    385.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1346.00   CHANNEL SLOPE =  0.0446
 CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    373.79
 FLOW VELOCITY(FEET/SEC.) =  12.52   FLOW DEPTH(FEET) =   3.82
 TRAVEL TIME(MIN.) =   1.79   Tc(MIN.) =  19.20
 LONGEST FLOWPATH FROM NODE   6340.00 TO NODE   6351.00 =  6023.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   6350.00 TO NODE   6351.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
 MAINLINE Tc(MIN) =  19.20
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.870
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"               B        0.40      0.30      1.00    66
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          B        4.10      0.30      1.00    69
 NATURAL FAIR COVER
 "WOODLAND"                 B        4.70      0.30      1.00    60
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      C        5.80      0.25      1.00    75
 NATURAL FAIR COVER
 "OPEN BRUSH"               C       15.90      0.25      1.00    77
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          C       17.60      0.25      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   48.50      SUBAREA RUNOFF(CFS) =  113.95
 EFFECTIVE AREA(ACRES) =    198.10   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    198.10       PEAK FLOW RATE(CFS) =     466.24

****************************************************************************
 FLOW PROCESS FROM NODE   6350.00 TO NODE   6351.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
 MAINLINE Tc(MIN) =  19.20
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.870
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "WOODLAND"                 C       14.20      0.25      1.00    73
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      D        4.70      0.20      1.00    81
 NATURAL FAIR COVER
 "OPEN BRUSH"               D       10.90      0.20      1.00    83
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          D        0.90      0.20      1.00    84
 NATURAL FAIR COVER
 "WOODLAND"                 D        1.10      0.20      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   31.80      SUBAREA RUNOFF(CFS) =   75.78
 EFFECTIVE AREA(ACRES) =    229.90   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    229.90       PEAK FLOW RATE(CFS) =     542.02

****************************************************************************
 FLOW PROCESS FROM NODE   6351.00 TO NODE   6352.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    385.00  DOWNSTREAM(FEET) =    340.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1879.00   CHANNEL SLOPE =  0.0239
 CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    542.02
 FLOW VELOCITY(FEET/SEC.) =  10.89   FLOW DEPTH(FEET) =   4.98
 TRAVEL TIME(MIN.) =   2.88   Tc(MIN.) =  22.08
 LONGEST FLOWPATH FROM NODE   6340.00 TO NODE   6352.00 =  7902.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   6351.00 TO NODE   6352.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
 MAINLINE Tc(MIN) =  22.08
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.642
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL POOR COVER
 "BARREN"                   A        3.20      0.40      1.00    78
 NATURAL GOOD COVER
 "MEADOWS"                  A        0.40      0.40      1.00    30
 AGRICULTURAL POOR COVER
 "FALLOW"                   B        5.30      0.30      1.00    86
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      B        0.20      0.30      1.00    63
 NATURAL POOR COVER
 "BARREN"                   B       14.90      0.30      1.00    86
 NATURAL FAIR COVER
 "OPEN BRUSH"               B        1.10      0.30      1.00    66
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.31
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   25.10      SUBAREA RUNOFF(CFS) =   52.58
 EFFECTIVE AREA(ACRES) =    255.00   AREA-AVERAGED Fm(INCH/HR) =  0.26
 AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    255.00       PEAK FLOW RATE(CFS) =     547.40

****************************************************************************
 FLOW PROCESS FROM NODE   6351.00 TO NODE   6352.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
 MAINLINE Tc(MIN) =  22.08
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.642
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          B        1.50      0.30      1.00    69
 AGRICULTURAL POOR COVER
 "FALLOW"                   C        2.50      0.25      1.00    91
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      C        2.00      0.25      1.00    75
 NATURAL POOR COVER
 "BARREN"                   C        1.60      0.25      1.00    91
 NATURAL FAIR COVER
 "OPEN BRUSH"               C        8.80      0.25      1.00    77
 NATURAL GOOD COVER
 "MEADOWS"                  C        0.40      0.25      1.00    71
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   16.80      SUBAREA RUNOFF(CFS) =   36.10
 EFFECTIVE AREA(ACRES) =    271.80   AREA-AVERAGED Fm(INCH/HR) =  0.26
 AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    271.80       PEAK FLOW RATE(CFS) =     583.50

****************************************************************************
 FLOW PROCESS FROM NODE   6351.00 TO NODE   6352.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
 MAINLINE Tc(MIN) =  22.08
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.642
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          C        2.60      0.25      1.00    79
 AGRICULTURAL POOR COVER
 "FALLOW"                   D       17.30      0.20      1.00    94
 NATURAL FAIR COVER
```

```
  "CHAPARRAL,BROADLEAF"      D        3.10      0.20      1.00    81
  NATURAL POOR COVER
  "BARREN"                   D        0.10      0.20      1.00    93
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        1.90      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   25.00      SUBAREA RUNOFF(CFS) =   54.83
  EFFECTIVE AREA(ACRES) =    296.80   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    296.80       PEAK FLOW RATE(CFS) =     638.32

****************************************************************************
  FLOW PROCESS FROM NODE   6352.00 TO NODE   6353.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    340.00  DOWNSTREAM(FEET) =    335.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   728.00   CHANNEL SLOPE =  0.0069
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    638.32
  FLOW VELOCITY(FEET/SEC.) =   7.10   FLOW DEPTH(FEET) =   6.61
  TRAVEL TIME(MIN.) =   1.71   Tc(MIN.) =  23.79
  LONGEST FLOWPATH FROM NODE   6340.00 TO NODE   6353.00 =  8630.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6352.00 TO NODE   6353.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  23.79
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.533
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   A        0.60      0.40      1.00    78
  AGRICULTURAL POOR COVER
  "FALLOW"                   B        1.80      0.30      1.00    86
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.40      0.30      1.00    63
  NATURAL POOR COVER
  "BARREN"                   B        6.30      0.30      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.90      0.30      1.00    60
  AGRICULTURAL POOR COVER
  "FALLOW"                   C        6.90      0.25      1.00    91
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   16.90      SUBAREA RUNOFF(CFS) =   34.21
  EFFECTIVE AREA(ACRES) =    313.70   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    313.70       PEAK FLOW RATE(CFS) =     643.34

****************************************************************************
  FLOW PROCESS FROM NODE   6352.00 TO NODE   6353.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  23.79
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.533
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        3.10      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        5.40      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C        0.90      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        6.00      0.25      1.00    77
  NATURAL GOOD COVER
  "MEADOWS"                  C        3.60      0.25      1.00    71
  NATURAL FAIR COVER
  "WOODLAND"                 C        4.00      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   23.00      SUBAREA RUNOFF(CFS) =   47.25
  EFFECTIVE AREA(ACRES) =    336.70   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    336.70       PEAK FLOW RATE(CFS) =     690.59

****************************************************************************
  FLOW PROCESS FROM NODE   6352.00 TO NODE   6353.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  23.79
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.533
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   D        9.70      0.20      1.00    94
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.40      0.20      1.00    81
  NATURAL POOR COVER
  "BARREN"                   D        0.60      0.20      1.00    93
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        5.20      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   15.90      SUBAREA RUNOFF(CFS) =   33.38
  EFFECTIVE AREA(ACRES) =    352.60   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    352.60       PEAK FLOW RATE(CFS) =     723.97

****************************************************************************
  FLOW PROCESS FROM NODE   6353.00 TO NODE   6354.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    335.00  DOWNSTREAM(FEET) =    314.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   857.00   CHANNEL SLOPE =  0.0245
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    723.97
  FLOW VELOCITY(FEET/SEC.) =  11.76   FLOW DEPTH(FEET) =   5.09
  TRAVEL TIME(MIN.) =   1.21   Tc(MIN.) =  25.01
  LONGEST FLOWPATH FROM NODE   6340.00 TO NODE   6354.00 =  9487.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6353.00 TO NODE   6354.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  25.01
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.460
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   B        2.90      0.30      1.00    86
  NATURAL POOR COVER
  "BARREN"                   B       11.00      0.30      1.00    86
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        3.40      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        3.60      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       14.00      0.25      1.00    75
  AGRICULTURAL POOR COVER
  "FALLOW"                   C       13.90      0.25      1.00    91
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   48.80      SUBAREA RUNOFF(CFS) =   96.11
  EFFECTIVE AREA(ACRES) =    401.40   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    401.40       PEAK FLOW RATE(CFS) =     796.96

****************************************************************************
  FLOW PROCESS FROM NODE   6353.00 TO NODE   6354.00 IS CODE =  81
----------------------------------------------------------------------------
```

```
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  25.01
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.460
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   C        3.60      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C        1.80      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       41.00      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     C        1.90      0.25      1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                 C        1.40      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       39.80      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   89.50      SUBAREA RUNOFF(CFS) =  179.79
  EFFECTIVE AREA(ACRES) =    490.90   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    490.90       PEAK FLOW RATE(CFS) =     976.75

********************************************************************************
  FLOW PROCESS FROM NODE   6353.00 TO NODE   6354.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  25.01
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.460
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   D        9.80      0.20      1.00    94
  NATURAL POOR COVER
  "BARREN"                   D        1.10      0.20      1.00    93
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       48.00      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     D        6.70      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 D        4.00      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   69.60      SUBAREA RUNOFF(CFS) =  141.55
  EFFECTIVE AREA(ACRES) =    560.50   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    560.50       PEAK FLOW RATE(CFS) =    1118.30

********************************************************************************
  FLOW PROCESS FROM NODE   6354.00 TO NODE   6354.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
================================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  25.01
  RAINFALL INTENSITY(INCH/HR) =   2.46
  AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =   560.50
  TOTAL STREAM AREA(ACRES) =   560.50
  PEAK FLOW RATE(CFS) AT CONFLUENCE =   1118.30

  ** CONFLUENCE DATA **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)        (ACRES)    NODE
      1   6657.80  28.09    2.304  0.28( 0.21) 0.72  3127.6    6300.00
      1   6764.24  29.24    2.253  0.28( 0.21) 0.72  3288.7    6320.00
      1   8127.50  47.43    1.709  0.29( 0.20) 0.69  5623.4     780.00
      2   1118.30  25.01    2.460  0.24( 0.24) 1.00   560.5    6340.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)        (ACRES)    NODE
      1   7484.45  25.01    2.460  0.28( 0.21) 0.77  3344.3    6340.00
      2   7697.49  28.09    2.304  0.28( 0.21) 0.77  3688.1    6300.00
      3   7778.42  29.24    2.253  0.28( 0.21) 0.76  3849.2    6320.00
      4   8867.20  47.43    1.709  0.28( 0.20) 0.71  6183.9     780.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =   8867.20    Tc(MIN.) =    47.43
  EFFECTIVE AREA(ACRES) =  6183.90   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.28  AREA-AVERAGED Ap =  0.71
  TOTAL AREA(ACRES) =   6183.90
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6354.00 = 13618.00 FEET.

********************************************************************************
  FLOW PROCESS FROM NODE   6354.00 TO NODE   6355.00 IS CODE =  51
--------------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    314.00  DOWNSTREAM(FEET) =    280.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1554.00   CHANNEL SLOPE =  0.0219
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   8867.20
  FLOW VELOCITY(FEET/SEC.) =  20.49   FLOW DEPTH(FEET) =  10.65
  TRAVEL TIME(MIN.) =   1.26   Tc(MIN.) =  48.69
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6355.00 = 15172.00 FEET.

********************************************************************************
  FLOW PROCESS FROM NODE   6354.00 TO NODE   6355.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  48.69
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.680
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   B        0.40      0.30      1.00    86
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.20      0.30      1.00    63
  NATURAL POOR COVER
  "BARREN"                   B       14.80      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B        3.10      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        0.20      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.90      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   19.60      SUBAREA RUNOFF(CFS) =   24.35
  EFFECTIVE AREA(ACRES) =   6203.50   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.28  AREA-AVERAGED Ap =  0.72
  TOTAL AREA(ACRES) =   6203.50       PEAK FLOW RATE(CFS) =    8867.20
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

********************************************************************************
  FLOW PROCESS FROM NODE   6354.00 TO NODE   6355.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  48.69
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.680
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   C        3.70      0.25      1.00    91
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        4.30      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        7.50      0.25      1.00    91
  NATURAL FAIR COVER
```

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  "GRASS"                    C        6.60      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        4.60      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        5.30      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   32.00      SUBAREA RUNOFF(CFS) =   41.19
  EFFECTIVE AREA(ACRES) =   6235.50   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.28  AREA-AVERAGED Ap =  0.72
  TOTAL AREA(ACRES) =   6235.50       PEAK FLOW RATE(CFS) =    8867.20
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6355.00 TO NODE   6356.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    280.00  DOWNSTREAM(FEET) =    270.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   921.00   CHANNEL SLOPE =  0.0109
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   8867.20
  FLOW VELOCITY(FEET/SEC.) =  15.93   FLOW DEPTH(FEET) =  12.96
  TRAVEL TIME(MIN.) =   0.96   Tc(MIN.) =  49.65
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6356.00 = 16093.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6355.00 TO NODE   6356.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  49.65
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.658
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   B       23.80      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B        0.90      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        2.10      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        2.40      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       10.70      0.25      1.00    75
  AGRICULTURAL POOR COVER
  "FALLOW"                   C        4.60      0.25      1.00    91
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   44.50      SUBAREA RUNOFF(CFS) =   55.08
  EFFECTIVE AREA(ACRES) =   6280.00   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.28  AREA-AVERAGED Ap =  0.72
  TOTAL AREA(ACRES) =   6280.00       PEAK FLOW RATE(CFS) =    8867.20
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6355.00 TO NODE   6356.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  49.65
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.658
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   C        7.00      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C        5.20      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       20.70      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        8.50      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       12.50      0.20      1.00    81
  AGRICULTURAL POOR COVER
  "FALLOW"                   D        0.40      0.20      1.00    94
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   54.30      SUBAREA RUNOFF(CFS) =   69.39
  EFFECTIVE AREA(ACRES) =   6334.30   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.28  AREA-AVERAGED Ap =  0.72
  TOTAL AREA(ACRES) =   6334.30       PEAK FLOW RATE(CFS) =    8867.20
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6355.00 TO NODE   6356.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  49.65
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.658
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       14.10      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D        4.00      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   18.10      SUBAREA RUNOFF(CFS) =   23.75
  EFFECTIVE AREA(ACRES) =   6352.40   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.28  AREA-AVERAGED Ap =  0.72
  TOTAL AREA(ACRES) =   6352.40       PEAK FLOW RATE(CFS) =    8867.20
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6356.00 TO NODE   6357.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    270.00  DOWNSTREAM(FEET) =    255.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1018.00   CHANNEL SLOPE =  0.0147
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   8867.20
  FLOW VELOCITY(FEET/SEC.) =  17.79   FLOW DEPTH(FEET) =  11.90
  TRAVEL TIME(MIN.) =   0.95   Tc(MIN.) =  50.61
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6357.00 = 17111.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6356.00 TO NODE   6357.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  50.61
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.640
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.20      0.30      1.00    63
  NATURAL POOR COVER
  "BARREN"                   B       12.60      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B        2.90      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.70      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        1.10      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        9.00      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   27.50      SUBAREA RUNOFF(CFS) =   33.58
  EFFECTIVE AREA(ACRES) =   6379.90   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.28  AREA-AVERAGED Ap =  0.72
  TOTAL AREA(ACRES) =   6379.90       PEAK FLOW RATE(CFS) =    8867.20
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6356.00 TO NODE   6357.00 IS CODE =  81
```

```
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  50.61
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.640
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                    C        8.40      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                     C        4.00      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       19.20      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        6.20      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        6.00      0.20      1.00    81
  NATURAL POOR COVER
  "BARREN"                    D        1.10      0.20      1.00    93
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   44.90      SUBAREA RUNOFF(CFS) =   56.50
  EFFECTIVE AREA(ACRES) =   6424.80   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.28  AREA-AVERAGED Ap =  0.73
  TOTAL AREA(ACRES) =   6424.80       PEAK FLOW RATE(CFS) =    8867.20
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

********************************************************************************
  FLOW PROCESS FROM NODE   6356.00 TO NODE   6357.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  50.61
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.640
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                D       11.00      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.70      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   11.70      SUBAREA RUNOFF(CFS) =   15.17
  EFFECTIVE AREA(ACRES) =   6436.50   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.28  AREA-AVERAGED Ap =  0.73
  TOTAL AREA(ACRES) =   6436.50       PEAK FLOW RATE(CFS) =    8867.20
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

********************************************************************************
  FLOW PROCESS FROM NODE   6357.00 TO NODE   6358.00 IS CODE =  51
--------------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    255.00  DOWNSTREAM(FEET) =    245.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   916.00   CHANNEL SLOPE =  0.0109
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   8867.20
  FLOW VELOCITY(FEET/SEC.) =  15.97   FLOW DEPTH(FEET) =  12.93
  TRAVEL TIME(MIN.) =   0.96   Tc(MIN.) =  51.56
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6358.00 = 18027.00 FEET.

********************************************************************************
  FLOW PROCESS FROM NODE   6357.00 TO NODE   6358.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  51.56
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.625
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                    B        7.10      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                     B        2.00      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        1.30      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.30      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        2.90      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                    C        5.30      0.25      1.00    91
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   18.90      SUBAREA RUNOFF(CFS) =   22.91
  EFFECTIVE AREA(ACRES) =   6455.40   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.28  AREA-AVERAGED Ap =  0.73
  TOTAL AREA(ACRES) =   6455.40       PEAK FLOW RATE(CFS) =    8867.20
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

********************************************************************************
  FLOW PROCESS FROM NODE   6357.00 TO NODE   6358.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  51.56
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.625
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     C        7.30      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       29.60      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        7.10      0.25      1.00    73
  NATURAL POOR COVER
  "BARREN"                    D        0.90      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                     D        4.10      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        1.10      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   50.10      SUBAREA RUNOFF(CFS) =   62.27
  EFFECTIVE AREA(ACRES) =   6505.50   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.28  AREA-AVERAGED Ap =  0.73
  TOTAL AREA(ACRES) =   6505.50       PEAK FLOW RATE(CFS) =    8867.20
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

********************************************************************************
  FLOW PROCESS FROM NODE   6357.00 TO NODE   6358.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  51.56
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.625
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.40      SUBAREA RUNOFF(CFS) =    0.51
  EFFECTIVE AREA(ACRES) =   6505.90   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.28  AREA-AVERAGED Ap =  0.73
  TOTAL AREA(ACRES) =   6505.90       PEAK FLOW RATE(CFS) =    8867.20
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

********************************************************************************
  FLOW PROCESS FROM NODE   6358.00 TO NODE   6359.00 IS CODE =  51
--------------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    245.00  DOWNSTREAM(FEET) =    220.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1510.00   CHANNEL SLOPE =  0.0166
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   8867.20
  FLOW VELOCITY(FEET/SEC.) =  18.54   FLOW DEPTH(FEET) =  11.52
  TRAVEL TIME(MIN.) =   1.36   Tc(MIN.) =  52.92
```

```
 LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6359.00 = 19537.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   6358.00 TO NODE   6359.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  52.92
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.603
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL POOR COVER
 "BARREN"                    B       13.70      0.30      1.00    86
 NATURAL FAIR COVER
 "GRASS"                     B       13.70      0.30      1.00    69
 AGRICULTURAL FAIR COVER
 "ORCHARDS"                  B       17.70      0.30      1.00    65
 NATURAL FAIR COVER
 "OPEN BRUSH"                B        4.20      0.30      1.00    66
 NATURAL FAIR COVER
 "WOODLAND"                  B        6.70      0.30      1.00    60
 NATURAL POOR COVER
 "BARREN"                    C        5.30      0.25      1.00    91
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   61.30      SUBAREA RUNOFF(CFS) =   72.14
 EFFECTIVE AREA(ACRES) =   6567.20   AREA-AVERAGED Fm(INCH/HR) =  0.21
 AREA-AVERAGED Fp(INCH/HR) =  0.28  AREA-AVERAGED Ap =  0.73
 TOTAL AREA(ACRES) =   6567.20       PEAK FLOW RATE(CFS) =    8867.20
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE   6358.00 TO NODE   6359.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  52.92
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.603
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                     C       10.50      0.25      1.00    79
 AGRICULTURAL FAIR COVER
 "ORCHARDS"                  C        2.20      0.25      1.00    77
 URBAN FAIR COVER
 "TURF"                      C        1.30      0.25      1.00    77
 NATURAL FAIR COVER
 "OPEN BRUSH"                C       11.30      0.25      1.00    77
 NATURAL FAIR COVER
 "WOODLAND"                  C        6.00      0.25      1.00    73
 NATURAL FAIR COVER
 "GRASS"                     D       14.40      0.20      1.00    84
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   45.70      SUBAREA RUNOFF(CFS) =   56.31
 EFFECTIVE AREA(ACRES) =   6612.90   AREA-AVERAGED Fm(INCH/HR) =  0.21
 AREA-AVERAGED Fp(INCH/HR) =  0.28  AREA-AVERAGED Ap =  0.73
 TOTAL AREA(ACRES) =   6612.90       PEAK FLOW RATE(CFS) =    8867.20
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE   6358.00 TO NODE   6359.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  52.92
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.603
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL FAIR COVER
 "ORCHARDS"                  D       23.50      0.20      1.00    82
 NATURAL FAIR COVER
 "OPEN BRUSH"                D        0.40      0.20      1.00    83
 NATURAL FAIR COVER
 "WOODLAND"                  D        1.10      0.20      1.00    79
 NATURAL POOR COVER
 "BARREN"                    D        0.90      0.20      1.00    93
 URBAN FAIR COVER
 "TURF"                      D        0.20      0.20      1.00    82
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   26.10      SUBAREA RUNOFF(CFS) =   32.96
 EFFECTIVE AREA(ACRES) =   6639.00   AREA-AVERAGED Fm(INCH/HR) =  0.21
 AREA-AVERAGED Fp(INCH/HR) =  0.28  AREA-AVERAGED Ap =  0.73
 TOTAL AREA(ACRES) =   6639.00       PEAK FLOW RATE(CFS) =    8867.20
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE   6359.00 TO NODE   6374.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    220.00  DOWNSTREAM(FEET) =    213.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   959.00   CHANNEL SLOPE =  0.0073
 CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
 CHANNEL FLOW THRU SUBAREA(CFS) =   8867.20
 FLOW VELOCITY(FEET/SEC.) =  13.80   FLOW DEPTH(FEET) =  14.45
 TRAVEL TIME(MIN.) =   1.16   Tc(MIN.) =  54.08
 LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6374.00 = 20496.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   6359.00 TO NODE   6374.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  54.08
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.585
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                     A        0.20      0.40      1.00    50
 NATURAL FAIR COVER
 "WOODLAND"                  A        0.20      0.40      1.00    36
 NATURAL FAIR COVER
 "GRASS"                     B        0.10      0.30      1.00    69
 NATURAL FAIR COVER
 "WOODLAND"                  B        0.50      0.30      1.00    60
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        1.00      0.25      1.00    77
 NATURAL FAIR COVER
 "WOODLAND"                  C        0.30      0.25      1.00    73
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    2.30      SUBAREA RUNOFF(CFS) =    2.68
 EFFECTIVE AREA(ACRES) =   6641.30   AREA-AVERAGED Fm(INCH/HR) =  0.21
 AREA-AVERAGED Fp(INCH/HR) =  0.28  AREA-AVERAGED Ap =  0.73
 TOTAL AREA(ACRES) =   6641.30       PEAK FLOW RATE(CFS) =    8867.20
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE   6359.00 TO NODE   6374.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  54.08
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.585
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                     D        0.50      0.20      1.00    84
 NATURAL FAIR COVER
 "WOODLAND"                  D        3.40      0.20      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    3.90      SUBAREA RUNOFF(CFS) =    4.86
 EFFECTIVE AREA(ACRES) =   6645.20   AREA-AVERAGED Fm(INCH/HR) =  0.21
 AREA-AVERAGED Fp(INCH/HR) =  0.28  AREA-AVERAGED Ap =  0.73
 TOTAL AREA(ACRES) =   6645.20       PEAK FLOW RATE(CFS) =    8867.20
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
```

```
****************************************************************************
  FLOW PROCESS FROM NODE   6374.00 TO NODE   6374.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  54.08
  RAINFALL INTENSITY(INCH/HR) =   1.58
  AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.28
  AREA-AVERAGED Ap =  0.73
  EFFECTIVE STREAM AREA(ACRES) =  6645.20
  TOTAL STREAM AREA(ACRES) =  6645.20
  PEAK FLOW RATE(CFS) AT CONFLUENCE =   8867.20

****************************************************************************
  FLOW PROCESS FROM NODE   6360.00 TO NODE   6361.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   329.00
  ELEVATION DATA: UPSTREAM(FEET) =    661.00  DOWNSTREAM(FEET) =    565.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    9.176
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.404
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.40      0.20      1.00    83    9.18
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        0.70      0.20      1.00    84    9.18
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      4.16
  TOTAL AREA(ACRES) =      1.10   PEAK FLOW RATE(CFS) =      4.16

****************************************************************************
  FLOW PROCESS FROM NODE   6361.00 TO NODE   6362.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    565.00  DOWNSTREAM(FEET) =    550.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    95.00   CHANNEL SLOPE =  0.1579
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      4.16
  FLOW VELOCITY(FEET/SEC.) =   6.43   FLOW DEPTH(FEET) =   0.45
  TRAVEL TIME(MIN.) =   0.25   Tc(MIN.) =   9.42
  LONGEST FLOWPATH FROM NODE   6360.00 TO NODE   6362.00 =   424.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6361.00 TO NODE   6362.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.42
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.331
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.60      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        0.50      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.10      SUBAREA RUNOFF(CFS) =    4.09
  EFFECTIVE AREA(ACRES) =      2.20   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      2.20       PEAK FLOW RATE(CFS) =       8.18

****************************************************************************
  FLOW PROCESS FROM NODE   6362.00 TO NODE   6363.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    550.00  DOWNSTREAM(FEET) =    510.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   175.00   CHANNEL SLOPE =  0.2286
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      8.18
  FLOW VELOCITY(FEET/SEC.) =   8.83   FLOW DEPTH(FEET) =   0.58
  TRAVEL TIME(MIN.) =   0.33   Tc(MIN.) =   9.75
  LONGEST FLOWPATH FROM NODE   6360.00 TO NODE   6363.00 =   599.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6362.00 TO NODE   6363.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.75
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.233
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        1.30      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        0.50      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.80      SUBAREA RUNOFF(CFS) =    6.53
  EFFECTIVE AREA(ACRES) =      4.00   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      4.00       PEAK FLOW RATE(CFS) =      14.52

****************************************************************************
  FLOW PROCESS FROM NODE   6363.00 TO NODE   6364.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    510.00  DOWNSTREAM(FEET) =    475.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   331.00   CHANNEL SLOPE =  0.1057
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     14.52
  FLOW VELOCITY(FEET/SEC.) =   7.67   FLOW DEPTH(FEET) =   0.96
  TRAVEL TIME(MIN.) =   0.72   Tc(MIN.) =  10.47
  LONGEST FLOWPATH FROM NODE   6360.00 TO NODE   6364.00 =   930.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6363.00 TO NODE   6364.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.47
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.066
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        2.10      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        0.50      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    2.60      SUBAREA RUNOFF(CFS) =    9.05
  EFFECTIVE AREA(ACRES) =      6.60   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      6.60       PEAK FLOW RATE(CFS) =      22.96

****************************************************************************
  FLOW PROCESS FROM NODE   6364.00 TO NODE   6365.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    475.00  DOWNSTREAM(FEET) =    465.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   139.00   CHANNEL SLOPE =  0.0719
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
```

```
  CHANNEL FLOW THRU SUBAREA(CFS) =     22.96
  FLOW VELOCITY(FEET/SEC.) =   7.38   FLOW DEPTH(FEET) =   1.03
  TRAVEL TIME(MIN.) =   0.31   Tc(MIN.) =  10.79
  LONGEST FLOWPATH FROM NODE   6360.00 TO NODE   6365.00 =  1069.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6364.00 TO NODE   6365.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.79
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.003
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        1.10      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        2.80      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        2.30      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    6.20      SUBAREA RUNOFF(CFS) =   21.22
  EFFECTIVE AREA(ACRES) =     12.80   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     12.80       PEAK FLOW RATE(CFS) =      43.81

****************************************************************************
  FLOW PROCESS FROM NODE   6365.00 TO NODE   6366.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    465.00  DOWNSTREAM(FEET) =    445.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   521.00   CHANNEL SLOPE =  0.0384
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     43.81
  FLOW VELOCITY(FEET/SEC.) =   6.93   FLOW DEPTH(FEET) =   1.71
  TRAVEL TIME(MIN.) =   1.25   Tc(MIN.) =  12.04
  LONGEST FLOWPATH FROM NODE   6360.00 TO NODE   6366.00 =  1590.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6365.00 TO NODE   6366.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.04
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.752
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        0.90      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        2.20      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        7.20      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   10.30      SUBAREA RUNOFF(CFS) =   32.93
  EFFECTIVE AREA(ACRES) =     23.10   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     23.10       PEAK FLOW RATE(CFS) =      73.85

****************************************************************************
  FLOW PROCESS FROM NODE   6366.00 TO NODE   6367.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    445.00  DOWNSTREAM(FEET) =    405.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1024.00   CHANNEL SLOPE =  0.0391
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     73.85
  FLOW VELOCITY(FEET/SEC.) =   7.91   FLOW DEPTH(FEET) =   1.90
  TRAVEL TIME(MIN.) =   2.16   Tc(MIN.) =  14.20
  LONGEST FLOWPATH FROM NODE   6360.00 TO NODE   6367.00 =  2614.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6366.00 TO NODE   6367.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  14.20
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.415
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.10      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        4.90      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D       13.40      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   18.40      SUBAREA RUNOFF(CFS) =   53.24
  EFFECTIVE AREA(ACRES) =     41.50   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     41.50       PEAK FLOW RATE(CFS) =     120.09

****************************************************************************
  FLOW PROCESS FROM NODE   6367.00 TO NODE   6368.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    405.00  DOWNSTREAM(FEET) =    355.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1441.00   CHANNEL SLOPE =  0.0347
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    120.09
  FLOW VELOCITY(FEET/SEC.) =   8.58   FLOW DEPTH(FEET) =   2.53
  TRAVEL TIME(MIN.) =   2.80   Tc(MIN.) =  17.00
  LONGEST FLOWPATH FROM NODE   6360.00 TO NODE   6368.00 =  4055.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6367.00 TO NODE   6368.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.00
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.076
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.20      0.25      1.00    77
  NATURAL FAIR COVER
  "GRASS"                     D        1.60      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D       12.60      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D       19.20      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   33.60      SUBAREA RUNOFF(CFS) =   86.97
  EFFECTIVE AREA(ACRES) =     75.10   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     75.10       PEAK FLOW RATE(CFS) =     194.40

****************************************************************************
  FLOW PROCESS FROM NODE   6368.00 TO NODE   6369.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    355.00  DOWNSTREAM(FEET) =    335.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   975.00   CHANNEL SLOPE =  0.0205
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    194.40
  FLOW VELOCITY(FEET/SEC.) =   7.94   FLOW DEPTH(FEET) =   3.34
  TRAVEL TIME(MIN.) =   2.05   Tc(MIN.) =  19.04
```

```
  LONGEST FLOWPATH FROM NODE   6360.00 TO NODE   6369.00 =  5030.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6368.00 TO NODE   6369.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.04
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.884
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.20      0.25      1.00    77
  NATURAL FAIR COVER
  "GRASS"                     D        2.50      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D       23.50      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D       25.20      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   51.50      SUBAREA RUNOFF(CFS) =  124.41
  EFFECTIVE AREA(ACRES) =    126.60   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    126.60       PEAK FLOW RATE(CFS) =     305.82

****************************************************************************
  FLOW PROCESS FROM NODE   6369.00 TO NODE   6370.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    335.00  DOWNSTREAM(FEET) =    325.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   505.00   CHANNEL SLOPE =  0.0198
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    305.82
  FLOW VELOCITY(FEET/SEC.) =   8.76   FLOW DEPTH(FEET) =   3.92
  TRAVEL TIME(MIN.) =   0.96   Tc(MIN.) =  20.00
  LONGEST FLOWPATH FROM NODE   6360.00 TO NODE   6370.00 =  5535.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6369.00 TO NODE   6370.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  20.00
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.800
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     B        0.20      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.40      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        0.20      0.30      1.00    69
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        1.10      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C        0.20      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        1.00      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.10      SUBAREA RUNOFF(CFS) =    7.08
  EFFECTIVE AREA(ACRES) =    129.70   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    129.70       PEAK FLOW RATE(CFS) =     305.82
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6369.00 TO NODE   6370.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  20.00
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.800
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        0.90      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D       20.10      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        9.80      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.50      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   31.30      SUBAREA RUNOFF(CFS) =   73.23
  EFFECTIVE AREA(ACRES) =    161.00   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    161.00       PEAK FLOW RATE(CFS) =     376.50

****************************************************************************
  FLOW PROCESS FROM NODE   6370.00 TO NODE   6371.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    325.00  DOWNSTREAM(FEET) =    305.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1293.00   CHANNEL SLOPE =  0.0155
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    376.50
  FLOW VELOCITY(FEET/SEC.) =   8.43   FLOW DEPTH(FEET) =   4.63
  TRAVEL TIME(MIN.) =   2.56   Tc(MIN.) =  22.56
  LONGEST FLOWPATH FROM NODE   6360.00 TO NODE   6371.00 =  6828.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6370.00 TO NODE   6371.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  22.56
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.606
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     B        0.90      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        2.20      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        0.20      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B        2.00      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        1.20      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        7.90      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   14.40      SUBAREA RUNOFF(CFS) =   30.30
  EFFECTIVE AREA(ACRES) =    175.40   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    175.40       PEAK FLOW RATE(CFS) =     378.80

****************************************************************************
  FLOW PROCESS FROM NODE   6370.00 TO NODE   6371.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  22.56
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.606
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        2.40      0.25      1.00    79
  NATURAL FAIR COVER
  "WOODLAND"                  C        0.30      0.25      1.00    73
  NATURAL FAIR COVER
```

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  "CHAPARRAL,BROADLEAF"      D        0.90      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        2.70      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D        9.80      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   16.10      SUBAREA RUNOFF(CFS) =   34.75
  EFFECTIVE AREA(ACRES) =    191.50   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    191.50       PEAK FLOW RATE(CFS) =     413.55

****************************************************************************
  FLOW PROCESS FROM NODE   6371.00 TO NODE   6372.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    305.00  DOWNSTREAM(FEET) =    265.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1459.00   CHANNEL SLOPE =  0.0274
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    413.55
  FLOW VELOCITY(FEET/SEC.) =  10.70   FLOW DEPTH(FEET) =   4.20
  TRAVEL TIME(MIN.) =   2.27   Tc(MIN.) =  24.83
  LONGEST FLOWPATH FROM NODE   6360.00 TO NODE   6372.00 =  8287.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6371.00 TO NODE   6372.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  24.83
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.470
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     B        3.60      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        2.30      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        1.50      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B        3.60      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.20      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C        0.40      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   11.60      SUBAREA RUNOFF(CFS) =   22.68
  EFFECTIVE AREA(ACRES) =    203.10   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    203.10       PEAK FLOW RATE(CFS) =     413.55
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6371.00 TO NODE   6372.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  24.83
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.470
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       29.50      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        6.50      0.25      1.00    79
  NATURAL FAIR COVER
  "WOODLAND"                  C       13.30      0.25      1.00    73
  NATURAL FAIR COVER
  "GRASS"                     D        2.20      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        2.00      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D       19.00      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   72.50      SUBAREA RUNOFF(CFS) =  145.90
  EFFECTIVE AREA(ACRES) =    275.60   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    275.60       PEAK FLOW RATE(CFS) =     558.63

****************************************************************************
  FLOW PROCESS FROM NODE   6371.00 TO NODE   6372.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  24.83
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.470
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.40      SUBAREA RUNOFF(CFS) =    0.82
  EFFECTIVE AREA(ACRES) =    276.00   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    276.00       PEAK FLOW RATE(CFS) =     559.45

****************************************************************************
  FLOW PROCESS FROM NODE   6372.00 TO NODE   6373.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    265.00  DOWNSTREAM(FEET) =    238.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1612.00   CHANNEL SLOPE =  0.0167
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    559.45
  FLOW VELOCITY(FEET/SEC.) =   9.58   FLOW DEPTH(FEET) =   5.21
  TRAVEL TIME(MIN.) =   2.80   Tc(MIN.) =  27.64
  LONGEST FLOWPATH FROM NODE   6360.00 TO NODE   6373.00 =  9899.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6372.00 TO NODE   6373.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  27.64
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.324
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     B        2.00      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        1.10      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        1.80      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B        1.70      0.30      1.00    60
  NATURAL FAIR COVER
  "GRASS"                     C        3.70      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        5.70      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   16.00      SUBAREA RUNOFF(CFS) =   29.57
  EFFECTIVE AREA(ACRES) =    292.00   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    292.00       PEAK FLOW RATE(CFS) =     559.45
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6372.00 TO NODE   6373.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  27.64
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.324
```

```
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        4.00      0.25      1.00    79
  NATURAL FAIR COVER
  "WOODLAND"                  C        2.30      0.25      1.00    73
  NATURAL FAIR COVER
  "GRASS"                     D        4.50      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.40      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        3.70      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   14.90      SUBAREA RUNOFF(CFS) =   28.20
  EFFECTIVE AREA(ACRES) =    306.90   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    306.90       PEAK FLOW RATE(CFS) =     580.94

****************************************************************************
  FLOW PROCESS FROM NODE   6373.00 TO NODE   6374.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    238.00  DOWNSTREAM(FEET) =    213.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1150.00   CHANNEL SLOPE =  0.0217
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    580.94
  FLOW VELOCITY(FEET/SEC.) =  10.66   FLOW DEPTH(FEET) =   4.97
  TRAVEL TIME(MIN.) =   1.80   Tc(MIN.) =  29.43
  LONGEST FLOWPATH FROM NODE   6360.00 TO NODE   6374.00 = 11049.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6373.00 TO NODE   6374.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  29.43
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.245
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     B        1.70      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B        2.20      0.30      1.00    60
  NATURAL FAIR COVER
  "GRASS"                     C        0.30      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        1.60      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        0.60      0.25      1.00    79
  NATURAL FAIR COVER
  "WOODLAND"                  C        1.80      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    8.20      SUBAREA RUNOFF(CFS) =   14.55
  EFFECTIVE AREA(ACRES) =    315.10   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    315.10       PEAK FLOW RATE(CFS) =     580.94
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6373.00 TO NODE   6374.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  29.43
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.245
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     D        0.10      0.20      1.00    84
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        1.30      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                  D        1.50      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    2.90      SUBAREA RUNOFF(CFS) =    5.34
  EFFECTIVE AREA(ACRES) =    318.00   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    318.00       PEAK FLOW RATE(CFS) =     580.94
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6374.00 TO NODE   6374.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  29.43
  RAINFALL INTENSITY(INCH/HR) =   2.24
  AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =   318.00
  TOTAL STREAM AREA(ACRES) =   318.00
  PEAK FLOW RATE(CFS) AT CONFLUENCE =    580.94

  ** CONFLUENCE DATA **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1   7484.45  31.98    2.145  0.27( 0.22) 0.80  3805.6    6340.00
      1   7697.49  35.02    2.030  0.27( 0.22) 0.79  4149.4    6300.00
      1   7778.42  36.15    1.996  0.27( 0.22) 0.79  4310.5    6320.00
      1   8867.20  54.08    1.585  0.28( 0.21) 0.73  6645.2     780.00
      2    580.94  29.43    2.245  0.22( 0.22) 1.00   318.0    6360.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1   7827.10  29.43    2.245  0.27( 0.22) 0.81  3820.2    6360.00
      2   8036.59  31.98    2.145  0.27( 0.22) 0.81  4123.6    6340.00
      3   8216.58  35.02    2.030  0.27( 0.22) 0.81  4467.4    6300.00
      4   8287.78  36.15    1.996  0.27( 0.22) 0.80  4628.5    6320.00
      5   9258.55  54.08    1.585  0.28( 0.21) 0.75  6963.2     780.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =   9258.55    Tc(MIN.) =    54.08
  EFFECTIVE AREA(ACRES) =  6963.20   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.28  AREA-AVERAGED Ap =  0.75
  TOTAL AREA(ACRES) =   6963.20
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6374.00 = 20496.00 FEET.
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   6963.20  TC(MIN.) =     54.08
  EFFECTIVE AREA(ACRES) =   6963.20  AREA-AVERAGED Fm(INCH/HR)=  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.28  AREA-AVERAGED Ap =  0.75
  PEAK FLOW RATE(CFS)   =   9258.55

  ** PEAK FLOW RATE TABLE **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1   7827.10  29.43    2.245  0.27( 0.22) 0.81  3820.2    6360.00
      2   8036.59  31.98    2.145  0.27( 0.22) 0.81  4123.6    6340.00
      3   8216.58  35.02    2.030  0.27( 0.22) 0.81  4467.4    6300.00
      4   8287.78  36.15    1.996  0.27( 0.22) 0.80  4628.5    6320.00
      5   9258.55  54.08    1.585  0.28( 0.21) 0.75  6963.2     780.00
============================================================================
============================================================================
  END OF RATIONAL METHOD ANALYSIS
```

```
**************************************************************************

            F L O O D    R O U T I N G    A N A L Y S I S
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                        Analysis prepared by:

                        Huitt - Zollars, Inc.
                       430 Exchange, Suite 200
                        Irvine, CA. 92602-1309
                           714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: CE63100H.FLD
  TIME/DATE OF STUDY: 13:04 04/01/2004


**************************************************************************
  FLOW PROCESS FROM NODE    100.00 TO NODE   6374.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    6963.200 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.720 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.020
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.680
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.080
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.220
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.210
         LOW LOSS FRACTION = 0.500
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.52
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.09
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.45
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.43
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  3.36
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  5.63

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.735
          30-MINUTE FACTOR = 0.735
           1-HOUR FACTOR = 0.735
           3-HOUR FACTOR = 0.957
           6-HOUR FACTOR = 0.977
          24-HOUR FACTOR = 0.986

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  11.574


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


==========================================================================
```

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.840	707.160
2	2.714	1578.644
3	5.303	2179.627
4	8.886	3017.851
5	13.204	3636.376
6	18.979	4862.579
7	25.695	5655.420
8	34.776	7647.664
9	47.902	11053.640
10	55.935	6764.510
11	61.525	4707.500
12	65.483	3332.926
13	69.094	3040.790
14	72.030	2472.785
15	74.783	2318.584
16	76.992	1859.653
17	78.961	1658.146
18	80.914	1645.026
19	82.514	1347.462
20	84.051	1294.084
21	85.414	1147.425
22	86.595	994.836
23	87.705	934.873
24	88.725	858.572
25	89.699	820.544
26	90.558	723.163
27	91.369	682.989
28	92.071	591.435
29	92.713	540.172
30	93.352	538.289
31	93.882	446.485
32	94.305	356.043
33	94.727	355.735
34	95.141	348.346
35	95.532	328.989
36	95.886	298.362
37	96.081	164.327
38	96.255	146.241
39	96.416	136.225
40	96.569	128.034
41	96.721	128.008
42	96.872	127.301
43	97.020	124.821
44	97.168	124.654
45	97.301	111.798
46	97.424	103.414
47	97.545	102.456
48	97.665	100.561
49	97.783	99.854
50	97.902	100.208
51	98.021	100.028
52	98.140	100.195
53	98.255	96.745
54	98.347	77.702
55	98.430	69.452
56	98.512	69.638
57	98.595	69.516
58	98.677	69.516
59	98.759	69.105
60	98.837	65.668
61	98.914	64.788

62	98.991	64.878
63	99.068	64.794
64	99.145	64.884
65	99.222	64.813
66	99.299	64.858
67	99.376	64.833
68	99.452	63.830
69	99.524	60.824
70	99.575	42.333
71	99.606	26.586
72	99.638	26.618
73	99.669	26.586
74	99.701	26.612
75	99.733	26.573
76	99.764	26.612
77	99.796	26.612
78	99.816	16.942
79	99.829	11.192
80	99.840	9.316
81	99.844	3.457
82	99.848	3.097
83	99.852	3.045
84	99.855	3.045
85	99.859	3.090
86	99.863	3.052
87	99.866	3.045
88	99.870	3.045
89	99.873	3.090
90	99.877	3.052
91	99.881	3.045
92	99.884	3.090
93	99.888	3.045
94	99.892	3.097
95	99.895	3.045
96	99.899	3.045
97	99.902	3.045
98	99.906	3.052
99	99.910	3.135
100	99.913	3.000
101	99.917	3.090
102	99.921	3.045
103	99.924	3.052
104	99.928	3.045
105	99.932	3.045
106	99.935	3.045
107	99.939	3.045
108	99.942	3.045
109	99.946	3.052
110	99.950	3.045
111	99.953	3.045
112	99.957	3.045
113	99.960	3.045
114	99.964	3.045
115	99.968	3.052
116	99.971	3.045
117	99.975	3.045
118	99.979	3.045
119	99.982	3.045
120	99.986	3.045
121	99.989	3.052
122	99.993	3.045
123	99.997	3.045
124	100.000	2.833

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1301.1132

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1918.4962

2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 1850.0 3700.0 5550.0 7400.0
14.000	525.6874	1086.09	. Q V . . .
14.083	533.3580	1113.78	. Q .V . . .
14.167	541.2957	1152.54	. Q .V . . .
14.250	549.5615	1200.20	. Q .V . . .
14.333	558.2324	1259.01	. Q .V . . .
14.417	567.3747	1327.46	. Q .V . . .
14.500	577.1036	1412.63	. Q . V . . .
14.583	587.5042	1510.18	. Q . V . . .
14.667	598.7608	1634.45	. Q . V . . .
14.750	611.1895	1804.64	. Q. V . . .
14.833	624.4517	1925.68	. Q V . . .
14.917	638.4057	2026.12	. Q V . . .
15.000	652.9537	2112.38	. .Q V . . .
15.083	668.1022	2199.56	. .Q V . . .
15.167	683.8243	2282.85	. . Q V . . .
15.250	700.1470	2370.06	. . Q V . . .
15.333	717.0588	2455.59	. . QV . . .
15.417	734.4651	2527.40	. . Q V . . .
15.500	752.2465	2581.86	. . Q V . . .
15.583	770.3451	2627.91	. . Q V . . .
15.667	788.6741	2661.37	. . Q V . . .
15.750	807.2379	2695.46	. . Q V . . .
15.833	825.9426	2715.93	. . Q V . . .
15.917	844.9258	2756.37	. . Q V . . .
16.000	864.2638	2807.87	. . Q V . . .
16.083	885.0412	3016.88	. . Q V . . .
16.167	908.4778	3402.99	. . Q . . .
16.250	934.5098	3779.84	. . VQ . . .
16.333	963.7903	4251.54	. . V Q . . .
16.417	996.1716	4701.75	. . V Q . . .
16.500	1032.8450	5324.98	. . .V Q . . .
16.583	1073.2056	5860.35	. . . V .Q . . .
16.667	1118.7384	6611.37	. . . V . Q .
16.750	1169.5571	7378.88	. . . V . Q.
16.833	1209.8289	5847.46	. . . V .Q .
16.917	1243.9235	4950.53	. . . VQ . .
17.000	1274.1720	4392.09	. . . Q V . . .
17.083	1303.6917	4286.25	. . . Q V . . .
17.167	1331.4779	4034.57	. . .Q V . . .
17.250	1358.0542	3858.87	. . Q V . . .
17.333	1382.7305	3583.00	. . Q. V . . .
17.417	1406.0588	3387.29	. . Q . V. . .
17.500	1428.2910	3228.11	. . Q . V. . .
17.583	1448.8994	2992.35	. . Q . V . .
17.667	1468.1798	2799.51	. . Q . V . .
17.750	1485.7164	2546.32	. . Q . V . .
17.833	1501.9502	2357.14	. . Q . .V . .
17.917	1517.2677	2224.10	. . Q . .V . .
18.000	1531.8121	2111.84	. .Q . .V . .
18.083	1545.6682	2011.90	. Q . . V . .
18.167	1558.7596	1900.88	. Q . . V . .
18.250	1571.2092	1807.68	. Q. . . V . .
18.333	1582.9706	1707.75	. Q. . . V . .
18.417	1594.1749	1626.87	. Q . . . V . .
18.500	1604.8827	1554.77	. Q . . . V . .
18.583	1614.9431	1460.77	. Q . . . V . .
18.667	1624.3552	1366.64	. Q . . . V . .
18.750	1633.2626	1293.35	. Q . . . V . .
18.833	1641.7609	1233.95	. Q . . . V . .
18.917	1649.8452	1173.85	. Q . . . V . .
19.000	1657.4979	1111.17	. Q . . . V . .
19.083	1664.5668	1026.40	. Q . . . V . .
19.167	1671.3339	982.57	. Q . . . V . .
19.250	1677.8527	946.52	. Q . . . V . .
19.333	1684.1614	916.03	. Q . . . V .
19.417	1690.2749	887.69	. Q . . . V .
19.500	1696.1995	860.24	. Q . . . V .
19.583	1701.9500	834.97	. Q . . . V .
19.667	1707.5411	811.84	. Q . . . V .
19.750	1712.9580	786.53	. Q . . . V .
19.833	1718.2230	764.47	. Q . . . V .
19.917	1723.3605	745.97	. Q . . . V .
20.000	1728.3788	728.67	. Q . . . V .

****
FLOW PROCESS FROM NODE 6374.00 TO NODE 6374.00 IS CODE = 11

>>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<

STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 1850.0 3700.0 5550.0 7400.0
0.083	0.0178	2.58	Q . . . .
0.167	0.0753	8.35	Q . . . .
0.250	0.1879	16.34	Q . . . .
0.333	0.3766	27.41	Q . . . .
0.417	0.6575	40.78	Q . . . .
0.500	1.0615	58.66	Q . . . .
0.583	1.6090	79.50	Q . . . .
0.667	2.3506	107.68	Q . . . .
0.750	3.3726	148.39	Q . . . .
0.833	4.5679	173.56	Q . . . .
0.917	5.8856	191.33	VQ . . . .
1.000	7.2914	204.12	VQ . . . .
1.083	8.7783	215.91	VQ . . . .
1.167	10.3324	225.65	VQ . . . .
1.250	11.9500	234.88	VQ . . . .
1.333	13.6197	242.45	VQ . . . .
1.417	15.3369	249.33	VQ . . . .
1.500	17.1011	256.17	VQ . . . .
1.583	18.9054	261.98	VQ . . . .
1.667	20.7483	267.59	VQ . . . .
1.750	22.6264	272.71	VQ . . . .
1.833	24.5360	277.27	VQ . . . .
1.917	26.4757	281.66	VQ . . . .
2.000	28.4438	285.76	VQ . . . .
2.083	30.4395	289.77	VQ . . . .
2.167	32.4603	293.42	VQ . . . .
2.250	34.5056	296.97	VQ . . . .
2.333	36.5729	300.18	VQ . . . .
2.417	38.6613	303.23	VQ . . . .
2.500	40.7706	306.28	VQ . . . .
2.583	42.8989	309.03	VQ . . . .
2.667	45.0439	311.44	VQ . . . .
2.750	47.2056	313.89	VQ . . . .
2.833	49.3840	316.31	.Q . . . .
2.917	51.5789	318.69	.Q . . . .
3.000	53.7892	320.95	.Q . . . .
3.083	56.0121	322.76	.Q . . . .

3.167	58.2469	324.49	.Q	.	.	.	.
3.250	60.4937	326.23	.Q	.	.	.	.
3.333	62.7521	327.93	.Q	.	.	.	.
3.417	65.0225	329.66	.Q	.	.	.	.
3.500	67.3048	331.38	.Q	.	.	.	.
3.583	69.5991	333.13	.Q	.	.	.	.
3.667	71.9054	334.87	.Q	.	.	.	.
3.750	74.2236	336.61	.Q	.	.	.	.
3.833	76.5535	338.30	.Q	.	.	.	.
3.917	78.8953	340.03	.Q	.	.	.	.
4.000	81.2488	341.74	.Q	.	.	.	.
4.083	83.6145	343.49	.Q	.	.	.	.
4.167	85.9921	345.23	.Q	.	.	.	.
4.250	88.3820	347.02	.Q	.	.	.	.
4.333	90.7841	348.79	.Q	.	.	.	.
4.417	93.1987	350.59	.Q	.	.	.	.
4.500	95.6251	352.32	.Q	.	.	.	.
4.583	98.0635	354.06	.QV	.	.	.	.
4.667	100.5138	355.78	.QV	.	.	.	.
4.750	102.9764	357.56	.QV	.	.	.	.
4.833	105.4510	359.32	.QV	.	.	.	.
4.917	107.9382	361.13	.QV	.	.	.	.
5.000	110.4376	362.91	.QV	.	.	.	.
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5.750	133.5111	379.95	. Q	.	.	.	.
5.833	136.1410	381.85	. Q	.	.	.	.
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7.583	194.5667	425.58	. Q V	.	.	.	.
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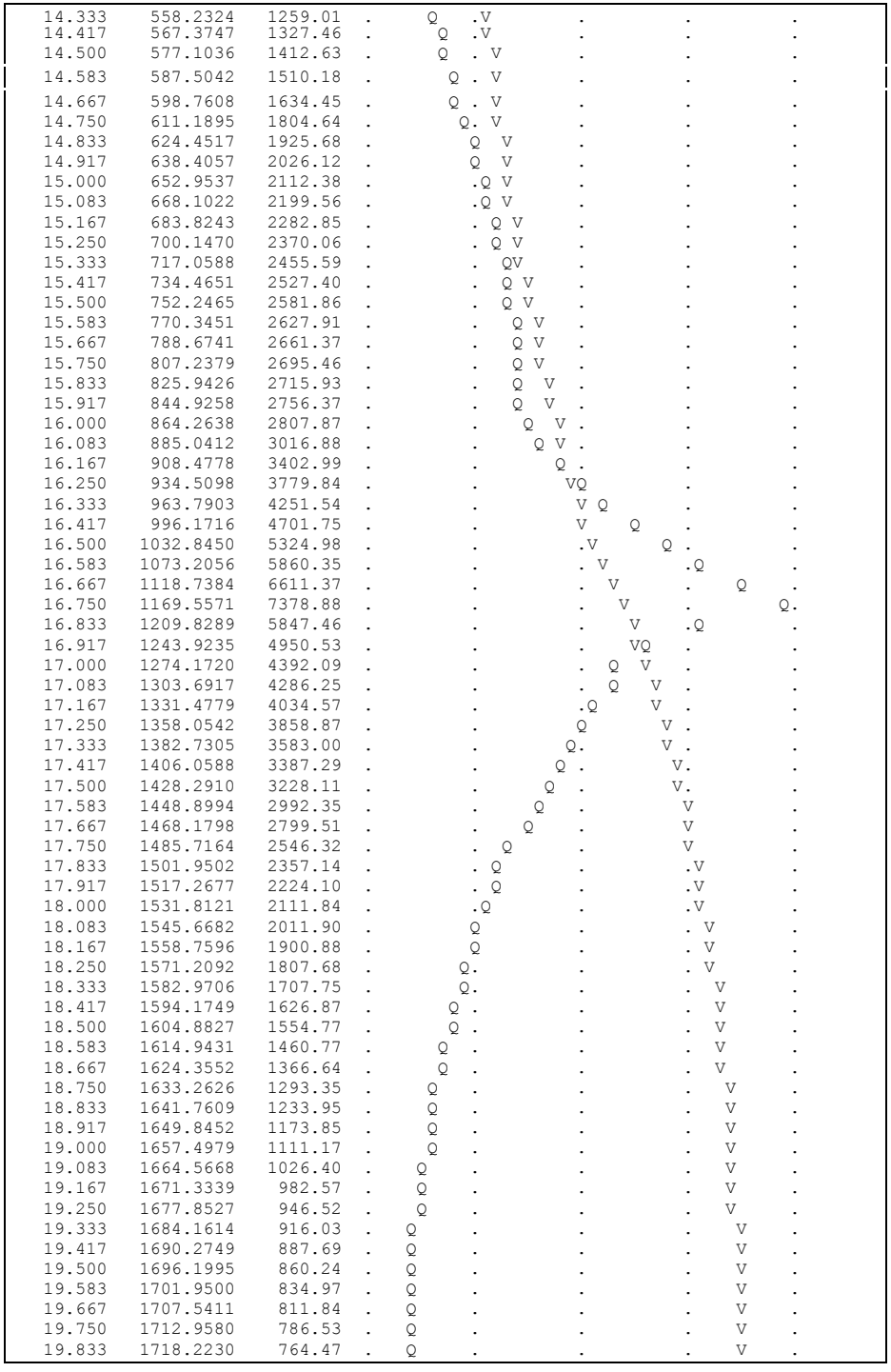
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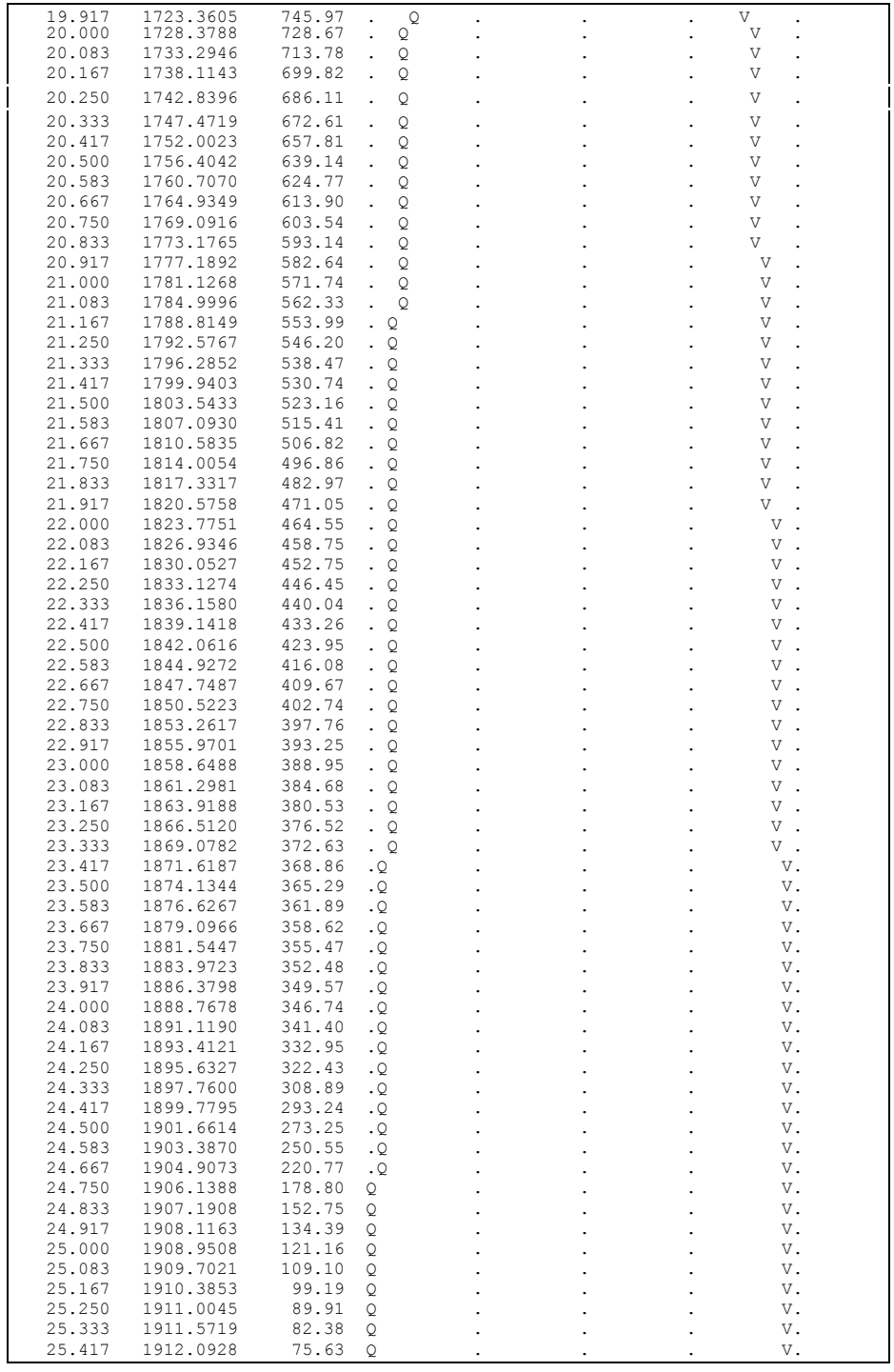
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27.833	1917.5872	9.12	Q	.	.	.	V.
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28.667	1918.0530	5.12	Q	.	.	.	V.
28.750	1918.0862	4.83	Q	.	.	.	V.
28.833	1918.1174	4.54	Q	.	.	.	V.
28.917	1918.1467	4.25	Q	.	.	.	V.
29.000	1918.1741	3.98	Q	.	.	.	V.
29.083	1918.1996	3.71	Q	.	.	.	V.
29.167	1918.2233	3.44	Q	.	.	.	V.
29.250	1918.2451	3.18	Q	.	.	.	V.
29.333	1918.2651	2.92	Q	.	.	.	V.
29.417	1918.2834	2.66	Q	.	.	.	V.
29.500	1918.2999	2.40	Q	.	.	.	V.
29.583	1918.3147	2.14	Q	.	.	.	V.
29.667	1918.3278	1.89	Q	.	.	.	V.
29.750	1918.3391	1.66	Q	.	.	.	V.
29.833	1918.3494	1.49	Q	.	.	.	V.
29.917	1918.3589	1.38	Q	.	.	.	V.
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END OF FLOODSCx ROUTING ANALYSIS

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

TECHNICAL APPENDIX IV-B
HYDROLOGIC ANALYSIS
PROPOSED CONDITION

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

HYDROLOGY ANALYSIS FOR CANADA GOBERNADORA PROPOSED CONDITION 100-YEAR HIGH CONFIDENCE STORM EVENT

Losses

Node	S6395
Total Area (ac)	7,291.1
24-Hour Rainfall Depth (in)	5.63
Fm (in/hr)	0.19
Y-Bar	0.41

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.2	0.3	0.0	0.0	0.2	0.3
11+ Dwellings / Acre	20	32	56	69	75	1.9	31.8	212.9	229.1	1.9	31.8	212.9	229.1
5-7 Dwellings / Acre	50	32	56	69	75	0.6	38.3	102.8	86.0	0.6	83.4	167.6	97.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	76.8	192.7	307.8	0.0	76.8	1,089.5	307.8
2 Dwellings / Acre	70	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	1,034.3	0.0
1 Dwelling / 2.5 Acre	90	32	56	69	75	0.0	0.0	0.0	0.0	0.0	28.7	1,593.6	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	1,067.0	0.0
Barren (Poor)	100	78	86	91	93	47.3	117.1	43.0	2.7	47.3	117.1	43.0	2.7
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	28.3	110.9	81.9	0.0	28.3	110.9	81.9
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	6.2	2.0	0.0	0.0	6.2	2.0
Grass (Fair)	100	50	69	79	84	2.5	46.8	127.3	77.7	2.5	46.8	127.3	77.7
Meadows or Cienegas (Good)	100	30	58	71	78	0.4	0.0	4.0	0.0	0.4	0.0	4.0	0.0
Open Brush (Fair)	100	46	66	77	83	1.3	16.6	148.9	94.7	1.3	16.6	148.9	94.7
Woodland (Fair)	100	36	60	73	79	8.6	23.8	28.5	16.5	8.6	23.8	28.5	16.5
Fallow (Poor)	100	77	86	91	94	1.3	3.3	8.4	10.9	1.3	3.3	8.4	10.9
Pasture, Dryland (Fair)	100	49	69	79	84	37.7	62.4	30.4	77.2	37.7	62.4	30.4	77.2

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
2 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
1 Dwelling / 2.5 Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.58	0.72	0.82	0.86
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.07	0.34	0.53	0.63
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.23	0.48	0.63	0.72
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.17	0.43	0.60	0.68
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.01	0.27	0.46	0.58
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.13	0.39	0.56	0.67
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.04	0.30	0.49	0.60
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.56	0.72	0.82	0.88
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.16	0.43	0.60	0.68

```
______________________________________________________________________________
******************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

------------------------------------------------------------------------------
  FILE NAME: CP63100H.DAT
  TIME/DATE OF STUDY: 12:41 05/29/2004
==============================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
==============================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *DATA BANK RAINFALL USED*
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

******************************************************************************
  FLOW PROCESS FROM NODE    780.00 TO NODE    780.00 IS CODE =   7
------------------------------------------------------------------------------
  >>>>>USER SPECIFIED HYDROLOGY INFORMATION AT NODE<<<<<
==============================================================================
  USER-SPECIFIED VALUES ARE AS FOLLOWS:
  TC(MIN.) =  36.19   RAINFALL INTENSITY(INCH/HR) =  1.99
  EFFECTIVE AREA(ACRES) =  4741.30
  TOTAL AREA(ACRES) =  4741.30        PEAK FLOW RATE(CFS) =   7547.37
  AREA-AVERAGED Fm(INCH/HR) =   0.19  AREA-AVERAGED Fp(INCH/HR) =   0.30
  AREA-AVERAGED Ap =  0.63
  NOTE: EFFECTIVE AREA IS USED AS THE TOTAL CONTRIBUTING AREA FOR ALL
        CONFLUENCE ANALYSES.

******************************************************************************
  FLOW PROCESS FROM NODE    780.00 TO NODE   6311.00 IS CODE =  51
------------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    408.00  DOWNSTREAM(FEET) =    382.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2533.00   CHANNEL SLOPE =  0.0103
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   7547.37
  FLOW VELOCITY(FEET/SEC.) =  15.25   FLOW DEPTH(FEET) =  14.39
  TRAVEL TIME(MIN.) =   2.77   Tc(MIN.) =  38.96
  LONGEST FLOWPATH FROM NODE    780.00 TO NODE   6311.00 =  2533.00 FEET.

******************************************************************************
  FLOW PROCESS FROM NODE    780.00 TO NODE   6311.00 IS CODE =  81
------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==============================================================================
  MAINLINE Tc(MIN) =  38.96
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.911
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   A        1.30      0.40      1.00    77
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       A        0.60      0.40      0.50    32
  NATURAL POOR COVER
  "BARREN"                   A        1.60      0.40      1.00    78
  NATURAL FAIR COVER
  "GRASS"                    A        2.30      0.40      1.00    50
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A       29.80      0.40      1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A        5.10      0.40      1.00    36
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   40.70      SUBAREA RUNOFF(CFS) =   55.46
  EFFECTIVE AREA(ACRES) =   4782.00   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.30  AREA-AVERAGED Ap =  0.63
  TOTAL AREA(ACRES) =   4782.00       PEAK FLOW RATE(CFS) =    7547.37
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

******************************************************************************
  FLOW PROCESS FROM NODE    780.00 TO NODE   6311.00 IS CODE =  81
------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==============================================================================
  MAINLINE Tc(MIN) =  38.96
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.911
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   B        1.10      0.30      1.00    86
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B        9.30      0.30      0.50    56
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.80      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B       12.20      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.20      0.30      1.00    60
  AGRICULTURAL POOR COVER
  "FALLOW"                   C        0.20      0.25      1.00    91
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.81
  SUBAREA AREA(ACRES) =   24.80      SUBAREA RUNOFF(CFS) =   37.23
  EFFECTIVE AREA(ACRES) =   4806.80   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.30  AREA-AVERAGED Ap =  0.63
  TOTAL AREA(ACRES) =   4806.80       PEAK FLOW RATE(CFS) =    7547.37
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

******************************************************************************
  FLOW PROCESS FROM NODE    780.00 TO NODE   6311.00 IS CODE =  81
------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==============================================================================
  MAINLINE Tc(MIN) =  38.96
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.911
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        1.60      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        6.40      0.25      0.50    69
  NATURAL FAIR COVER
  "GRASS"                    C        0.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       26.30      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C       13.20      0.25      1.00    79
  NATURAL FAIR COVER
  "WOODLAND"                 C        1.30      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
  SUBAREA AREA(ACRES) =   49.20      SUBAREA RUNOFF(CFS) =   74.28
```

```
  EFFECTIVE AREA(ACRES) =   4856.00   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.30  AREA-AVERAGED Ap =  0.64
  TOTAL AREA(ACRES) =   4856.00       PEAK FLOW RATE(CFS) =    7547.37
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE    780.00 TO NODE   6311.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  38.96
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.911
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                    D        0.20      0.20      1.00    94
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D        0.20      0.20      0.50    75
  NATURAL FAIR COVER
  "GRASS"                     D        0.20      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        4.50      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D       16.90      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   22.00      SUBAREA RUNOFF(CFS) =   33.90
  EFFECTIVE AREA(ACRES) =   4878.00   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.30  AREA-AVERAGED Ap =  0.64
  TOTAL AREA(ACRES) =   4878.00       PEAK FLOW RATE(CFS) =    7549.97

****************************************************************************
  FLOW PROCESS FROM NODE   6311.00 TO NODE   6311.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  38.96
  RAINFALL INTENSITY(INCH/HR) =   1.91
  AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.30
  AREA-AVERAGED Ap =  0.64
  EFFECTIVE STREAM AREA(ACRES) =  4878.00
  TOTAL STREAM AREA(ACRES) =  4878.00
  PEAK FLOW RATE(CFS) AT CONFLUENCE =   7549.97

****************************************************************************
  FLOW PROCESS FROM NODE   6300.00 TO NODE   6301.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   317.00
  ELEVATION DATA: UPSTREAM(FEET) =    801.00  DOWNSTREAM(FEET) =    685.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    8.641
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.562
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.40      0.25      1.00    77    8.64
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        0.50      0.20      1.00    81    8.64
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.30      0.20      1.00    83    8.64
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      4.69
  TOTAL AREA(ACRES) =      1.20   PEAK FLOW RATE(CFS) =      4.69

****************************************************************************
  FLOW PROCESS FROM NODE   6301.00 TO NODE   6302.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    685.00  DOWNSTREAM(FEET) =    655.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   135.00   CHANNEL SLOPE =  0.2222
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      4.69
  FLOW VELOCITY(FEET/SEC.) =   7.46   FLOW DEPTH(FEET) =   0.44
  TRAVEL TIME(MIN.) =   0.30   Tc(MIN.) =   8.94
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6302.00 =   452.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6301.00 TO NODE   6302.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   8.94
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.473
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.20      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        0.50      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.50      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.20      SUBAREA RUNOFF(CFS) =    4.61
  EFFECTIVE AREA(ACRES) =      2.40   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      2.40       PEAK FLOW RATE(CFS) =       9.20

****************************************************************************
  FLOW PROCESS FROM NODE   6302.00 TO NODE   6303.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    655.00  DOWNSTREAM(FEET) =    630.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   203.00   CHANNEL SLOPE =  0.1232
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      9.20
  FLOW VELOCITY(FEET/SEC.) =   7.21   FLOW DEPTH(FEET) =   0.74
  TRAVEL TIME(MIN.) =   0.47   Tc(MIN.) =   9.41
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6303.00 =   655.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6302.00 TO NODE   6303.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.41
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.334
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.20      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        0.40      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        1.70      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    2.30      SUBAREA RUNOFF(CFS) =    8.55
  EFFECTIVE AREA(ACRES) =      4.70   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      4.70       PEAK FLOW RATE(CFS) =      17.45

****************************************************************************
  FLOW PROCESS FROM NODE   6303.00 TO NODE   6304.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    630.00  DOWNSTREAM(FEET) =    605.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   321.00   CHANNEL SLOPE =  0.0779
```

```
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     17.45
  FLOW VELOCITY(FEET/SEC.) =   7.02   FLOW DEPTH(FEET) =   0.87
  TRAVEL TIME(MIN.) =   0.76   Tc(MIN.) =  10.17
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6304.00 =   976.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6303.00 TO NODE   6304.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.17
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.125
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.20      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.90      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        0.10      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        2.30      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =     3.50      SUBAREA RUNOFF(CFS) =   12.32
  EFFECTIVE AREA(ACRES) =      8.20   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      8.20       PEAK FLOW RATE(CFS) =      28.88

****************************************************************************
  FLOW PROCESS FROM NODE   6304.00 TO NODE   6305.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    605.00  DOWNSTREAM(FEET) =    585.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   288.00   CHANNEL SLOPE =  0.0694
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     28.88
  FLOW VELOCITY(FEET/SEC.) =   7.72   FLOW DEPTH(FEET) =   1.18
  TRAVEL TIME(MIN.) =   0.62   Tc(MIN.) =  10.80
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6305.00 =  1264.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6304.00 TO NODE   6305.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.80
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.001
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.40      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        2.90      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        0.90      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        2.20      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =     6.40      SUBAREA RUNOFF(CFS) =   21.74
  EFFECTIVE AREA(ACRES) =     14.60   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     14.60       PEAK FLOW RATE(CFS) =      49.71

****************************************************************************
  FLOW PROCESS FROM NODE   6305.00 TO NODE   6306.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    585.00  DOWNSTREAM(FEET) =    560.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   344.00   CHANNEL SLOPE =  0.0727
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     49.71
  FLOW VELOCITY(FEET/SEC.) =   9.07   FLOW DEPTH(FEET) =   1.55
  TRAVEL TIME(MIN.) =   0.63   Tc(MIN.) =  11.43
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6306.00 =  1608.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6305.00 TO NODE   6306.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.43
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.874
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        0.40      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        3.60      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        1.80      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        1.40      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        3.70      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    10.90      SUBAREA RUNOFF(CFS) =   35.77
  EFFECTIVE AREA(ACRES) =     25.50   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     25.50       PEAK FLOW RATE(CFS) =      83.82

****************************************************************************
  FLOW PROCESS FROM NODE   6306.00 TO NODE   6307.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    560.00  DOWNSTREAM(FEET) =    530.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   619.00   CHANNEL SLOPE =  0.0485
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     83.82
  FLOW VELOCITY(FEET/SEC.) =   8.84   FLOW DEPTH(FEET) =   1.93
  TRAVEL TIME(MIN.) =   1.17   Tc(MIN.) =  12.59
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6307.00 =  2227.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6306.00 TO NODE   6307.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.59
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.646
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        2.10      0.30      1.00    63
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        5.30      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        4.30      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        1.50      0.20      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        1.90      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    15.10      SUBAREA RUNOFF(CFS) =   46.21
  EFFECTIVE AREA(ACRES) =     40.60   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     40.60       PEAK FLOW RATE(CFS) =     124.79

****************************************************************************
  FLOW PROCESS FROM NODE   6307.00 TO NODE   6308.00 IS CODE =  51
```

```
--------------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    530.00  DOWNSTREAM(FEET) =    515.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   377.00   CHANNEL SLOPE =  0.0398
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    124.79
  FLOW VELOCITY(FEET/SEC.) =   9.12   FLOW DEPTH(FEET) =   2.49
  TRAVEL TIME(MIN.) =   0.69   Tc(MIN.) =  13.28
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6308.00 =  2604.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6307.00 TO NODE   6308.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  13.28
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.547
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B         0.30      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                     B         0.90      0.30      1.00    69
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C         6.50      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C         2.00      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C         3.70      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D         1.30      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   14.70      SUBAREA RUNOFF(CFS) =   43.63
  EFFECTIVE AREA(ACRES) =     55.30   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     55.30       PEAK FLOW RATE(CFS) =     164.79

****************************************************************************
  FLOW PROCESS FROM NODE   6307.00 TO NODE   6308.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  13.28
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.547
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     D         0.30      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D         3.20      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.50      SUBAREA RUNOFF(CFS) =   10.54
  EFFECTIVE AREA(ACRES) =     58.80   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     58.80       PEAK FLOW RATE(CFS) =     175.34

****************************************************************************
  FLOW PROCESS FROM NODE   6308.00 TO NODE   6309.00 IS CODE =  51
--------------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    515.00  DOWNSTREAM(FEET) =    490.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   520.00   CHANNEL SLOPE =  0.0481
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    175.34
  FLOW VELOCITY(FEET/SEC.) =  10.65   FLOW DEPTH(FEET) =   2.83
  TRAVEL TIME(MIN.) =   0.81   Tc(MIN.) =  14.10
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6309.00 =  3124.00 FEET.

****************************************************************************
```

```
  FLOW PROCESS FROM NODE   6308.00 TO NODE   6309.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  14.10
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.430
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     B         4.10      0.30      1.00    69
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B         2.80      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                     C        14.60      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C         4.20      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C         4.70      0.25      1.00    75
  NATURAL FAIR COVER
  "WOODLAND"                  C         3.10      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   33.50      SUBAREA RUNOFF(CFS) =   95.56
  EFFECTIVE AREA(ACRES) =     92.30   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     92.30       PEAK FLOW RATE(CFS) =     264.70

****************************************************************************
  FLOW PROCESS FROM NODE   6308.00 TO NODE   6309.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  14.10
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.430
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D         1.70      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                     D         9.30      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D         2.30      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D         0.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   13.70      SUBAREA RUNOFF(CFS) =   39.83
  EFFECTIVE AREA(ACRES) =    106.00   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    106.00       PEAK FLOW RATE(CFS) =     304.53

****************************************************************************
  FLOW PROCESS FROM NODE   6309.00 TO NODE   6310.00 IS CODE =  51
--------------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    490.00  DOWNSTREAM(FEET) =    432.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1420.00   CHANNEL SLOPE =  0.0408
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    304.53
  FLOW VELOCITY(FEET/SEC.) =  11.50   FLOW DEPTH(FEET) =   3.52
  TRAVEL TIME(MIN.) =   2.06   Tc(MIN.) =  16.15
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6310.00 =  4544.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6309.00 TO NODE   6310.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  16.15
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.171
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
```

```
  "GRASS"                    B        0.70      0.30      1.00    69
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        7.80      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                    C        6.00      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.60      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       19.40      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        0.90      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   35.40      SUBAREA RUNOFF(CFS) =   92.71
  EFFECTIVE AREA(ACRES) =    141.40   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    141.40       PEAK FLOW RATE(CFS) =     372.50

****************************************************************************
  FLOW PROCESS FROM NODE   6310.00 TO NODE   6311.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    432.00  DOWNSTREAM(FEET) =    382.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1847.00   CHANNEL SLOPE =  0.0271
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    372.50
  FLOW VELOCITY(FEET/SEC.) =  10.37   FLOW DEPTH(FEET) =   3.99
  TRAVEL TIME(MIN.) =   2.97   Tc(MIN.) =  19.12
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6311.00 =  6391.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6310.00 TO NODE   6311.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.12
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.877
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                    A        4.90      0.40      1.00    78
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           A        0.60      0.40      1.00    49
  NATURAL FAIR COVER
  "GRASS"                     B        1.90      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        0.10      0.30      1.00    69
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        2.00      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                     C        2.70      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.33
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   12.20      SUBAREA RUNOFF(CFS) =   27.92
  EFFECTIVE AREA(ACRES) =    153.60   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    153.60       PEAK FLOW RATE(CFS) =     372.50
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6310.00 TO NODE   6311.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.12
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.877
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        0.40      0.25      1.00    79
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        5.00      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     D        0.20      0.20      1.00    84
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        1.20      0.20      1.00    84
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        2.20      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    9.00      SUBAREA RUNOFF(CFS) =   21.44
  EFFECTIVE AREA(ACRES) =    162.60   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    162.60       PEAK FLOW RATE(CFS) =     384.50

****************************************************************************
  FLOW PROCESS FROM NODE   6311.00 TO NODE   6311.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  19.12
  RAINFALL INTENSITY(INCH/HR) =   2.88
  AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =   162.60
  TOTAL STREAM AREA(ACRES) =   162.60
  PEAK FLOW RATE(CFS) AT CONFLUENCE =    384.50

  ** CONFLUENCE DATA **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1   7549.97  38.96    1.911  0.30( 0.19) 0.64  4878.0     780.00
      2    384.50  19.12    2.877  0.25( 0.25) 1.00   162.6    6300.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1   6172.14  19.12    2.877  0.30( 0.20) 0.66  2557.2    6300.00
      2   7793.13  38.96    1.911  0.30( 0.19) 0.65  5040.6     780.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =   7793.13    Tc(MIN.) =    38.96
  EFFECTIVE AREA(ACRES) =  5040.60   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.30  AREA-AVERAGED Ap =  0.65
  TOTAL AREA(ACRES) =   5040.60
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6311.00 =  6391.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6311.00 TO NODE   6330.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    382.00  DOWNSTREAM(FEET) =    375.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1141.00   CHANNEL SLOPE =  0.0061
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   7793.13
  FLOW VELOCITY(FEET/SEC.) =  12.50   FLOW DEPTH(FEET) =  14.12
  TRAVEL TIME(MIN.) =   1.52   Tc(MIN.) =  40.48
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6330.00 =  7532.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6311.00 TO NODE   6330.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  40.48
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.869
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                    A       13.20      0.40      1.00    78
  AGRICULTURAL FAIR COVER
```

```
  "PASTURE,DRYLAND"          A        0.90      0.40      1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A        0.60      0.40      1.00    36
  NATURAL POOR COVER
  "BARREN"                   B        4.60      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B        8.40      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B        3.60      0.30      1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.35
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   31.30     SUBAREA RUNOFF(CFS) =   42.87
  EFFECTIVE AREA(ACRES) =   5071.90   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.30  AREA-AVERAGED Ap =  0.65
  TOTAL AREA(ACRES) =   5071.90       PEAK FLOW RATE(CFS) =    7793.13
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6311.00 TO NODE   6330.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  40.48
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.869
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.60      0.30      1.00    63
  NATURAL POOR COVER
  "BARREN"                   C        0.20      0.25      1.00    91
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        5.80      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        2.60      0.25      1.00    79
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        6.90      0.25      1.00    75
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.20      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   16.30     SUBAREA RUNOFF(CFS) =   23.72
  EFFECTIVE AREA(ACRES) =   5088.20   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.30  AREA-AVERAGED Ap =  0.65
  TOTAL AREA(ACRES) =   5088.20       PEAK FLOW RATE(CFS) =    7793.13
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6311.00 TO NODE   6330.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  40.48
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.869
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D        1.30      0.20      1.00    84
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D        1.30      0.20      1.00    84
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       10.50      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   13.10     SUBAREA RUNOFF(CFS) =   19.68
  EFFECTIVE AREA(ACRES) =   5101.30   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.30  AREA-AVERAGED Ap =  0.65
  TOTAL AREA(ACRES) =   5101.30       PEAK FLOW RATE(CFS) =    7793.13
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6330.00 TO NODE   6330.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  40.48
  RAINFALL INTENSITY(INCH/HR) =   1.87
  AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.30
  AREA-AVERAGED Ap =  0.65
  EFFECTIVE STREAM AREA(ACRES) =  5101.30
  TOTAL STREAM AREA(ACRES) =  5101.30
  PEAK FLOW RATE(CFS) AT CONFLUENCE =   7793.13

****************************************************************************
  FLOW PROCESS FROM NODE   6320.00 TO NODE   6321.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   305.00
  ELEVATION DATA: UPSTREAM(FEET) =    715.00  DOWNSTREAM(FEET) =    660.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    9.802
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.219
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.20      0.25      1.00    77    9.80
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        0.30      0.25      1.00    79    9.80
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D        0.30      0.20      1.00    84    9.80
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      2.87
  TOTAL AREA(ACRES) =      0.80   PEAK FLOW RATE(CFS) =      2.87

****************************************************************************
  FLOW PROCESS FROM NODE   6321.00 TO NODE   6322.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    660.00  DOWNSTREAM(FEET) =    650.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   148.00   CHANNEL SLOPE =  0.0676
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      2.87
  FLOW VELOCITY(FEET/SEC.) =   4.27   FLOW DEPTH(FEET) =   0.46
  TRAVEL TIME(MIN.) =   0.58   Tc(MIN.) =  10.38
  LONGEST FLOWPATH FROM NODE   6320.00 TO NODE   6322.00 =   453.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6321.00 TO NODE   6322.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.38
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.084
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.40      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        0.60      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.20      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D        0.80      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    2.00     SUBAREA RUNOFF(CFS) =    6.95
  EFFECTIVE AREA(ACRES) =      2.80   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      2.80       PEAK FLOW RATE(CFS) =       9.72

****************************************************************************
  FLOW PROCESS FROM NODE   6322.00 TO NODE   6323.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
```

```
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    650.00  DOWNSTREAM(FEET) =    620.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   262.00   CHANNEL SLOPE =  0.1145
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      9.72
  FLOW VELOCITY(FEET/SEC.) =   7.16   FLOW DEPTH(FEET) =   0.77
  TRAVEL TIME(MIN.) =   0.61   Tc(MIN.) =  10.99
  LONGEST FLOWPATH FROM NODE   6320.00 TO NODE   6323.00 =   715.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6322.00 TO NODE   6323.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.99
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.962
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.80      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        0.60      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.30      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        1.30      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =     3.00      SUBAREA RUNOFF(CFS) =   10.09
  EFFECTIVE AREA(ACRES) =      5.80   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      5.80       PEAK FLOW RATE(CFS) =      19.51

****************************************************************************
  FLOW PROCESS FROM NODE   6323.00 TO NODE   6324.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    620.00  DOWNSTREAM(FEET) =    610.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   193.00   CHANNEL SLOPE =  0.0518
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     19.51
  FLOW VELOCITY(FEET/SEC.) =   6.23   FLOW DEPTH(FEET) =   1.03
  TRAVEL TIME(MIN.) =   0.52   Tc(MIN.) =  11.51
  LONGEST FLOWPATH FROM NODE   6320.00 TO NODE   6324.00 =   908.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6323.00 TO NODE   6324.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.51
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.859
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        1.30      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        1.50      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =     2.80      SUBAREA RUNOFF(CFS) =    9.09
  EFFECTIVE AREA(ACRES) =      8.60   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      8.60       PEAK FLOW RATE(CFS) =      28.06

****************************************************************************
  FLOW PROCESS FROM NODE   6324.00 TO NODE   6325.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    610.00  DOWNSTREAM(FEET) =    580.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   384.00   CHANNEL SLOPE =  0.0781
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     28.06
  FLOW VELOCITY(FEET/SEC.) =   7.99   FLOW DEPTH(FEET) =   1.12
  TRAVEL TIME(MIN.) =   0.80   Tc(MIN.) =  12.31
  LONGEST FLOWPATH FROM NODE   6320.00 TO NODE   6325.00 =  1292.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6324.00 TO NODE   6325.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.31
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.699
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.20      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        0.70      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        2.90      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        3.20      0.25      1.00    79
  NATURAL FAIR COVER
  "WOODLAND"                  C        0.20      0.25      1.00    73
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        1.10      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =     8.30      SUBAREA RUNOFF(CFS) =   25.77
  EFFECTIVE AREA(ACRES) =     16.90   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     16.90       PEAK FLOW RATE(CFS) =      52.59

****************************************************************************
  FLOW PROCESS FROM NODE   6324.00 TO NODE   6325.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.31
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.699
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        0.50      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =     0.50      SUBAREA RUNOFF(CFS) =    1.57
  EFFECTIVE AREA(ACRES) =     17.40   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     17.40       PEAK FLOW RATE(CFS) =      54.17

****************************************************************************
  FLOW PROCESS FROM NODE   6325.00 TO NODE   6326.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    580.00  DOWNSTREAM(FEET) =    530.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   805.00   CHANNEL SLOPE =  0.0621
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     54.17
  FLOW VELOCITY(FEET/SEC.) =   8.74   FLOW DEPTH(FEET) =   1.68
  TRAVEL TIME(MIN.) =   1.54   Tc(MIN.) =  13.84
  LONGEST FLOWPATH FROM NODE   6320.00 TO NODE   6326.00 =  2097.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6325.00 TO NODE   6326.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  13.84
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.467
  SUBAREA LOSS RATE DATA(AMC  II):
```

```
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        0.20      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B        6.10      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        4.60      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        2.80      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D        2.40      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   16.10      SUBAREA RUNOFF(CFS) =   46.56
  EFFECTIVE AREA(ACRES) =     33.50   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     33.50       PEAK FLOW RATE(CFS) =      97.09

****************************************************************************
  FLOW PROCESS FROM NODE   6326.00 TO NODE   6327.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    530.00  DOWNSTREAM(FEET) =    490.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   946.00   CHANNEL SLOPE =  0.0423
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     97.09
  FLOW VELOCITY(FEET/SEC.) =   8.73   FLOW DEPTH(FEET) =   2.16
  TRAVEL TIME(MIN.) =   1.81   Tc(MIN.) =  15.65
  LONGEST FLOWPATH FROM NODE   6320.00 TO NODE   6327.00 =  3043.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6326.00 TO NODE   6327.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  15.65
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.227
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B        3.70      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.70      0.30      1.00    60
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        0.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        2.30      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D       15.10      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                 D        0.70      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   22.90      SUBAREA RUNOFF(CFS) =   61.98
  EFFECTIVE AREA(ACRES) =     56.40   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     56.40       PEAK FLOW RATE(CFS) =     151.86

****************************************************************************
  FLOW PROCESS FROM NODE   6327.00 TO NODE   6328.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    490.00  DOWNSTREAM(FEET) =    470.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   938.00   CHANNEL SLOPE =  0.0213
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    151.86
  FLOW VELOCITY(FEET/SEC.) =   7.55   FLOW DEPTH(FEET) =   2.91
  TRAVEL TIME(MIN.) =   2.07   Tc(MIN.) =  17.72
  LONGEST FLOWPATH FROM NODE   6320.00 TO NODE   6328.00 =  3981.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6327.00 TO NODE   6328.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.72
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.001
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.10      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B       14.40      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.90      0.30      1.00    60
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        5.50      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        1.10      0.25      1.00    79
  NATURAL FAIR COVER
  "GRASS"                    D        0.40      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   23.40      SUBAREA RUNOFF(CFS) =   57.21
  EFFECTIVE AREA(ACRES) =     79.80   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     79.80       PEAK FLOW RATE(CFS) =     197.57

****************************************************************************
  FLOW PROCESS FROM NODE   6327.00 TO NODE   6328.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.72
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.001
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        6.60      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D       27.30      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                 D        0.20      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   34.10      SUBAREA RUNOFF(CFS) =   85.96
  EFFECTIVE AREA(ACRES) =    113.90   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    113.90       PEAK FLOW RATE(CFS) =     283.53

****************************************************************************
  FLOW PROCESS FROM NODE   6328.00 TO NODE   6329.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    470.00  DOWNSTREAM(FEET) =    405.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1687.00   CHANNEL SLOPE =  0.0385
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    283.53
  FLOW VELOCITY(FEET/SEC.) =  11.05   FLOW DEPTH(FEET) =   3.45
  TRAVEL TIME(MIN.) =   2.54   Tc(MIN.) =  20.26
  LONGEST FLOWPATH FROM NODE   6320.00 TO NODE   6329.00 =  5668.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6328.00 TO NODE   6329.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  20.26
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.780
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        0.20      0.40      1.00    46
  AGRICULTURAL FAIR COVER
```

```
  "PASTURE,DRYLAND"          A        0.10      0.40      1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A        0.40      0.40      1.00    36
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        2.50      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B        6.40      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.80      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.31
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   10.40      SUBAREA RUNOFF(CFS) =   23.15
  EFFECTIVE AREA(ACRES) =    124.30   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    124.30       PEAK FLOW RATE(CFS) =     284.05

****************************************************************************
  FLOW PROCESS FROM NODE   6328.00 TO NODE   6329.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  20.26
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.780
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       15.00      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        0.20      0.25      1.00    79
  NATURAL FAIR COVER
  "GRASS"                     D        0.20      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        4.80      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        2.70      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                  D        2.00      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   24.90      SUBAREA RUNOFF(CFS) =   57.14
  EFFECTIVE AREA(ACRES) =    149.20   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    149.20       PEAK FLOW RATE(CFS) =     341.19

****************************************************************************
  FLOW PROCESS FROM NODE   6329.00 TO NODE   6330.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    405.00  DOWNSTREAM(FEET) =    375.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1040.00   CHANNEL SLOPE =  0.0288
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    341.19
  FLOW VELOCITY(FEET/SEC.) =  10.36   FLOW DEPTH(FEET) =   3.76
  TRAVEL TIME(MIN.) =   1.67   Tc(MIN.) =  21.93
  LONGEST FLOWPATH FROM NODE   6320.00 TO NODE   6330.00 =  6708.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6329.00 TO NODE   6330.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  21.93
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.653
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                    A        0.10      0.40      1.00    78
  NATURAL FAIR COVER
  "OPEN BRUSH"                A        1.10      0.40      1.00    46
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           A        4.10      0.40      1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                  A        0.50      0.40      1.00    36
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        2.20      0.30      1.00    63
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        3.80      0.30      1.00    66
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.35
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   11.80      SUBAREA RUNOFF(CFS) =   24.47
  EFFECTIVE AREA(ACRES) =    161.00   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    161.00       PEAK FLOW RATE(CFS) =     348.59

****************************************************************************
  FLOW PROCESS FROM NODE   6329.00 TO NODE   6330.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  21.93
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.653
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        3.30      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B        1.30      0.30      1.00    60
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        2.60      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        0.10      0.25      1.00    79
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D       36.50      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                     D        2.50      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   46.30      SUBAREA RUNOFF(CFS) =  101.68
  EFFECTIVE AREA(ACRES) =    207.30   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    207.30       PEAK FLOW RATE(CFS) =     450.27

****************************************************************************
  FLOW PROCESS FROM NODE   6329.00 TO NODE   6330.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  21.93
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.653
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                D       17.70      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        4.50      0.20      1.00    84
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"        D        7.20      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                  D        3.30      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.91
  SUBAREA AREA(ACRES) =   32.70      SUBAREA RUNOFF(CFS) =   72.71
  EFFECTIVE AREA(ACRES) =    240.00   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.99
  TOTAL AREA(ACRES) =    240.00       PEAK FLOW RATE(CFS) =     522.98

****************************************************************************
  FLOW PROCESS FROM NODE   6330.00 TO NODE   6330.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  21.93
  RAINFALL INTENSITY(INCH/HR) =   2.65
  AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23
  AREA-AVERAGED Ap =  0.99
  EFFECTIVE STREAM AREA(ACRES) =   240.00
  TOTAL STREAM AREA(ACRES) =   240.00
```

```
  PEAK FLOW RATE(CFS) AT CONFLUENCE =    522.98

  ** CONFLUENCE DATA **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)        (ACRES)    NODE
      1   6172.14  20.75    2.743  0.29( 0.20) 0.67  2617.9    6300.00
      1   7793.13  40.48    1.869  0.30( 0.19) 0.65  5101.3     780.00
      2    522.98  21.93    2.653  0.23( 0.23) 0.99   240.0    6320.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)        (ACRES)    NODE
      1   6685.24  20.75    2.743  0.29( 0.20) 0.69  2844.9    6300.00
      2   6792.67  21.93    2.653  0.29( 0.20) 0.69  3007.3    6320.00
      3   8146.77  40.48    1.869  0.29( 0.20) 0.67  5341.3     780.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =   8146.77    Tc(MIN.) =    40.48
  EFFECTIVE AREA(ACRES) =  5341.30   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.67
  TOTAL AREA(ACRES) =   5341.30
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6330.00 =  7532.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6330.00 TO NODE   6331.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    375.00  DOWNSTREAM(FEET) =    360.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1470.00   CHANNEL SLOPE =  0.0102
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   8146.77
  FLOW VELOCITY(FEET/SEC.) =  15.22   FLOW DEPTH(FEET) =  12.58
  TRAVEL TIME(MIN.) =   1.61   Tc(MIN.) =  42.09
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6331.00 =  9002.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6330.00 TO NODE   6331.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  42.09
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.832
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                    A        0.40      0.40      1.00    78
  NATURAL FAIR COVER
  "WOODLAND"                  A        0.70      0.40      1.00    36
  NATURAL POOR COVER
  "BARREN"                    B       18.00      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                     B        4.00      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.90      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        2.30      0.30      1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   26.30      SUBAREA RUNOFF(CFS) =   36.16
  EFFECTIVE AREA(ACRES) =   5367.60   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.67
  TOTAL AREA(ACRES) =   5367.60       PEAK FLOW RATE(CFS) =    8146.77
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6330.00 TO NODE   6331.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  42.09
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.832
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        0.40      0.30      1.00    63
  NATURAL FAIR COVER
  "WOODLAND"                  B        3.70      0.30      1.00    60
  NATURAL FAIR COVER
  "GRASS"                     C        1.10      0.25      1.00    79
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        3.20      0.25      1.00    75
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        7.20      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                     D        5.70      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   21.30      SUBAREA RUNOFF(CFS) =   30.72
  EFFECTIVE AREA(ACRES) =   5388.90   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.67
  TOTAL AREA(ACRES) =   5388.90       PEAK FLOW RATE(CFS) =    8146.77
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6330.00 TO NODE   6331.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  42.09
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.832
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                D       12.00      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        3.30      0.20      1.00    84
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"        D        0.70      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                  D        2.90      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   18.90      SUBAREA RUNOFF(CFS) =   27.81
  EFFECTIVE AREA(ACRES) =   5407.80   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.67
  TOTAL AREA(ACRES) =   5407.80       PEAK FLOW RATE(CFS) =    8146.77
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6331.00 TO NODE   6332.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    360.00  DOWNSTREAM(FEET) =    355.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   724.00   CHANNEL SLOPE =  0.0069
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   8146.77
  FLOW VELOCITY(FEET/SEC.) =  13.21   FLOW DEPTH(FEET) =  14.01
  TRAVEL TIME(MIN.) =   0.91   Tc(MIN.) =  43.00
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6332.00 =  9726.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6331.00 TO NODE   6332.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  43.00
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.811
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                    B       13.40      0.30      1.00    86
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        2.00      0.30      1.00    66
  AGRICULTURAL FAIR COVER
```

```
  "PASTURE,DRYLAND"          B        4.30      0.30      1.00    69
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B        2.00      0.30      0.60    56
  NATURAL FAIR COVER
  "WOODLAND"                 B        1.20      0.30      1.00    60
  NATURAL FAIR COVER
  "GRASS"                    D        1.70      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =   24.60      SUBAREA RUNOFF(CFS) =   33.82
  EFFECTIVE AREA(ACRES) =   5432.40   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.67
  TOTAL AREA(ACRES) =   5432.40       PEAK FLOW RATE(CFS) =    8146.77
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6331.00 TO NODE   6332.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  43.00
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.811
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        7.90      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        7.30      0.20      1.00    84
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        0.60      0.20      1.00    81
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"        D       16.00      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.50      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.80
  SUBAREA AREA(ACRES) =   32.30      SUBAREA RUNOFF(CFS) =   47.98
  EFFECTIVE AREA(ACRES) =   5464.70   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.68
  TOTAL AREA(ACRES) =   5464.70       PEAK FLOW RATE(CFS) =    8146.77
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6332.00 TO NODE   6333.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    355.00  DOWNSTREAM(FEET) =    350.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   875.00   CHANNEL SLOPE =  0.0057
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   8146.77
  FLOW VELOCITY(FEET/SEC.) =  12.33   FLOW DEPTH(FEET) =  14.76
  TRAVEL TIME(MIN.) =   1.18   Tc(MIN.) =  44.19
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6333.00 = 10601.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6332.00 TO NODE   6333.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  44.19
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.784
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                    A        7.10      0.40      1.00    78
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           A        2.20      0.40      1.00    49
  NATURAL POOR COVER
  "BARREN"                    B       10.90      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                     B        3.10      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        1.10      0.30      1.00    66
  AGRICULTURAL FAIR COVER
```

```
  "PASTURE,DRYLAND"          B        4.20      0.30      1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.33
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   28.60      SUBAREA RUNOFF(CFS) =   37.35
  EFFECTIVE AREA(ACRES) =   5493.30   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.68
  TOTAL AREA(ACRES) =   5493.30       PEAK FLOW RATE(CFS) =    8146.77
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6332.00 TO NODE   6333.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  44.19
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.784
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        5.10      0.30      1.00    63
  NATURAL FAIR COVER
  "WOODLAND"                  B        1.40      0.30      1.00    60
  NATURAL FAIR COVER
  "GRASS"                     C        8.60      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        6.30      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        3.40      0.25      1.00    79
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C       14.70      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   39.50      SUBAREA RUNOFF(CFS) =   54.23
  EFFECTIVE AREA(ACRES) =   5532.80   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.68
  TOTAL AREA(ACRES) =   5532.80       PEAK FLOW RATE(CFS) =    8146.77
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6332.00 TO NODE   6333.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  44.19
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.784
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     D        8.00      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        2.80      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        0.90      0.20      1.00    84
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        9.10      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   20.80      SUBAREA RUNOFF(CFS) =   29.65
  EFFECTIVE AREA(ACRES) =   5553.60   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.68
  TOTAL AREA(ACRES) =   5553.60       PEAK FLOW RATE(CFS) =    8146.77
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6333.00 TO NODE   6334.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    350.00  DOWNSTREAM(FEET) =    342.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1171.00   CHANNEL SLOPE =  0.0068
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   8146.77
  FLOW VELOCITY(FEET/SEC.) =  13.16   FLOW DEPTH(FEET) =  14.05
  TRAVEL TIME(MIN.) =   1.48   Tc(MIN.) =  45.67
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6334.00 = 11772.00 FEET.
```

```
****************************************************************************
  FLOW PROCESS FROM NODE   6333.00 TO NODE   6334.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  45.67
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.750
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   A        8.20      0.40      1.00    78
  NATURAL FAIR COVER
  "WOODLAND"                 A        0.70      0.40      1.00    36
  NATURAL POOR COVER
  "BARREN"                   B        5.50      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B        1.10      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B        0.90      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.20      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.35
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   16.60      SUBAREA RUNOFF(CFS) =   20.86
  EFFECTIVE AREA(ACRES) =   5570.20   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.68
  TOTAL AREA(ACRES) =   5570.20       PEAK FLOW RATE(CFS) =    8146.77
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6333.00 TO NODE   6334.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  45.67
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.750
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        1.60      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        7.00      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        1.90      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.90      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   11.40      SUBAREA RUNOFF(CFS) =   15.43
  EFFECTIVE AREA(ACRES) =   5581.60   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.68
  TOTAL AREA(ACRES) =   5581.60       PEAK FLOW RATE(CFS) =    8146.77
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6334.00 TO NODE   6355.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    342.00  DOWNSTREAM(FEET) =    314.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1846.00   CHANNEL SLOPE =  0.0152
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   8146.77
  FLOW VELOCITY(FEET/SEC.) =  17.54   FLOW DEPTH(FEET) =  11.26
  TRAVEL TIME(MIN.) =   1.75   Tc(MIN.) =  47.42
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6355.00 = 13618.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6334.00 TO NODE   6355.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  47.42
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.709
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   A        8.00      0.40      1.00    78
  NATURAL FAIR COVER
  "WOODLAND"                 A        0.40      0.40      1.00    36
  NATURAL POOR COVER
  "BARREN"                   B        0.70      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B        1.50      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        0.20      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        1.10      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.37
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   11.90      SUBAREA RUNOFF(CFS) =   14.34
  EFFECTIVE AREA(ACRES) =   5593.50   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.68
  TOTAL AREA(ACRES) =   5593.50       PEAK FLOW RATE(CFS) =    8146.77
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6334.00 TO NODE   6355.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  47.42
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.709
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   C        7.60      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C        1.30      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        4.40      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        2.90      0.25      1.00    73
  NATURAL FAIR COVER
  "GRASS"                    D        0.50      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.90      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   17.60      SUBAREA RUNOFF(CFS) =   23.18
  EFFECTIVE AREA(ACRES) =   5611.10   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.68
  TOTAL AREA(ACRES) =   5611.10       PEAK FLOW RATE(CFS) =    8146.77
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6334.00 TO NODE   6355.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  47.42
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.709
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 D        0.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.10      SUBAREA RUNOFF(CFS) =    0.14
  EFFECTIVE AREA(ACRES) =   5611.20   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.68
  TOTAL AREA(ACRES) =   5611.20       PEAK FLOW RATE(CFS) =    8146.77
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6355.00 TO NODE   6355.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
```

```
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  47.42
  RAINFALL INTENSITY(INCH/HR) =   1.71
  AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29
  AREA-AVERAGED Ap =  0.68
  EFFECTIVE STREAM AREA(ACRES) =  5611.20
  TOTAL STREAM AREA(ACRES) =  5611.20
  PEAK FLOW RATE(CFS) AT CONFLUENCE =   8146.77

****************************************************************************
  FLOW PROCESS FROM NODE   6340.00 TO NODE   6341.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   303.00
  ELEVATION DATA: UPSTREAM(FEET) =    769.00  DOWNSTREAM(FEET) =    695.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    9.201
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.397
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        1.00      0.25      1.00    77    9.20
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      3.73
  TOTAL AREA(ACRES) =      1.00   PEAK FLOW RATE(CFS) =      3.73

****************************************************************************
  FLOW PROCESS FROM NODE   6341.00 TO NODE   6342.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    695.00  DOWNSTREAM(FEET) =    665.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   167.00   CHANNEL SLOPE =  0.1796
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      3.73
  FLOW VELOCITY(FEET/SEC.) =   6.51   FLOW DEPTH(FEET) =   0.41
  TRAVEL TIME(MIN.) =   0.43   Tc(MIN.) =   9.63
  LONGEST FLOWPATH FROM NODE   6340.00 TO NODE   6342.00 =   470.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6341.00 TO NODE   6342.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.63
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.270
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.30      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        0.60      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.90      SUBAREA RUNOFF(CFS) =    3.26
  EFFECTIVE AREA(ACRES) =      1.90   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.90       PEAK FLOW RATE(CFS) =       6.87

****************************************************************************
  FLOW PROCESS FROM NODE   6342.00 TO NODE   6343.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    665.00  DOWNSTREAM(FEET) =    645.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   110.00   CHANNEL SLOPE =  0.1818
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      6.87
  FLOW VELOCITY(FEET/SEC.) =   7.73   FLOW DEPTH(FEET) =   0.57
  TRAVEL TIME(MIN.) =   0.24   Tc(MIN.) =   9.87
  LONGEST FLOWPATH FROM NODE   6340.00 TO NODE   6343.00 =   580.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6342.00 TO NODE   6343.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.87
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.200
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.40      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        0.60      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.00      SUBAREA RUNOFF(CFS) =    3.55
  EFFECTIVE AREA(ACRES) =      2.90   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      2.90       PEAK FLOW RATE(CFS) =      10.31

****************************************************************************
  FLOW PROCESS FROM NODE   6343.00 TO NODE   6344.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    645.00  DOWNSTREAM(FEET) =    630.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   152.00   CHANNEL SLOPE =  0.0987
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     10.31
  FLOW VELOCITY(FEET/SEC.) =   6.89   FLOW DEPTH(FEET) =   0.82
  TRAVEL TIME(MIN.) =   0.37   Tc(MIN.) =  10.23
  LONGEST FLOWPATH FROM NODE   6340.00 TO NODE   6344.00 =   732.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6343.00 TO NODE   6344.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.23
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.113
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     C        0.80      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        1.40      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        1.00      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.20      SUBAREA RUNOFF(CFS) =   11.13
  EFFECTIVE AREA(ACRES) =      6.10   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      6.10       PEAK FLOW RATE(CFS) =      21.21

****************************************************************************
  FLOW PROCESS FROM NODE   6344.00 TO NODE   6345.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    630.00  DOWNSTREAM(FEET) =    600.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   329.00   CHANNEL SLOPE =  0.0912
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     21.21
  FLOW VELOCITY(FEET/SEC.) =   7.83   FLOW DEPTH(FEET) =   0.93
  TRAVEL TIME(MIN.) =   0.70   Tc(MIN.) =  10.93
  LONGEST FLOWPATH FROM NODE   6340.00 TO NODE   6345.00 =  1061.00 FEET.

****************************************************************************
```

```
 FLOW PROCESS FROM NODE   6344.00 TO NODE   6345.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  10.93
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.973
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                     C        2.10      0.25      1.00    79
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        4.70      0.25      1.00    77
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       C        0.20      0.25      1.00    75
 NATURAL FAIR COVER
 "OPEN BRUSH"                D        0.10      0.20      1.00    83
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    7.10      SUBAREA RUNOFF(CFS) =   23.80
 EFFECTIVE AREA(ACRES) =     13.20   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     13.20       PEAK FLOW RATE(CFS) =      44.24

****************************************************************************
 FLOW PROCESS FROM NODE   6345.00 TO NODE   6346.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    600.00  DOWNSTREAM(FEET) =    585.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   297.00   CHANNEL SLOPE =  0.0505
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     44.24
 FLOW VELOCITY(FEET/SEC.) =   7.68   FLOW DEPTH(FEET) =   1.60
 TRAVEL TIME(MIN.) =   0.64   Tc(MIN.) =  11.58
 LONGEST FLOWPATH FROM NODE   6340.00 TO NODE   6346.00 =  1358.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   6345.00 TO NODE   6346.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  11.58
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.845
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                     C        5.20      0.25      1.00    79
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        2.00      0.25      1.00    77
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       C        0.20      0.25      1.00    75
 NATURAL FAIR COVER
 "WOODLAND"                  C        3.00      0.25      1.00    73
 NATURAL FAIR COVER
 "OPEN BRUSH"                D        0.20      0.20      1.00    83
 NATURAL FAIR COVER
 "WOODLAND"                  D        0.10      0.20      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   10.70      SUBAREA RUNOFF(CFS) =   34.63
 EFFECTIVE AREA(ACRES) =     23.90   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     23.90       PEAK FLOW RATE(CFS) =      77.34

****************************************************************************
 FLOW PROCESS FROM NODE   6346.00 TO NODE   6347.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    585.00  DOWNSTREAM(FEET) =    540.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   903.00   CHANNEL SLOPE =  0.0498
 CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     77.34
 FLOW VELOCITY(FEET/SEC.) =   8.72   FLOW DEPTH(FEET) =   1.83
 TRAVEL TIME(MIN.) =   1.73   Tc(MIN.) =  13.30
 LONGEST FLOWPATH FROM NODE   6340.00 TO NODE   6347.00 =  2261.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   6346.00 TO NODE   6347.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  13.30
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.544
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                     C       10.40      0.25      1.00    79
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       C        6.10      0.25      1.00    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   16.50      SUBAREA RUNOFF(CFS) =   48.92
 EFFECTIVE AREA(ACRES) =     40.40   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     40.40       PEAK FLOW RATE(CFS) =     119.80

****************************************************************************
 FLOW PROCESS FROM NODE   6347.00 TO NODE   6348.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    540.00  DOWNSTREAM(FEET) =    500.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   905.00   CHANNEL SLOPE =  0.0442
 CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    119.80
 FLOW VELOCITY(FEET/SEC.) =   9.37   FLOW DEPTH(FEET) =   2.38
 TRAVEL TIME(MIN.) =   1.61   Tc(MIN.) =  14.91
 LONGEST FLOWPATH FROM NODE   6340.00 TO NODE   6348.00 =  3166.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   6347.00 TO NODE   6348.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  14.91
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.313
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"        B        0.20      0.30      0.50    56
 NATURAL FAIR COVER
 "GRASS"                     B        2.50      0.30      1.00    69
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       B        4.40      0.30      1.00    63
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"        C        1.00      0.25      0.50    69
 NATURAL FAIR COVER
 "GRASS"                     C        5.70      0.25      1.00    79
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       C       19.30      0.25      1.00    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
 SUBAREA AREA(ACRES) =   33.10      SUBAREA RUNOFF(CFS) =   91.06
 EFFECTIVE AREA(ACRES) =     73.50   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.99
 TOTAL AREA(ACRES) =     73.50       PEAK FLOW RATE(CFS) =     202.43

****************************************************************************
 FLOW PROCESS FROM NODE   6348.00 TO NODE   6349.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    500.00  DOWNSTREAM(FEET) =    470.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   844.00   CHANNEL SLOPE =  0.0355
 CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
```

```
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    202.43
  FLOW VELOCITY(FEET/SEC.) =   9.84   FLOW DEPTH(FEET) =   2.96
  TRAVEL TIME(MIN.) =   1.43   Tc(MIN.) =  16.34
  LONGEST FLOWPATH FROM NODE   6340.00 TO NODE   6349.00 =  4010.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6348.00 TO NODE   6349.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.34
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.150
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B        1.20      0.30      0.50    56
  NATURAL FAIR COVER
  "GRASS"                    B        3.20      0.30      1.00    69
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        1.10      0.25      0.50    69
  NATURAL FAIR COVER
  "GRASS"                    C        2.90      0.25      1.00    79
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        2.00      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.89
  SUBAREA AREA(ACRES) =   10.40     SUBAREA RUNOFF(CFS) =   27.23
  EFFECTIVE AREA(ACRES) =     83.90   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =     83.90       PEAK FLOW RATE(CFS) =     218.88

****************************************************************************
  FLOW PROCESS FROM NODE   6349.00 TO NODE   6350.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    470.00  DOWNSTREAM(FEET) =    445.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   667.00   CHANNEL SLOPE =  0.0375
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    218.88
  FLOW VELOCITY(FEET/SEC.) =  10.23   FLOW DEPTH(FEET) =   3.04
  TRAVEL TIME(MIN.) =   1.09   Tc(MIN.) =  17.43
  LONGEST FLOWPATH FROM NODE   6340.00 TO NODE   6350.00 =  4677.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6349.00 TO NODE   6350.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.43
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.028
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B        4.80      0.30      0.50    56
  NATURAL FAIR COVER
  "GRASS"                    B        1.20      0.30      1.00    69
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        1.90      0.25      0.50    69
  NATURAL FAIR COVER
  "GRASS"                    C        2.20      0.25      1.00    79
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        1.00      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.70
  SUBAREA AREA(ACRES) =   11.10     SUBAREA RUNOFF(CFS) =   28.34
  EFFECTIVE AREA(ACRES) =     95.00   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.95
  TOTAL AREA(ACRES) =     95.00       PEAK FLOW RATE(CFS) =     238.04

****************************************************************************
  FLOW PROCESS FROM NODE   6350.00 TO NODE   6351.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    445.00  DOWNSTREAM(FEET) =    385.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1346.00   CHANNEL SLOPE =  0.0446
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    238.04
  FLOW VELOCITY(FEET/SEC.) =  11.16   FLOW DEPTH(FEET) =   3.03
  TRAVEL TIME(MIN.) =   2.01   Tc(MIN.) =  19.44
  LONGEST FLOWPATH FROM NODE   6340.00 TO NODE   6351.00 =  6023.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6350.00 TO NODE   6351.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.44
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.849
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B        4.30      0.30      0.50    56
  NATURAL FAIR COVER
  "GRASS"                    B        0.30      0.30      1.00    69
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        7.80      0.25      0.50    69
  NATURAL FAIR COVER
  "GRASS"                    C       12.40      0.25      1.00    79
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        0.20      0.25      1.00    79
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        1.80      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.77
  SUBAREA AREA(ACRES) =   26.80     SUBAREA RUNOFF(CFS) =   63.95
  EFFECTIVE AREA(ACRES) =    121.80   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.91
  TOTAL AREA(ACRES) =    121.80       PEAK FLOW RATE(CFS) =     286.71

****************************************************************************
  FLOW PROCESS FROM NODE   6350.00 TO NODE   6351.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.44
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.849
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D        0.70      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.70     SUBAREA RUNOFF(CFS) =    1.67
  EFFECTIVE AREA(ACRES) =    122.50   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.91
  TOTAL AREA(ACRES) =    122.50       PEAK FLOW RATE(CFS) =     288.38

****************************************************************************
  FLOW PROCESS FROM NODE   6351.00 TO NODE   6352.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    385.00  DOWNSTREAM(FEET) =    382.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   184.00   CHANNEL SLOPE =  0.0163
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    288.38
  FLOW VELOCITY(FEET/SEC.) =   8.03   FLOW DEPTH(FEET) =   3.99
  TRAVEL TIME(MIN.) =   0.38   Tc(MIN.) =  19.82
  LONGEST FLOWPATH FROM NODE   6340.00 TO NODE   6352.00 =  6207.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6351.00 TO NODE   6352.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  19.82
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.816
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        B       13.40      0.30      0.50    56
  NATURAL POOR COVER
  "BARREN"                    B        0.70      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                     B        0.60      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        0.40      0.30      1.00    69
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        1.30      0.25      1.00    75
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        C       58.60      0.25      0.50    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.52
  SUBAREA AREA(ACRES) =   75.00      SUBAREA RUNOFF(CFS) =  180.91
  EFFECTIVE AREA(ACRES) =    197.50   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.76
  TOTAL AREA(ACRES) =    197.50       PEAK FLOW RATE(CFS) =     465.58

****************************************************************************
  FLOW PROCESS FROM NODE   6351.00 TO NODE   6352.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.82
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.816
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     C        4.80      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        6.00      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      C        5.60      0.25      1.00    81
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        0.10      0.25      1.00    79
  NATURAL FAIR COVER
  "WOODLAND"                  C        0.10      0.25      1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        2.70      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   19.30      SUBAREA RUNOFF(CFS) =   44.69
  EFFECTIVE AREA(ACRES) =    216.80   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.78
  TOTAL AREA(ACRES) =    216.80       PEAK FLOW RATE(CFS) =     510.27

****************************************************************************
  FLOW PROCESS FROM NODE   6351.00 TO NODE   6352.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.82
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.816
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                    D        0.40      0.20      1.00    94
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D       28.70      0.20      0.50    75
  NATURAL FAIR COVER
  "GRASS"                     D        3.80      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        3.00      0.20      1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      D        0.90      0.20      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.20      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.61
  SUBAREA AREA(ACRES) =   37.00      SUBAREA RUNOFF(CFS) =   89.69
  EFFECTIVE AREA(ACRES) =    253.80   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.76
  TOTAL AREA(ACRES) =    253.80       PEAK FLOW RATE(CFS) =     599.95

****************************************************************************
  FLOW PROCESS FROM NODE   6352.00 TO NODE   6353.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    382.00  DOWNSTREAM(FEET) =    340.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1695.00   CHANNEL SLOPE =  0.0248
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    599.95
  FLOW VELOCITY(FEET/SEC.) =  11.28   FLOW DEPTH(FEET) =   4.89
  TRAVEL TIME(MIN.) =   2.50   Tc(MIN.) =  22.33
  LONGEST FLOWPATH FROM NODE   6340.00 TO NODE   6353.00 =  7902.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6352.00 TO NODE   6353.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  22.33
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.623
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                    A        3.20      0.40      1.00    78
  NATURAL GOOD COVER
  "MEADOWS"                   A        0.40      0.40      1.00    30
  AGRICULTURAL POOR COVER
  "FALLOW"                    B        0.40      0.30      1.00    86
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        B        4.10      0.30      0.50    56
  NATURAL POOR COVER
  "BARREN"                    B       12.40      0.30      1.00    86
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.30      0.30      1.00    66
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.32
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.90
  SUBAREA AREA(ACRES) =   20.80      SUBAREA RUNOFF(CFS) =   43.72
  EFFECTIVE AREA(ACRES) =    274.60   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.77
  TOTAL AREA(ACRES) =    274.60       PEAK FLOW RATE(CFS) =     599.95
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6352.00 TO NODE   6353.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  22.33
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.623
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        B        4.70      0.30      0.20    56
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        0.20      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.20      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        2.00      0.25      1.00    75
  AGRICULTURAL POOR COVER
  "FALLOW"                    C        2.20      0.25      1.00    91
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        C       22.30      0.25      0.50    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.53
  SUBAREA AREA(ACRES) =   31.60      SUBAREA RUNOFF(CFS) =   70.79
  EFFECTIVE AREA(ACRES) =    306.20   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.74
  TOTAL AREA(ACRES) =    306.20       PEAK FLOW RATE(CFS) =     670.50

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```
 FLOW PROCESS FROM NODE   6352.00 TO NODE   6353.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  22.33
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.623
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        1.20      0.25      1.00    77
 NATURAL GOOD COVER
 "MEADOWS"                   C        0.40      0.25      1.00    71
 RESIDENTIAL
 "11+ DWELLINGS/ACRE"        C       12.00      0.25      0.20    69
 NATURAL FAIR COVER
 "CHAPARRAL,NARROWLEAF"      C        0.60      0.25      1.00    81
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           C        0.10      0.25      1.00    79
 NATURAL FAIR COVER
 "WOODLAND"                  C        0.20      0.25      1.00    73
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.34
 SUBAREA AREA(ACRES) =   14.50      SUBAREA RUNOFF(CFS) =   33.13
 EFFECTIVE AREA(ACRES) =    320.70   AREA-AVERAGED Fm(INCH/HR) =  0.19
 AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.73
 TOTAL AREA(ACRES) =    320.70       PEAK FLOW RATE(CFS) =     703.63

****************************************************************************
 FLOW PROCESS FROM NODE   6352.00 TO NODE   6353.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  22.33
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.623
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       D        1.30      0.20      1.00    81
 AGRICULTURAL POOR COVER
 "FALLOW"                    D        3.30      0.20      1.00    94
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"        D       22.60      0.20      0.50    75
 NATURAL POOR COVER
 "BARREN"                    D        0.10      0.20      1.00    93
 NATURAL FAIR COVER
 "OPEN BRUSH"                D        1.20      0.20      1.00    83
 RESIDENTIAL
 "11+ DWELLINGS/ACRE"        D       16.90      0.20      0.20    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.45
 SUBAREA AREA(ACRES) =   45.40      SUBAREA RUNOFF(CFS) =  103.48
 EFFECTIVE AREA(ACRES) =    366.10   AREA-AVERAGED Fm(INCH/HR) =  0.17
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.69
 TOTAL AREA(ACRES) =    366.10       PEAK FLOW RATE(CFS) =     807.11

****************************************************************************
 FLOW PROCESS FROM NODE   6352.00 TO NODE   6353.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  22.33
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.623
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,NARROWLEAF"      D        1.10      0.20      1.00    86
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    1.10      SUBAREA RUNOFF(CFS) =    2.40
 EFFECTIVE AREA(ACRES) =    367.20   AREA-AVERAGED Fm(INCH/HR) =  0.17
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.69
 TOTAL AREA(ACRES) =    367.20       PEAK FLOW RATE(CFS) =     809.51

****************************************************************************
 FLOW PROCESS FROM NODE   6353.00 TO NODE   6354.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    340.00  DOWNSTREAM(FEET) =    335.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   728.00   CHANNEL SLOPE =  0.0069
 CHANNEL BASE(FEET) =    8.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   8.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    809.51
 FLOW VELOCITY(FEET/SEC.) =   7.53   FLOW DEPTH(FEET) =   7.11
 TRAVEL TIME(MIN.) =   1.61   Tc(MIN.) =  23.94
 LONGEST FLOWPATH FROM NODE   6340.00 TO NODE   6354.00 =  8630.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   6353.00 TO NODE   6354.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  23.94
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.524
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL POOR COVER
 "BARREN"                    A        0.60      0.40      1.00    78
 AGRICULTURAL POOR COVER
 "FALLOW"                    B        1.80      0.30      1.00    86
 NATURAL POOR COVER
 "BARREN"                    B        4.80      0.30      1.00    86
 NATURAL FAIR COVER
 "WOODLAND"                  B        0.30      0.30      1.00    60
 AGRICULTURAL POOR COVER
 "FALLOW"                    C        5.80      0.25      1.00    91
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       C        0.90      0.25      1.00    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   14.20      SUBAREA RUNOFF(CFS) =   28.67
 EFFECTIVE AREA(ACRES) =    381.40   AREA-AVERAGED Fm(INCH/HR) =  0.18
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.70
 TOTAL AREA(ACRES) =    381.40       PEAK FLOW RATE(CFS) =     809.51
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE   6353.00 TO NODE   6354.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  23.94
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.524
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL POOR COVER
 "BARREN"                    C        3.60      0.25      1.00    91
 NATURAL FAIR COVER
 "GRASS"                     C        0.90      0.25      1.00    79
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        3.60      0.25      1.00    77
 NATURAL GOOD COVER
 "MEADOWS"                   C        3.60      0.25      1.00    71
 NATURAL FAIR COVER
 "WOODLAND"                  C        1.20      0.25      1.00    73
 AGRICULTURAL POOR COVER
 "FALLOW"                    D        5.60      0.20      1.00    94
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   18.50      SUBAREA RUNOFF(CFS) =   38.11
 EFFECTIVE AREA(ACRES) =    399.90   AREA-AVERAGED Fm(INCH/HR) =  0.18
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.72
 TOTAL AREA(ACRES) =    399.90       PEAK FLOW RATE(CFS) =     843.41

****************************************************************************
 FLOW PROCESS FROM NODE   6353.00 TO NODE   6354.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  23.94
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.524
 SUBAREA LOSS RATE DATA(AMC  II):
```

```
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        0.40      0.20       1.00    81
  NATURAL POOR COVER
  "BARREN"                    D        0.60      0.20       1.00    93
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        1.90      0.20       1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    2.90      SUBAREA RUNOFF(CFS) =    6.07
  EFFECTIVE AREA(ACRES) =    402.80   AREA-AVERAGED Fm(INCH/HR) =  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.72
  TOTAL AREA(ACRES) =    402.80       PEAK FLOW RATE(CFS) =     849.48

****************************************************************************
  FLOW PROCESS FROM NODE   6354.00 TO NODE   6355.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    335.00  DOWNSTREAM(FEET) =    314.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   857.00   CHANNEL SLOPE =  0.0245
  CHANNEL BASE(FEET) =    8.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   8.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    849.48
  FLOW VELOCITY(FEET/SEC.) =  12.21   FLOW DEPTH(FEET) =   5.25
  TRAVEL TIME(MIN.) =   1.17   Tc(MIN.) =  25.11
  LONGEST FLOWPATH FROM NODE   6340.00 TO NODE   6355.00 =  9487.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6354.00 TO NODE   6355.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  25.11
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.454
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                    B        8.60      0.30       1.00    86
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.90      0.30       1.00    66
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"        B        3.10      0.30       0.60    56
  NATURAL POOR COVER
  "BARREN"                    C        3.20      0.25       1.00    91
  NATURAL FAIR COVER
  "GRASS"                     C        1.80      0.25       1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        1.40      0.25       1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
  SUBAREA AREA(ACRES) =   19.00      SUBAREA RUNOFF(CFS) =   37.46
  EFFECTIVE AREA(ACRES) =    421.80   AREA-AVERAGED Fm(INCH/HR) =  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.73
  TOTAL AREA(ACRES) =    421.80       PEAK FLOW RATE(CFS) =     861.80

****************************************************************************
  FLOW PROCESS FROM NODE   6354.00 TO NODE   6355.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  25.11
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.454
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"        C        2.70      0.25       0.60    69
  AGRICULTURAL POOR COVER
  "FALLOW"                    D        1.40      0.20       1.00    94
  NATURAL POOR COVER
  "BARREN"                    D        1.10      0.20       1.00    93
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        1.00      0.20       1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.83
  SUBAREA AREA(ACRES) =    6.20      SUBAREA RUNOFF(CFS) =   12.70
  EFFECTIVE AREA(ACRES) =    428.00   AREA-AVERAGED Fm(INCH/HR) =  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.73
  TOTAL AREA(ACRES) =    428.00       PEAK FLOW RATE(CFS) =     874.50

****************************************************************************
  FLOW PROCESS FROM NODE   6355.00 TO NODE   6355.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  25.11
  RAINFALL INTENSITY(INCH/HR) =   2.45
  AREA-AVERAGED Fm(INCH/HR) =  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.25
  AREA-AVERAGED Ap =  0.73
  EFFECTIVE STREAM AREA(ACRES) =   428.00
  TOTAL STREAM AREA(ACRES) =   428.00
  PEAK FLOW RATE(CFS) AT CONFLUENCE =    874.50

  ** CONFLUENCE DATA **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)        (ACRES)    NODE
      1   6685.24  28.08    2.304  0.29( 0.21) 0.72  3114.8    6300.00
      1   6792.67  29.24    2.254  0.29( 0.20) 0.72  3277.2    6320.00
      1   8146.77  47.42    1.709  0.29( 0.20) 0.68  5611.2     780.00
      2    874.50  25.11    2.454  0.25( 0.18) 0.73   428.0    6340.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)        (ACRES)    NODE
      1   7278.61  25.11    2.454  0.28( 0.20) 0.72  3212.7    6340.00
      2   7501.92  28.08    2.304  0.28( 0.20) 0.72  3542.8    6300.00
      3   7589.78  29.24    2.254  0.28( 0.20) 0.72  3705.2    6320.00
      4   8734.25  47.42    1.709  0.29( 0.20) 0.69  6039.2     780.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =   8734.25    Tc(MIN.) =    47.42
  EFFECTIVE AREA(ACRES) =  6039.20   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.69
  TOTAL AREA(ACRES) =   6039.20
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6355.00 = 13618.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6355.00 TO NODE   6356.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    314.00  DOWNSTREAM(FEET) =    280.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1554.00   CHANNEL SLOPE =  0.0219
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   8734.25
  FLOW VELOCITY(FEET/SEC.) =  20.40   FLOW DEPTH(FEET) =  10.56
  TRAVEL TIME(MIN.) =   1.27   Tc(MIN.) =  48.69
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6356.00 = 15172.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6355.00 TO NODE   6356.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  48.69
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.680
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        0.20      0.30       1.00    63
  NATURAL POOR COVER
  "BARREN"                    B       10.80      0.30       1.00    86
  NATURAL FAIR COVER
  "GRASS"                     B        3.10      0.30       1.00    69
```

```
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B        4.70      0.30      0.60    56
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.90      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        3.20      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.92
  SUBAREA AREA(ACRES) =   22.90      SUBAREA RUNOFF(CFS) =   29.10
  EFFECTIVE AREA(ACRES) =   6062.10   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.69
  TOTAL AREA(ACRES) =   6062.10       PEAK FLOW RATE(CFS) =    8734.25
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6355.00 TO NODE   6356.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  48.69
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.680
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   C        7.30      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C        6.60      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        2.90      0.25      1.00    77
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        3.30      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C        5.30      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.95
  SUBAREA AREA(ACRES) =   25.40      SUBAREA RUNOFF(CFS) =   32.99
  EFFECTIVE AREA(ACRES) =   6087.50   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.69
  TOTAL AREA(ACRES) =   6087.50       PEAK FLOW RATE(CFS) =    8734.25
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6356.00 TO NODE   6357.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    280.00  DOWNSTREAM(FEET) =    270.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   921.00   CHANNEL SLOPE =  0.0109
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   8734.25
  FLOW VELOCITY(FEET/SEC.) =  15.87   FLOW DEPTH(FEET) =  12.85
  TRAVEL TIME(MIN.) =   0.97   Tc(MIN.) =  49.66
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6357.00 = 16093.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6356.00 TO NODE   6357.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  49.66
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.658
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   B        8.80      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B        0.90      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        0.30      0.30      1.00    66
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B       10.20      0.30      0.60    56
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        1.10      0.25      1.00    75
  NATURAL POOR COVER
  "BARREN"                   C        5.90      0.25      1.00    91
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.85
  SUBAREA AREA(ACRES) =   27.20      SUBAREA RUNOFF(CFS) =   34.66
  EFFECTIVE AREA(ACRES) =   6114.70   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.69
  TOTAL AREA(ACRES) =   6114.70       PEAK FLOW RATE(CFS) =    8734.25
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6356.00 TO NODE   6357.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  49.66
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.658
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        5.20      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        1.90      0.25      1.00    77
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        4.00      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C        1.20      0.25      1.00    73
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D        0.30      0.20      0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.86
  SUBAREA AREA(ACRES) =   12.60      SUBAREA RUNOFF(CFS) =   16.36
  EFFECTIVE AREA(ACRES) =   6127.30   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.69
  TOTAL AREA(ACRES) =   6127.30       PEAK FLOW RATE(CFS) =    8734.25
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6357.00 TO NODE   6358.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    270.00  DOWNSTREAM(FEET) =    255.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1018.00   CHANNEL SLOPE =  0.0147
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   8734.25
  FLOW VELOCITY(FEET/SEC.) =  17.71   FLOW DEPTH(FEET) =  11.80
  TRAVEL TIME(MIN.) =   0.96   Tc(MIN.) =  50.62
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6358.00 = 17111.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6357.00 TO NODE   6358.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  50.62
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.640
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   B        4.90      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B        2.90      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        0.80      0.30      1.00    66
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B        5.30      0.30      0.60    56
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.40      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        0.10      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.85
  SUBAREA AREA(ACRES) =   14.40      SUBAREA RUNOFF(CFS) =   17.95
  EFFECTIVE AREA(ACRES) =   6141.70   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.69
```

```
  TOTAL AREA(ACRES) =   6141.70       PEAK FLOW RATE(CFS) =    8734.25
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6357.00 TO NODE   6358.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  50.62
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.640
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   C        7.10      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C        4.00      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        5.70      0.25      1.00    77
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        1.00      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C        2.40      0.25      1.00    73
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D        0.90      0.20      0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.96
  SUBAREA AREA(ACRES) =   21.10      SUBAREA RUNOFF(CFS) =   26.59
  EFFECTIVE AREA(ACRES) =   6162.80   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.69
  TOTAL AREA(ACRES) =   6162.80       PEAK FLOW RATE(CFS) =    8734.25
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6358.00 TO NODE   6359.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    255.00  DOWNSTREAM(FEET) =    245.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   916.00   CHANNEL SLOPE =  0.0109
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   8734.25
  FLOW VELOCITY(FEET/SEC.) =  15.90   FLOW DEPTH(FEET) =  12.83
  TRAVEL TIME(MIN.) =   0.96   Tc(MIN.) =  51.58
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6359.00 = 18027.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6358.00 TO NODE   6359.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  51.58
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.625
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   B        1.50      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B        1.80      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        0.20      0.30      1.00    66
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B        1.80      0.30      0.60    56
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.30      0.30      1.00    60
  NATURAL POOR COVER
  "BARREN"                   C        4.10      0.25      1.00    91
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
  SUBAREA AREA(ACRES) =    9.70      SUBAREA RUNOFF(CFS) =   11.94
  EFFECTIVE AREA(ACRES) =   6172.50   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.69
  TOTAL AREA(ACRES) =   6172.50       PEAK FLOW RATE(CFS) =    8734.25
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6358.00 TO NODE   6359.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  51.58
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.625
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        6.10      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       11.40      0.25      1.00    77
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        1.90      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.90      0.25      1.00    73
  NATURAL POOR COVER
  "BARREN"                   D        0.90      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                    D        4.10      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =   25.30      SUBAREA RUNOFF(CFS) =   31.70
  EFFECTIVE AREA(ACRES) =   6197.80   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.69
  TOTAL AREA(ACRES) =   6197.80       PEAK FLOW RATE(CFS) =    8734.25
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6358.00 TO NODE   6359.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  51.58
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.625
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D        0.10      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D        0.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.92
  SUBAREA AREA(ACRES) =    0.50      SUBAREA RUNOFF(CFS) =    0.65
  EFFECTIVE AREA(ACRES) =   6198.30   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.69
  TOTAL AREA(ACRES) =   6198.30       PEAK FLOW RATE(CFS) =    8734.25
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6359.00 TO NODE   6371.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    245.00  DOWNSTREAM(FEET) =    220.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1510.00   CHANNEL SLOPE =  0.0166
  CHANNEL BASE(FEET) =   30.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   8734.25
  FLOW VELOCITY(FEET/SEC.) =  18.47   FLOW DEPTH(FEET) =  11.42
  TRAVEL TIME(MIN.) =   1.36   Tc(MIN.) =  52.94
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6371.00 = 19537.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6359.00 TO NODE   6371.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  52.94
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.603
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   B        1.30      0.30      1.00    86
  NATURAL FAIR COVER
```

```
  "GRASS"                    B        0.20      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        0.20      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        4.00      0.30      1.00    60
  NATURAL FAIR COVER
  "GRASS"                    C        4.30      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        2.30      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   12.30     SUBAREA RUNOFF(CFS) =   14.72
  EFFECTIVE AREA(ACRES) =   6210.60   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.69
  TOTAL AREA(ACRES) =   6210.60       PEAK FLOW RATE(CFS) =    8734.25
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6359.00 TO NODE   6371.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  52.94
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.603
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        0.20      0.25      0.60    69
  NATURAL FAIR COVER
  "GRASS"                    D       10.30      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   10.50     SUBAREA RUNOFF(CFS) =   13.27
  EFFECTIVE AREA(ACRES) =   6221.10   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29  AREA-AVERAGED Ap =  0.69
  TOTAL AREA(ACRES) =   6221.10       PEAK FLOW RATE(CFS) =    8734.25
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6371.00 TO NODE   6371.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  52.94
  RAINFALL INTENSITY(INCH/HR) =   1.60
  AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.29
  AREA-AVERAGED Ap =  0.69
  EFFECTIVE STREAM AREA(ACRES) =  6221.10
  TOTAL STREAM AREA(ACRES) =  6221.10
  PEAK FLOW RATE(CFS) AT CONFLUENCE =   8734.25

****************************************************************************
  FLOW PROCESS FROM NODE   6360.00 TO NODE   6361.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   286.00
  ELEVATION DATA: UPSTREAM(FEET) =    695.00  DOWNSTREAM(FEET) =    690.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    6.992
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.162
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       C        0.20      0.25      0.20    69    6.99
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.20
  SUBAREA RUNOFF(CFS) =      0.92
  TOTAL AREA(ACRES) =      0.20   PEAK FLOW RATE(CFS) =      0.92

****************************************************************************
  FLOW PROCESS FROM NODE   6361.00 TO NODE   6362.00 IS CODE =  61
```

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----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STANDARD CURB SECTION USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  690.00  DOWNSTREAM ELEVATION(FEET) =  670.00
  STREET LENGTH(FEET) =   389.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 40.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  1
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       1.74
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.25
    HALFSTREET FLOOD WIDTH(FEET) =    4.71
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    4.23
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.07
  STREET FLOW TRAVEL TIME(MIN.) =   1.53   Tc(MIN.) =   8.52
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.597
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       C        0.40      0.25      0.20    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.20
  SUBAREA AREA(ACRES) =    0.40     SUBAREA RUNOFF(CFS) =    1.64
  EFFECTIVE AREA(ACRES) =      0.60    AREA-AVERAGED Fm(INCH/HR) =  0.05
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.20
  TOTAL AREA(ACRES) =      0.60       PEAK FLOW RATE(CFS) =       2.46

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.28   HALFSTREET FLOOD WIDTH(FEET) =   6.04
  FLOW VELOCITY(FEET/SEC.) =  4.43   DEPTH*VELOCITY(FT*FT/SEC.) =   1.24
  LONGEST FLOWPATH FROM NODE   6360.00 TO NODE   6362.00 =   675.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6362.00 TO NODE   6363.00 IS CODE =  61
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STANDARD CURB SECTION USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  670.00  DOWNSTREAM ELEVATION(FEET) =  660.00
  STREET LENGTH(FEET) =   198.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 40.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  1
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      10.94
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.42
    HALFSTREET FLOOD WIDTH(FEET) =   12.86
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    5.93
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    2.46
  STREET FLOW TRAVEL TIME(MIN.) =   0.56   Tc(MIN.) =   9.08
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.432
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       C        4.30      0.25      0.20    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.20
  SUBAREA AREA(ACRES) =    4.30     SUBAREA RUNOFF(CFS) =   16.96
  EFFECTIVE AREA(ACRES) =      4.90    AREA-AVERAGED Fm(INCH/HR) =  0.05
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 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.20
 TOTAL AREA(ACRES) =      4.90        PEAK FLOW RATE(CFS) =      19.33

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.48   HALFSTREET FLOOD WIDTH(FEET) =  16.31
 FLOW VELOCITY(FEET/SEC.) =  6.78   DEPTH*VELOCITY(FT*FT/SEC.) =   3.29
 LONGEST FLOWPATH FROM NODE   6360.00 TO NODE   6363.00 =   873.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   6363.00 TO NODE   6364.00 IS CODE =  61
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STANDARD CURB SECTION USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) =  660.00  DOWNSTREAM ELEVATION(FEET) =  635.00
 STREET LENGTH(FEET) =   512.00   CURB HEIGHT(INCHES) =  8.0
 STREET HALFWIDTH(FEET) = 40.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  1
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      26.08
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.53
   HALFSTREET FLOOD WIDTH(FEET) =   18.49
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    7.23
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    3.82
 STREET FLOW TRAVEL TIME(MIN.) =   1.18   Tc(MIN.) =  10.26
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.108
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "11+ DWELLINGS/ACRE"       C        3.70      0.25      0.20    69
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.20
 SUBAREA AREA(ACRES) =    3.70      SUBAREA RUNOFF(CFS) =   13.51
 EFFECTIVE AREA(ACRES) =      8.60    AREA-AVERAGED Fm(INCH/HR) =  0.05
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.20
 TOTAL AREA(ACRES) =      8.60        PEAK FLOW RATE(CFS) =      31.41

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.56   HALFSTREET FLOOD WIDTH(FEET) =  19.89
 FLOW VELOCITY(FEET/SEC.) =  7.57   DEPTH*VELOCITY(FT*FT/SEC.) =   4.21
 LONGEST FLOWPATH FROM NODE   6360.00 TO NODE   6364.00 =  1385.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   6364.00 TO NODE   6365.00 IS CODE =  61
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STANDARD CURB SECTION USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) =  635.00  DOWNSTREAM ELEVATION(FEET) =  590.00
 STREET LENGTH(FEET) =   881.00   CURB HEIGHT(INCHES) =  8.0
 STREET HALFWIDTH(FEET) = 40.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  20.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  1
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      46.12
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.62
   HALFSTREET FLOOD WIDTH(FEET) =   23.01
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    8.41
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    5.20
 STREET FLOW TRAVEL TIME(MIN.) =   1.75   Tc(MIN.) =  12.01
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.759
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "11+ DWELLINGS/ACRE"       C        7.00      0.25      0.20    69
 RESIDENTIAL
 "11+ DWELLINGS/ACRE"       D        1.80      0.20      0.20    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.20
 SUBAREA AREA(ACRES) =    8.80      SUBAREA RUNOFF(CFS) =   29.39
 EFFECTIVE AREA(ACRES) =     17.40    AREA-AVERAGED Fm(INCH/HR) =  0.05
 AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.20
 TOTAL AREA(ACRES) =     17.40        PEAK FLOW RATE(CFS) =      58.10

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.66   HALFSTREET FLOOD WIDTH(FEET) =  25.12
 FLOW VELOCITY(FEET/SEC.) =  8.94   DEPTH*VELOCITY(FT*FT/SEC.) =   5.91
 LONGEST FLOWPATH FROM NODE   6360.00 TO NODE   6365.00 =  2266.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   6365.00 TO NODE   6366.00 IS CODE =  31
----------------------------------------------------------------------------
 >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   590.00  DOWNSTREAM(FEET) =   528.00
 FLOW LENGTH(FEET) =  1287.00   MANNING'S N =  0.013
 DEPTH OF FLOW IN  27.0 INCH PIPE IS  20.0 INCHES
 PIPE-FLOW VELOCITY(FEET/SEC.) =  18.36
 ESTIMATED PIPE DIAMETER(INCH) =  27.00    NUMBER OF PIPES =   1
 PIPE-FLOW(CFS) =     58.10
 PIPE TRAVEL TIME(MIN.) =   1.17    Tc(MIN.) =  13.17
 LONGEST FLOWPATH FROM NODE   6360.00 TO NODE   6366.00 =  3553.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   6365.00 TO NODE   6366.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  13.17
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.563
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "11+ DWELLINGS/ACRE"       C        3.50      0.25      0.20    69
 RESIDENTIAL
 "11+ DWELLINGS/ACRE"       D        5.50      0.20      0.20    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.20
 SUBAREA AREA(ACRES) =    9.00      SUBAREA RUNOFF(CFS) =   28.50
 EFFECTIVE AREA(ACRES) =     26.40   AREA-AVERAGED Fm(INCH/HR) =  0.05
 AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.20
 TOTAL AREA(ACRES) =     26.40        PEAK FLOW RATE(CFS) =      83.53

****************************************************************************
 FLOW PROCESS FROM NODE   6366.00 TO NODE   6367.00 IS CODE =  31
----------------------------------------------------------------------------
 >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   528.00  DOWNSTREAM(FEET) =   490.00
 FLOW LENGTH(FEET) =  1574.00   MANNING'S N =  0.013
 DEPTH OF FLOW IN  36.0 INCH PIPE IS  25.5 INCHES
 PIPE-FLOW VELOCITY(FEET/SEC.) =  15.61
 ESTIMATED PIPE DIAMETER(INCH) =  36.00    NUMBER OF PIPES =   1
 PIPE-FLOW(CFS) =     83.53
 PIPE TRAVEL TIME(MIN.) =   1.68    Tc(MIN.) =  14.86
 LONGEST FLOWPATH FROM NODE   6360.00 TO NODE   6367.00 =  5127.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   6366.00 TO NODE   6367.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  14.86
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.321
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
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```
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       C       12.40      0.25       0.20    69
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        2.10      0.25       0.60    69
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D        8.90      0.20       0.20    75
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D        3.90      0.20       0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.29
  SUBAREA AREA(ACRES) =   27.30     SUBAREA RUNOFF(CFS) =   80.01
  EFFECTIVE AREA(ACRES) =     53.70   AREA-AVERAGED Fm(INCH/HR) =  0.06
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.24
  TOTAL AREA(ACRES) =     53.70       PEAK FLOW RATE(CFS) =     157.79

****************************************************************************
  FLOW PROCESS FROM NODE   6367.00 TO NODE   6368.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   490.00  DOWNSTREAM(FEET) =   460.00
  FLOW LENGTH(FEET) =   615.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  39.0 INCH PIPE IS  29.3 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  23.64
  ESTIMATED PIPE DIAMETER(INCH) =  39.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =    157.79
  PIPE TRAVEL TIME(MIN.) =   0.43    Tc(MIN.) =  15.29
  LONGEST FLOWPATH FROM NODE   6360.00 TO NODE   6368.00 =  5742.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6367.00 TO NODE   6368.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  15.29
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.268
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        3.40      0.25       0.60    69
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D        7.00      0.20       0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.60
  SUBAREA AREA(ACRES) =   10.40     SUBAREA RUNOFF(CFS) =   29.37
  EFFECTIVE AREA(ACRES) =     64.10   AREA-AVERAGED Fm(INCH/HR) =  0.07
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.30
  TOTAL AREA(ACRES) =     64.10       PEAK FLOW RATE(CFS) =     184.59

****************************************************************************
  FLOW PROCESS FROM NODE   6368.00 TO NODE   6369.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   460.00  DOWNSTREAM(FEET) =   400.00
  FLOW LENGTH(FEET) =  1577.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  42.0 INCH PIPE IS  34.1 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  22.06
  ESTIMATED PIPE DIAMETER(INCH) =  42.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =    184.59
  PIPE TRAVEL TIME(MIN.) =   1.19    Tc(MIN.) =  16.48
  LONGEST FLOWPATH FROM NODE   6360.00 TO NODE   6369.00 =  7319.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6368.00 TO NODE   6369.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.48
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.134
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       A        1.90      0.40       0.20    32
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       B        0.30      0.30       0.20    56
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B        0.20      0.30       0.60    56
  NATURAL FAIR COVER
  "GRASS"                    C        0.90      0.25       1.00    79
  COMMERCIAL                 C        0.20      0.25       0.10    69
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       C       92.20      0.25       0.20    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.21
  SUBAREA AREA(ACRES) =   95.70     SUBAREA RUNOFF(CFS) =  265.41
  EFFECTIVE AREA(ACRES) =    159.80   AREA-AVERAGED Fm(INCH/HR) =  0.06
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.25
  TOTAL AREA(ACRES) =    159.80       PEAK FLOW RATE(CFS) =     442.30

****************************************************************************
  FLOW PROCESS FROM NODE   6368.00 TO NODE   6369.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.48
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.134
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        9.80      0.25       0.60    69
  NATURAL FAIR COVER
  "GRASS"                    D        0.70      0.20       1.00    84
  COMMERCIAL                 D        0.30      0.20       0.10    75
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D      113.50      0.20       0.20    75
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D       61.60      0.20       0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.36
  SUBAREA AREA(ACRES) =  185.90     SUBAREA RUNOFF(CFS) =  512.19
  EFFECTIVE AREA(ACRES) =    345.70   AREA-AVERAGED Fm(INCH/HR) =  0.07
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.31
  TOTAL AREA(ACRES) =    345.70       PEAK FLOW RATE(CFS) =     954.49

****************************************************************************
  FLOW PROCESS FROM NODE   6369.00 TO NODE   6370.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   400.00  DOWNSTREAM(FEET) =   344.00
  FLOW LENGTH(FEET) =  2352.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  87.0 INCH PIPE IS  66.4 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  28.25
  ESTIMATED PIPE DIAMETER(INCH) =  87.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =    954.49
  PIPE TRAVEL TIME(MIN.) =   1.39    Tc(MIN.) =  17.87
  LONGEST FLOWPATH FROM NODE   6360.00 TO NODE   6370.00 =  9671.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6369.00 TO NODE   6370.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.87
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.988
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B        1.00      0.30       0.50    56
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        0.10      0.30       1.00    66
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       B       22.40      0.30       0.20    56
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B       25.40      0.30       0.60    56
  AGRICULTURAL POOR COVER
  "FALLOW"                   C        0.20      0.25       1.00    91
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        3.50      0.25       0.50    69
```

```
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.42
  SUBAREA AREA(ACRES) =   52.60      SUBAREA RUNOFF(CFS) =  135.51
  EFFECTIVE AREA(ACRES) =    398.30   AREA-AVERAGED Fm(INCH/HR) =  0.07
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.32
  TOTAL AREA(ACRES) =    398.30       PEAK FLOW RATE(CFS) =    1044.40

****************************************************************************
  FLOW PROCESS FROM NODE   6369.00 TO NODE   6370.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.87
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.988
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.70      0.25      1.00    77
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       C       66.90      0.25      0.20    69
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C       93.40      0.25      0.60    69
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D       34.30      0.20      0.50    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.20      0.20      1.00    83
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D       78.80      0.20      0.20    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.38
  SUBAREA AREA(ACRES) =  274.30      SUBAREA RUNOFF(CFS) =  715.82
  EFFECTIVE AREA(ACRES) =    672.60   AREA-AVERAGED Fm(INCH/HR) =  0.08
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.34
  TOTAL AREA(ACRES) =    672.60       PEAK FLOW RATE(CFS) =    1760.22

****************************************************************************
  FLOW PROCESS FROM NODE   6369.00 TO NODE   6370.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.87
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.988
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D       24.10      0.20      0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.60
  SUBAREA AREA(ACRES) =   24.10      SUBAREA RUNOFF(CFS) =   62.20
  EFFECTIVE AREA(ACRES) =    696.70   AREA-AVERAGED Fm(INCH/HR) =  0.08
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.35
  TOTAL AREA(ACRES) =    696.70       PEAK FLOW RATE(CFS) =    1822.42

****************************************************************************
  FLOW PROCESS FROM NODE   6370.00 TO NODE   6371.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   344.00  DOWNSTREAM(FEET) =   220.00
  FLOW LENGTH(FEET) =  2550.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  96.0 INCH PIPE IS  75.1 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  43.21
  ESTIMATED PIPE DIAMETER(INCH) =  96.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =   1822.42
  PIPE TRAVEL TIME(MIN.) =   0.98    Tc(MIN.) =  18.85
  LONGEST FLOWPATH FROM NODE   6360.00 TO NODE   6371.00 = 12221.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6370.00 TO NODE   6371.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.85
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.901
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL POOR COVER
  "BARREN"                   B       10.20      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B        1.70      0.30      1.00    69
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       B        4.40      0.30      0.20    56
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B        1.60      0.30      0.60    56
  NATURAL FAIR COVER
  "WOODLAND"                 B        2.40      0.30      1.00    60
  NATURAL POOR COVER
  "BARREN"                   C        4.00      0.25      1.00    91
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.83
  SUBAREA AREA(ACRES) =   24.30      SUBAREA RUNOFF(CFS) =   58.19
  EFFECTIVE AREA(ACRES) =    721.00   AREA-AVERAGED Fm(INCH/HR) =  0.09
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.37
  TOTAL AREA(ACRES) =    721.00       PEAK FLOW RATE(CFS) =    1826.34

****************************************************************************
  FLOW PROCESS FROM NODE   6370.00 TO NODE   6371.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.85
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.901
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        0.90      0.25      1.00    79
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       C       10.30      0.25      0.20    69
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        1.10      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C        1.30      0.25      1.00    73
  NATURAL FAIR COVER
  "GRASS"                    D        1.20      0.20      1.00    84
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D        3.70      0.20      0.20    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.37
  SUBAREA AREA(ACRES) =   18.50      SUBAREA RUNOFF(CFS) =   46.85
  EFFECTIVE AREA(ACRES) =    739.50   AREA-AVERAGED Fm(INCH/HR) =  0.09
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.37
  TOTAL AREA(ACRES) =    739.50       PEAK FLOW RATE(CFS) =    1873.18

****************************************************************************
  FLOW PROCESS FROM NODE   6370.00 TO NODE   6371.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.85
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.901
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D        0.20      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D        0.70      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.91
  SUBAREA AREA(ACRES) =    0.90      SUBAREA RUNOFF(CFS) =    2.20
  EFFECTIVE AREA(ACRES) =    740.40   AREA-AVERAGED Fm(INCH/HR) =  0.09
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.37
  TOTAL AREA(ACRES) =    740.40       PEAK FLOW RATE(CFS) =    1875.38

****************************************************************************
  FLOW PROCESS FROM NODE   6371.00 TO NODE   6371.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
```

```
  TIME OF CONCENTRATION(MIN.) =  18.85
  RAINFALL INTENSITY(INCH/HR) =   2.90
  AREA-AVERAGED Fm(INCH/HR) =  0.09
  AREA-AVERAGED Fp(INCH/HR) =  0.23
  AREA-AVERAGED Ap =  0.37
  EFFECTIVE STREAM AREA(ACRES) =   740.40
  TOTAL STREAM AREA(ACRES) =   740.40
  PEAK FLOW RATE(CFS) AT CONFLUENCE =   1875.38

  ** CONFLUENCE DATA **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1   7278.61  30.92    2.185  0.28( 0.20) 0.73  3394.6    6340.00
      1   7501.92  33.85    2.074  0.28( 0.20) 0.73  3724.7    6300.00
      1   7589.78  34.98    2.031  0.28( 0.20) 0.73  3887.1    6320.00
      1   8734.25  52.94    1.603  0.29( 0.20) 0.69  6221.1     780.00
      2   1875.38  18.85    2.901  0.23( 0.09) 0.37   740.4    6360.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1   7917.53  18.85    2.901  0.27( 0.17) 0.64  2810.0    6360.00
      2   8676.86  30.92    2.185  0.28( 0.18) 0.67  4135.0    6340.00
      3   8826.09  33.85    2.074  0.28( 0.19) 0.67  4465.1    6300.00
      4   8885.18  34.98    2.031  0.28( 0.19) 0.67  4627.5    6320.00
      5   9744.62  52.94    1.603  0.28( 0.19) 0.66  6961.5     780.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =   9744.62    Tc(MIN.) =    52.94
  EFFECTIVE AREA(ACRES) =  6961.50   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.28  AREA-AVERAGED Ap =  0.66
  TOTAL AREA(ACRES) =   6961.50
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6371.00 = 19537.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6371.00 TO NODE   6395.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    220.00  DOWNSTREAM(FEET) =    213.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   959.00   CHANNEL SLOPE =  0.0073
  CHANNEL BASE(FEET) =   35.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   9744.62
  FLOW VELOCITY(FEET/SEC.) =  14.01   FLOW DEPTH(FEET) =  14.15
  TRAVEL TIME(MIN.) =   1.14   Tc(MIN.) =  54.08
  LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6395.00 = 20496.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6371.00 TO NODE   6395.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  54.08
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.585
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     A        0.20      0.40      1.00    50
  NATURAL FAIR COVER
  "WOODLAND"                  A        0.20      0.40      1.00    36
  NATURAL FAIR COVER
  "GRASS"                     B        0.40      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.60      0.30      1.00    60
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        1.10      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        0.30      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    2.80      SUBAREA RUNOFF(CFS) =    3.26
  EFFECTIVE AREA(ACRES) =   6964.30   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.28  AREA-AVERAGED Ap =  0.66
  TOTAL AREA(ACRES) =   6964.30       PEAK FLOW RATE(CFS) =    9744.62
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6371.00 TO NODE   6395.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  54.08
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.585
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     D        0.30      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                  D        3.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.70      SUBAREA RUNOFF(CFS) =    4.61
  EFFECTIVE AREA(ACRES) =   6968.00   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.28  AREA-AVERAGED Ap =  0.66
  TOTAL AREA(ACRES) =   6968.00       PEAK FLOW RATE(CFS) =    9744.62
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   6395.00 TO NODE   6395.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  54.08
  RAINFALL INTENSITY(INCH/HR) =   1.58
  AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.28
  AREA-AVERAGED Ap =  0.66
  EFFECTIVE STREAM AREA(ACRES) =  6968.00
  TOTAL STREAM AREA(ACRES) =  6968.00
  PEAK FLOW RATE(CFS) AT CONFLUENCE =   9744.62

****************************************************************************
  FLOW PROCESS FROM NODE   6380.00 TO NODE   6381.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   325.00
  ELEVATION DATA: UPSTREAM(FEET) =    655.00  DOWNSTREAM(FEET) =    587.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    5.695
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.831
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS   Tc
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"        D        0.90      0.20      0.60    75    5.70
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.60
  SUBAREA RUNOFF(CFS) =      4.63
  TOTAL AREA(ACRES) =      0.90   PEAK FLOW RATE(CFS) =      4.63

****************************************************************************
  FLOW PROCESS FROM NODE   6381.00 TO NODE   6382.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    587.00  DOWNSTREAM(FEET) =    584.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    94.00   CHANNEL SLOPE =  0.0319
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      4.63
  FLOW VELOCITY(FEET/SEC.) =   4.52   FLOW DEPTH(FEET) =   0.63
  TRAVEL TIME(MIN.) =   0.35   Tc(MIN.) =   6.04
  LONGEST FLOWPATH FROM NODE   6380.00 TO NODE   6382.00 =   419.00 FEET.

****************************************************************************
```

```
 FLOW PROCESS FROM NODE    6381.00 TO NODE    6382.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =    6.04
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.652
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"       D        1.20      0.20       0.60    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.60
 SUBAREA AREA(ACRES) =     1.20      SUBAREA RUNOFF(CFS) =     5.97
 EFFECTIVE AREA(ACRES) =       2.10   AREA-AVERAGED Fm(INCH/HR) =  0.12
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.60
 TOTAL AREA(ACRES) =       2.10       PEAK FLOW RATE(CFS) =      10.46

****************************************************************************
 FLOW PROCESS FROM NODE    6382.00 TO NODE    6383.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    584.00  DOWNSTREAM(FEET) =    570.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   418.00   CHANNEL SLOPE =  0.0335
 CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =   1.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     10.46
 FLOW VELOCITY(FEET/SEC.) =   5.71   FLOW DEPTH(FEET) =   0.94
 TRAVEL TIME(MIN.) =   1.22   Tc(MIN.) =   7.26
 LONGEST FLOWPATH FROM NODE    6380.00 TO NODE    6383.00 =   837.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    6382.00 TO NODE    6383.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =    7.26
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.022
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"       D        3.10      0.20       0.60    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.60
 SUBAREA AREA(ACRES) =     3.10      SUBAREA RUNOFF(CFS) =    13.68
 EFFECTIVE AREA(ACRES) =       5.20   AREA-AVERAGED Fm(INCH/HR) =  0.12
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.60
 TOTAL AREA(ACRES) =       5.20       PEAK FLOW RATE(CFS) =      22.94

****************************************************************************
 FLOW PROCESS FROM NODE    6383.00 TO NODE    6384.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    570.00  DOWNSTREAM(FEET) =    540.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   557.00   CHANNEL SLOPE =  0.0539
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     22.94
 FLOW VELOCITY(FEET/SEC.) =   8.18   FLOW DEPTH(FEET) =   0.95
 TRAVEL TIME(MIN.) =   1.14   Tc(MIN.) =   8.40
 LONGEST FLOWPATH FROM NODE    6380.00 TO NODE    6384.00 =  1394.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    6383.00 TO NODE    6384.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =    8.40
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.634
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"       D        4.50      0.20       0.60    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.60
 SUBAREA AREA(ACRES) =     4.50      SUBAREA RUNOFF(CFS) =    18.28
 EFFECTIVE AREA(ACRES) =       9.70   AREA-AVERAGED Fm(INCH/HR) =  0.12
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.60
 TOTAL AREA(ACRES) =       9.70       PEAK FLOW RATE(CFS) =      39.41

****************************************************************************
 FLOW PROCESS FROM NODE    6384.00 TO NODE    6385.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    540.00  DOWNSTREAM(FEET) =    510.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   508.00   CHANNEL SLOPE =  0.0591
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     39.41
 FLOW VELOCITY(FEET/SEC.) =   9.74   FLOW DEPTH(FEET) =   1.25
 TRAVEL TIME(MIN.) =   0.87   Tc(MIN.) =   9.27
 LONGEST FLOWPATH FROM NODE    6380.00 TO NODE    6385.00 =  1902.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    6384.00 TO NODE    6385.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =    9.27
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.377
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"       D        3.50      0.20       0.60    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.60
 SUBAREA AREA(ACRES) =     3.50      SUBAREA RUNOFF(CFS) =    13.41
 EFFECTIVE AREA(ACRES) =      13.20   AREA-AVERAGED Fm(INCH/HR) =  0.12
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.60
 TOTAL AREA(ACRES) =      13.20       PEAK FLOW RATE(CFS) =      50.57

****************************************************************************
 FLOW PROCESS FROM NODE    6385.00 TO NODE    6386.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    510.00  DOWNSTREAM(FEET) =    500.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   381.00   CHANNEL SLOPE =  0.0262
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     50.57
 FLOW VELOCITY(FEET/SEC.) =   7.71   FLOW DEPTH(FEET) =   1.75
 TRAVEL TIME(MIN.) =   0.82   Tc(MIN.) =  10.09
 LONGEST FLOWPATH FROM NODE    6380.00 TO NODE    6386.00 =  2283.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    6385.00 TO NODE    6386.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =   10.09
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.142
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"       D       11.50      0.20       0.60    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.60
 SUBAREA AREA(ACRES) =    11.50      SUBAREA RUNOFF(CFS) =    41.62
 EFFECTIVE AREA(ACRES) =      24.70   AREA-AVERAGED Fm(INCH/HR) =  0.12
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.60
 TOTAL AREA(ACRES) =      24.70       PEAK FLOW RATE(CFS) =      89.40

****************************************************************************
 FLOW PROCESS FROM NODE    6386.00 TO NODE    6387.00 IS CODE =  51
----------------------------------------------------------------------------
```

```
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    500.00  DOWNSTREAM(FEET) =    435.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   751.00   CHANNEL SLOPE =  0.0866
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     89.40
 FLOW VELOCITY(FEET/SEC.) =  13.89   FLOW DEPTH(FEET) =   1.73
 TRAVEL TIME(MIN.) =   0.90   Tc(MIN.) =  10.99
 LONGEST FLOWPATH FROM NODE   6380.00 TO NODE   6387.00 =  3034.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   6386.00 TO NODE   6387.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
 MAINLINE Tc(MIN) =  10.99
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.961
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        0.10      0.25      1.00    77
 NATURAL FAIR COVER
 "GRASS"                     D        2.00      0.20      1.00    84
 NATURAL FAIR COVER
 "OPEN BRUSH"                D        0.60      0.20      1.00    83
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           D        0.50      0.20      1.00    84
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"        D        8.10      0.20      0.60    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.71
 SUBAREA AREA(ACRES) =   11.30      SUBAREA RUNOFF(CFS) =   38.83
 EFFECTIVE AREA(ACRES) =     36.00   AREA-AVERAGED Fm(INCH/HR) =  0.13
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.64
 TOTAL AREA(ACRES) =     36.00       PEAK FLOW RATE(CFS) =     124.23

****************************************************************************
 FLOW PROCESS FROM NODE   6387.00 TO NODE   6388.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    435.00  DOWNSTREAM(FEET) =    400.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1268.00   CHANNEL SLOPE =  0.0276
 CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    124.23
 FLOW VELOCITY(FEET/SEC.) =   7.95   FLOW DEPTH(FEET) =   2.73
 TRAVEL TIME(MIN.) =   2.66   Tc(MIN.) =  13.65
 LONGEST FLOWPATH FROM NODE   6380.00 TO NODE   6388.00 =  4302.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   6387.00 TO NODE   6388.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
 MAINLINE Tc(MIN) =  13.65
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.494
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        0.20      0.25      1.00    77
 NATURAL FAIR COVER
 "GRASS"                     D        4.40      0.20      1.00    84
 NATURAL FAIR COVER
 "OPEN BRUSH"                D        2.10      0.20      1.00    83
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           D        0.90      0.20      1.00    84
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"        D        9.00      0.20      0.60    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.78
 SUBAREA AREA(ACRES) =   16.60      SUBAREA RUNOFF(CFS) =   49.85
 EFFECTIVE AREA(ACRES) =     52.60   AREA-AVERAGED Fm(INCH/HR) =  0.14
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.68
 TOTAL AREA(ACRES) =     52.60       PEAK FLOW RATE(CFS) =     158.94

****************************************************************************
 FLOW PROCESS FROM NODE   6388.00 TO NODE   6389.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    400.00  DOWNSTREAM(FEET) =    392.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   173.00   CHANNEL SLOPE =  0.0462
 CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    158.94
 FLOW VELOCITY(FEET/SEC.) =  10.25   FLOW DEPTH(FEET) =   2.71
 TRAVEL TIME(MIN.) =   0.28   Tc(MIN.) =  13.93
 LONGEST FLOWPATH FROM NODE   6380.00 TO NODE   6389.00 =  4475.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   6388.00 TO NODE   6389.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
 MAINLINE Tc(MIN) =  13.93
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.454
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                     D        1.20      0.20      1.00    84
 NATURAL FAIR COVER
 "OPEN BRUSH"                D        0.10      0.20      1.00    83
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"        D       66.10      0.20      0.60    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.61
 SUBAREA AREA(ACRES) =   67.40      SUBAREA RUNOFF(CFS) =  202.12
 EFFECTIVE AREA(ACRES) =    120.00   AREA-AVERAGED Fm(INCH/HR) =  0.13
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.64
 TOTAL AREA(ACRES) =    120.00       PEAK FLOW RATE(CFS) =     359.14

****************************************************************************
 FLOW PROCESS FROM NODE   6389.00 TO NODE   6390.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    392.00  DOWNSTREAM(FEET) =    357.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   975.00   CHANNEL SLOPE =  0.0359
 CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    359.14
 FLOW VELOCITY(FEET/SEC.) =  11.44   FLOW DEPTH(FEET) =   3.95
 TRAVEL TIME(MIN.) =   1.42   Tc(MIN.) =  15.35
 LONGEST FLOWPATH FROM NODE   6380.00 TO NODE   6390.00 =  5450.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   6389.00 TO NODE   6390.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
 MAINLINE Tc(MIN) =  15.35
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.260
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                     C        0.20      0.25      1.00    79
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        0.10      0.25      1.00    77
 NATURAL FAIR COVER
 "GRASS"                     D        3.00      0.20      1.00    84
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"        D       21.80      0.20      0.60    75
 NATURAL FAIR COVER
 "WOODLAND"                  D        0.10      0.20      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.65
 SUBAREA AREA(ACRES) =   25.20      SUBAREA RUNOFF(CFS) =   70.97
 EFFECTIVE AREA(ACRES) =    145.20   AREA-AVERAGED Fm(INCH/HR) =  0.13
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  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.64
  TOTAL AREA(ACRES) =    145.20       PEAK FLOW RATE(CFS) =     409.24

****************************************************************************
  FLOW PROCESS FROM NODE   6390.00 TO NODE   6391.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    357.00  DOWNSTREAM(FEET) =    347.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   505.00   CHANNEL SLOPE =  0.0198
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    409.24
  FLOW VELOCITY(FEET/SEC.) =   9.44   FLOW DEPTH(FEET) =   4.54
  TRAVEL TIME(MIN.) =   0.89   Tc(MIN.) =  16.25
  LONGEST FLOWPATH FROM NODE   6380.00 TO NODE   6391.00 =  5955.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6390.00 TO NODE   6391.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.25
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.161
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B        0.90      0.30      0.60    56
  NATURAL FAIR COVER
  "GRASS"                    C        0.20      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.50      0.25      1.00    77
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        1.50      0.25      0.60    69
  NATURAL FAIR COVER
  "GRASS"                    D        1.90      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        1.30      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.85
  SUBAREA AREA(ACRES) =    6.30      SUBAREA RUNOFF(CFS) =   16.84
  EFFECTIVE AREA(ACRES) =    151.50   AREA-AVERAGED Fm(INCH/HR) =  0.13
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.65
  TOTAL AREA(ACRES) =    151.50       PEAK FLOW RATE(CFS) =     413.03

****************************************************************************
  FLOW PROCESS FROM NODE   6390.00 TO NODE   6391.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.25
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.161
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D       22.40      0.20      0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.60
  SUBAREA AREA(ACRES) =   22.40      SUBAREA RUNOFF(CFS) =   61.30
  EFFECTIVE AREA(ACRES) =    173.90   AREA-AVERAGED Fm(INCH/HR) =  0.13
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.64
  TOTAL AREA(ACRES) =    173.90       PEAK FLOW RATE(CFS) =     474.33

****************************************************************************
  FLOW PROCESS FROM NODE   6391.00 TO NODE   6392.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    347.00  DOWNSTREAM(FEET) =    330.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1293.00   CHANNEL SLOPE =  0.0131
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    474.33
  FLOW VELOCITY(FEET/SEC.) =   8.40   FLOW DEPTH(FEET) =   5.09
  TRAVEL TIME(MIN.) =   2.57   Tc(MIN.) =  18.81
  LONGEST FLOWPATH FROM NODE   6380.00 TO NODE   6392.00 =  7248.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6391.00 TO NODE   6392.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.81
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.905
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B        5.10      0.30      0.60    56
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.20      0.30      1.00    60
  NATURAL FAIR COVER
  "GRASS"                    C        0.80      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.70      0.25      1.00    77
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C       10.40      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.10      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.64
  SUBAREA AREA(ACRES) =   17.30      SUBAREA RUNOFF(CFS) =   42.58
  EFFECTIVE AREA(ACRES) =    191.20   AREA-AVERAGED Fm(INCH/HR) =  0.13
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  0.64
  TOTAL AREA(ACRES) =    191.20       PEAK FLOW RATE(CFS) =     476.86

****************************************************************************
  FLOW PROCESS FROM NODE   6391.00 TO NODE   6392.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.81
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.905
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D        2.30      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.30      0.20      1.00    83
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D       10.90      0.20      0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.68
  SUBAREA AREA(ACRES) =   13.50      SUBAREA RUNOFF(CFS) =   33.65
  EFFECTIVE AREA(ACRES) =    204.70   AREA-AVERAGED Fm(INCH/HR) =  0.13
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  0.65
  TOTAL AREA(ACRES) =    204.70       PEAK FLOW RATE(CFS) =     510.51

****************************************************************************
  FLOW PROCESS FROM NODE   6392.00 TO NODE   6393.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    330.00  DOWNSTREAM(FEET) =    295.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1459.00   CHANNEL SLOPE =  0.0240
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    510.51
  FLOW VELOCITY(FEET/SEC.) =  10.71   FLOW DEPTH(FEET) =   4.53
  TRAVEL TIME(MIN.) =   2.27   Tc(MIN.) =  21.08
  LONGEST FLOWPATH FROM NODE   6380.00 TO NODE   6393.00 =  8707.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6392.00 TO NODE   6393.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  21.08
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.718
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
```

```
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B        9.30      0.30       0.60    56
  NATURAL FAIR COVER
  "GRASS"                    C        0.20      0.25       1.00    79
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       C        0.20      0.25       0.50    69
  NATURAL FAIR COVER
  "GRASS"                    C        3.40      0.25       1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        1.50      0.25       1.00    77
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C       23.40      0.25       0.60    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.65
  SUBAREA AREA(ACRES) =   38.00      SUBAREA RUNOFF(CFS) =   87.11
  EFFECTIVE AREA(ACRES) =    242.70   AREA-AVERAGED Fm(INCH/HR) =  0.14
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.65
  TOTAL AREA(ACRES) =    242.70       PEAK FLOW RATE(CFS) =     563.19

****************************************************************************
  FLOW PROCESS FROM NODE   6392.00 TO NODE   6393.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  21.08
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.718
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.40      0.25       1.00    73
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.20      0.20       0.50    75
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D       11.10      0.20       0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.61
  SUBAREA AREA(ACRES) =   11.70      SUBAREA RUNOFF(CFS) =   27.31
  EFFECTIVE AREA(ACRES) =    254.40   AREA-AVERAGED Fm(INCH/HR) =  0.14
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  0.65
  TOTAL AREA(ACRES) =    254.40       PEAK FLOW RATE(CFS) =     590.50

****************************************************************************
  FLOW PROCESS FROM NODE   6393.00 TO NODE   6394.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    295.00  DOWNSTREAM(FEET) =    238.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1612.00   CHANNEL SLOPE =  0.0354
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    590.50
  FLOW VELOCITY(FEET/SEC.) =  12.82   FLOW DEPTH(FEET) =   4.42
  TRAVEL TIME(MIN.) =   2.10   Tc(MIN.) =  23.18
  LONGEST FLOWPATH FROM NODE   6380.00 TO NODE   6394.00 = 10319.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6393.00 TO NODE   6394.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  23.18
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.569
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B        0.20      0.30       1.00    69
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B        7.20      0.30       0.60    56
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.80      0.30       1.00    60
  NATURAL FAIR COVER
  "GRASS"                    C        1.10      0.25       1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.40      0.25       1.00    77
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C       32.80      0.25       0.60    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.62
  SUBAREA AREA(ACRES) =   42.50      SUBAREA RUNOFF(CFS) =   92.07
  EFFECTIVE AREA(ACRES) =    296.90   AREA-AVERAGED Fm(INCH/HR) =  0.14
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.64
  TOTAL AREA(ACRES) =    296.90       PEAK FLOW RATE(CFS) =     648.59

****************************************************************************
  FLOW PROCESS FROM NODE   6393.00 TO NODE   6394.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  23.18
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.569
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C        1.30      0.25       1.00    73
  NATURAL FAIR COVER
  "GRASS"                    D        3.20      0.20       1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.20      0.20       1.00    83
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D       11.40      0.20       0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.72
  SUBAREA AREA(ACRES) =   16.10      SUBAREA RUNOFF(CFS) =   35.09
  EFFECTIVE AREA(ACRES) =    313.00   AREA-AVERAGED Fm(INCH/HR) =  0.14
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.65
  TOTAL AREA(ACRES) =    313.00       PEAK FLOW RATE(CFS) =     683.68

****************************************************************************
  FLOW PROCESS FROM NODE   6394.00 TO NODE   6395.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    238.00  DOWNSTREAM(FEET) =    213.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1150.00   CHANNEL SLOPE =  0.0217
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    683.68
  FLOW VELOCITY(FEET/SEC.) =  11.12   FLOW DEPTH(FEET) =   5.40
  TRAVEL TIME(MIN.) =   1.72   Tc(MIN.) =  24.90
  LONGEST FLOWPATH FROM NODE   6380.00 TO NODE   6395.00 = 11469.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   6394.00 TO NODE   6395.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  24.90
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.466
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B        1.70      0.30       1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B        2.20      0.30       1.00    60
  NATURAL FAIR COVER
  "GRASS"                    C        0.10      0.25       1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.70      0.25       1.00    77
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        1.70      0.25       0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C        1.80      0.25       1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.92
  SUBAREA AREA(ACRES) =    8.20      SUBAREA RUNOFF(CFS) =   16.33
  EFFECTIVE AREA(ACRES) =    321.20   AREA-AVERAGED Fm(INCH/HR) =  0.15
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.65
  TOTAL AREA(ACRES) =    321.20       PEAK FLOW RATE(CFS) =     683.68
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
```

```
 FLOW PROCESS FROM NODE   6394.00 TO NODE   6395.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  24.90
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.466
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                    D        0.10      0.20      1.00    84
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"       D        0.30      0.20      0.60    75
 NATURAL FAIR COVER
 "WOODLAND"                 D        1.50      0.20      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.94
 SUBAREA AREA(ACRES) =    1.90      SUBAREA RUNOFF(CFS) =    3.90
 EFFECTIVE AREA(ACRES) =    323.10   AREA-AVERAGED Fm(INCH/HR) =  0.15
 AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.66
 TOTAL AREA(ACRES) =    323.10       PEAK FLOW RATE(CFS) =     683.68
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE   6395.00 TO NODE   6395.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  24.90
 RAINFALL INTENSITY(INCH/HR) =   2.47
 AREA-AVERAGED Fm(INCH/HR) =  0.15
 AREA-AVERAGED Fp(INCH/HR) =  0.22
 AREA-AVERAGED Ap =  0.66
 EFFECTIVE STREAM AREA(ACRES) =   323.10
 TOTAL STREAM AREA(ACRES) =   323.10
 PEAK FLOW RATE(CFS) AT CONFLUENCE =    683.68

 ** CONFLUENCE DATA **
  STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
  NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
     1   7917.53  20.06    2.795  0.27( 0.17) 0.64  2816.5    6360.00
     1   8676.86  32.10    2.140  0.28( 0.18) 0.67  4141.5    6340.00
     1   8826.09  35.02    2.029  0.28( 0.19) 0.67  4471.6    6300.00
     1   8885.18  36.15    1.995  0.28( 0.19) 0.67  4634.0    6320.00
     1   9744.62  54.08    1.585  0.28( 0.19) 0.66  6968.0     780.00
     2    683.68  24.90    2.466  0.22( 0.15) 0.66   323.1    6380.00

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
  STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
  NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
     1   8546.51  20.06    2.795  0.27( 0.17) 0.64  3076.8    6360.00
     2   8906.59  24.90    2.466  0.27( 0.17) 0.65  3672.5    6380.00
     3   9264.61  32.10    2.140  0.27( 0.18) 0.67  4464.6    6340.00
     4   9381.19  35.02    2.029  0.27( 0.18) 0.67  4794.7    6300.00
     5   9430.26  36.15    1.995  0.27( 0.18) 0.67  4957.1    6320.00
     6  10168.68  54.08    1.585  0.28( 0.19) 0.66  7291.1     780.00

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =  10168.68    Tc(MIN.) =    54.08
 EFFECTIVE AREA(ACRES) =  7291.10   AREA-AVERAGED Fm(INCH/HR) =  0.19
 AREA-AVERAGED Fp(INCH/HR) =  0.28  AREA-AVERAGED Ap =  0.66
 TOTAL AREA(ACRES) =   7291.10
 LONGEST FLOWPATH FROM NODE   6300.00 TO NODE   6395.00 = 20496.00 FEET.
============================================================================
 END OF STUDY SUMMARY:
 TOTAL AREA(ACRES)     =   7291.10  TC(MIN.) =     54.08
 EFFECTIVE AREA(ACRES) =   7291.10  AREA-AVERAGED Fm(INCH/HR)=  0.19
 AREA-AVERAGED Fp(INCH/HR) =  0.28  AREA-AVERAGED Ap =  0.66
 PEAK FLOW RATE(CFS)   =  10168.68

 ** PEAK FLOW RATE TABLE **
  STREAM     Q     Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
  NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
```

```
     1   8546.51  20.06    2.795  0.27( 0.17) 0.64  3076.8    6360.00
     2   8906.59  24.90    2.466  0.27( 0.17) 0.65  3672.5    6380.00
     3   9264.61  32.10    2.140  0.27( 0.18) 0.67  4464.6    6340.00
     4   9381.19  35.02    2.029  0.27( 0.18) 0.67  4794.7    6300.00
     5   9430.26  36.15    1.995  0.27( 0.18) 0.67  4957.1    6320.00
     6  10168.68  54.08    1.585  0.28( 0.19) 0.66  7291.1     780.00
============================================================================
============================================================================
 END OF RATIONAL METHOD ANALYSIS
```

```
**************************************************************************

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                          Analysis prepared by:

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                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: CP63100H.FLD
  TIME/DATE OF STUDY: 13:15 04/01/2004


**************************************************************************
  FLOW PROCESS FROM NODE    100.00 TO NODE   6395.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    7291.100 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.720 HOURS
         STORM RETURN FREQUENCY =  100-YEAR
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.240
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.680
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.080
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.180
         LOW LOSS FRACTION = 0.520
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.52
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.09
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.45
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.43
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  3.36
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  5.63

         PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.727
          30-MINUTE FACTOR = 0.727
           1-HOUR FACTOR = 0.727
           3-HOUR FACTOR = 0.955
           6-HOUR FACTOR = 0.976
          24-HOUR FACTOR = 0.985

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  11.574



==========================================================================
                     UNIT HYDROGRAPH DETERMINATION

--------------------------------------------------------------------------
```

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.773	681.657
2	2.471	1497.408
3	4.833	2082.535
4	8.388	3134.380
5	12.768	3862.617
6	18.456	5015.114
7	25.043	5808.570
8	34.169	8047.173
9	47.712	11941.385
10	56.362	7626.946
11	62.923	5785.397
12	67.687	4200.807
13	71.786	3614.922
14	75.222	3029.118
15	78.223	2646.816
16	80.560	2059.962
17	82.643	1836.876
18	84.606	1731.338
19	86.147	1358.521
20	87.605	1285.900
21	88.854	1101.039
22	89.857	884.721
23	90.776	809.859
24	91.637	759.753
25	92.468	732.198
26	93.192	639.024
27	93.892	617.093
28	94.495	531.064
29	95.034	475.583
30	95.573	475.449
31	95.980	358.527
32	96.284	268.347
33	96.588	268.058
34	96.888	264.809
35	97.183	260.026
36	97.443	229.261
37	97.544	88.882
38	97.623	69.985
39	97.700	67.839
40	97.777	67.933
41	97.855	68.040
42	97.931	67.206
43	98.004	64.704
44	98.077	64.657
45	98.151	64.488
46	98.224	64.683
47	98.296	63.674
48	98.366	61.697
49	98.435	60.950
50	98.505	61.327
51	98.574	61.131
52	98.644	61.306
53	98.710	58.353
54	98.774	56.678
55	98.838	56.685
56	98.903	56.678
57	98.967	56.685
58	99.031	56.685
59	99.095	56.254
60	99.155	52.588
61	99.213	51.801
62	99.272	51.760
63	99.331	51.801
64	99.390	51.774

65	99.448	51.760
66	99.507	51.801
67	99.566	51.780
68	99.623	50.731
69	99.677	47.583
70	99.709	28.221
71	99.723	11.733
72	99.736	11.766
73	99.749	11.733
74	99.763	11.759
75	99.776	11.719
76	99.789	11.759
77	99.803	11.759
78	99.816	11.759
79	99.829	11.719
80	99.840	9.755
81	99.844	3.619
82	99.848	3.243
83	99.852	3.189
84	99.855	3.189
85	99.859	3.236
86	99.863	3.195
87	99.866	3.189
88	99.870	3.189
89	99.873	3.236
90	99.877	3.195
91	99.881	3.189
92	99.884	3.236
93	99.888	3.189
94	99.892	3.243
95	99.895	3.189
96	99.899	3.189
97	99.902	3.189
98	99.906	3.195
99	99.910	3.283
100	99.913	3.142
101	99.917	3.236
102	99.921	3.189
103	99.924	3.195
104	99.928	3.189
105	99.932	3.189
106	99.935	3.189
107	99.939	3.189
108	99.942	3.189
109	99.946	3.195
110	99.950	3.189
111	99.953	3.189
112	99.957	3.189
113	99.960	3.189
114	99.964	3.189
115	99.968	3.195
116	99.971	3.189
117	99.975	3.189
118	99.979	3.189
119	99.982	3.189
120	99.986	3.189
121	99.989	3.195
122	99.993	3.189
123	99.997	3.189
124	100.000	2.967

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1342.6731
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 2026.1995

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	2025.0	4050.0	6075.0	8100.0
0.083	0.0165	2.39	Q	.	.	.	.
0.167	0.0691	7.65	Q	.	.	.	.
0.250	0.1722	14.97	Q	.	.	.	.
0.333	0.3513	26.00	Q	.	.	.	.
0.417	0.6242	39.63	Q	.	.	.	.
0.500	1.0191	57.33	Q	.	.	.	.
0.583	1.5554	77.88	Q	.	.	.	.
0.667	2.2877	106.34	Q	.	.	.	.
0.750	3.3107	148.54	Q	.	.	.	.
0.833	4.5211	175.74	Q	.	.	.	.
0.917	5.8751	196.61	Q	.	.	.	.
1.000	7.3349	211.97	VQ	.	.	.	.
1.083	8.8869	225.35	VQ	.	.	.	.
1.167	10.5171	236.70	VQ	.	.	.	.
1.250	12.2167	246.78	VQ	.	.	.	.
1.333	13.9717	254.82	VQ	.	.	.	.
1.417	15.7770	262.13	VQ	.	.	.	.
1.500	17.6301	269.07	VQ	.	.	.	.
1.583	19.5224	274.76	VQ	.	.	.	.
1.667	21.4522	280.20	VQ	.	.	.	.
1.750	23.4152	285.03	VQ	.	.	.	.
1.833	25.4063	289.11	VQ	.	.	.	.
1.917	27.4239	292.96	VQ	.	.	.	.
2.000	29.4669	296.63	VQ	.	.	.	.
2.083	31.5347	300.25	VQ	.	.	.	.
2.167	33.6252	303.54	VQ	.	.	.	.
2.250	35.7381	306.79	VQ	.	.	.	.
2.333	37.8712	309.73	VQ	.	.	.	.
2.417	40.0236	312.52	VQ	.	.	.	.
2.500	42.1950	315.30	VQ	.	.	.	.
2.583	44.3831	317.71	VQ	.	.	.	.
2.667	46.5855	319.79	VQ	.	.	.	.
2.750	48.8025	321.91	VQ	.	.	.	.
2.833	51.0340	324.01	.Q	.	.	.	.
2.917	53.2802	326.13	.Q	.	.	.	.
3.000	55.5401	328.14	.Q	.	.	.	.
3.083	57.8107	329.69	.Q	.	.	.	.
3.167	60.0914	331.16	.Q	.	.	.	.
3.250	62.3825	332.67	.Q	.	.	.	.
3.333	64.6839	334.16	.Q	.	.	.	.
3.417	66.9958	335.69	.Q	.	.	.	.
3.500	69.3182	337.21	.Q	.	.	.	.
3.583	71.6513	338.76	.Q	.	.	.	.
3.667	73.9949	340.29	.Q	.	.	.	.
3.750	76.3493	341.87	.Q	.	.	.	.
3.833	78.7146	343.43	.Q	.	.	.	.
3.917	81.0908	345.03	.Q	.	.	.	.
4.000	83.4780	346.62	.Q	.	.	.	.
4.083	85.8763	348.24	.Q	.	.	.	.
4.167	88.2858	349.85	.Q	.	.	.	.
4.250	90.7066	351.51	.Q	.	.	.	.
4.333	93.1388	353.15	.Q	.	.	.	.
4.417	95.5825	354.83	.Q	.	.	.	.
4.500	98.0377	356.49	.Q	.	.	.	.
4.583	100.5046	358.20	.Q	.	.	.	.
4.667	102.9831	359.89	.QV	.	.	.	.
4.750	105.4737	361.63	.QV	.	.	.	.
4.833	107.9762	363.36	.QV	.	.	.	.
4.917	110.4909	365.13	.QV	.	.	.	.
5.000	113.0176	366.88	.QV	.	.	.	.
5.083	115.5568	368.68	.QV	.	.	.	.
5.167	118.1082	370.47	.QV	.	.	.	.
5.250	120.6722	372.30	.QV	.	.	.	.
5.333	123.2488	374.12	.QV	.	.	.	.
5.417	125.8384	376.00	.QV	.	.	.	.
5.500	128.4407	377.86	.QV	.	.	.	.
5.583	131.0563	379.78	.QV	.	.	.	.
5.667	133.6850	381.68	.QV	.	.	.	.
5.750	136.3270	383.63	.QV	.	.	.	.
5.833	138.9820	385.49	.QV	.	.	.	.
5.917	141.6497	387.36	.QV	.	.	.	.
6.000	144.3303	389.21	.QV	.	.	.	.
6.083	147.0239	391.12	.QV	.	.	.	.
6.167	149.7307	393.02	.QV	.	.	.	.
6.250	152.4509	394.98	.Q V	.	.	.	.
6.333	155.1846	396.93	.Q V	.	.	.	.
6.417	157.9321	398.94	.Q V	.	.	.	.
6.500	160.6933	400.93	.Q V	.	.	.	.
6.583	163.4687	402.99	.Q V	.	.	.	.
6.667	166.2582	405.03	. QV	.	.	.	.
6.750	169.0620	407.12	. QV	.	.	.	.
6.833	171.8801	409.19	. QV	.	.	.	.
6.917	174.7130	411.33	. QV	.	.	.	.
7.000	177.5605	413.46	. QV	.	.	.	.
7.083	180.4231	415.66	. QV	.	.	.	.
7.167	183.3008	417.84	. QV	.	.	.	.
7.250	186.1941	420.10	. QV	.	.	.	.
7.333	189.1029	422.35	. QV	.	.	.	.
7.417	192.0276	424.68	. QV	.	.	.	.
7.500	194.9683	426.99	. QV	.	.	.	.
7.583	197.9255	429.38	. QV	.	.	.	.
7.667	200.8990	431.76	. QV	.	.	.	.
7.750	203.8896	434.22	. Q V	.	.	.	.
7.833	206.8970	436.67	. Q V	.	.	.	.
7.917	209.9218	439.21	. Q V	.	.	.	.
8.000	212.9641	441.73	. Q V	.	.	.	.
8.083	216.0243	444.35	. Q V	.	.	.	.
8.167	219.1025	446.95	. Q V	.	.	.	.
8.250	222.1993	449.65	. Q V	.	.	.	.
8.333	225.3145	452.33	. Q V	.	.	.	.
8.417	228.4489	455.12	. Q V	.	.	.	.
8.500	231.6024	457.89	. Q V	.	.	.	.
8.583	234.7757	460.76	. Q V	.	.	.	.
8.667	237.9686	463.62	. Q V	.	.	.	.
8.750	241.1820	466.59	. Q V	.	.	.	.
8.833	244.4158	469.54	. Q V	.	.	.	.
8.917	247.6707	472.61	. Q V	.	.	.	.
9.000	250.9467	475.67	. Q V	.	.	.	.
9.083	254.2445	478.84	. Q V	.	.	.	.
9.167	257.5641	482.01	. Q V	.	.	.	.
9.250	260.9063	485.29	. Q V	.	.	.	.
9.333	264.2711	488.57	. Q V	.	.	.	.
9.417	267.6594	491.98	. Q V	.	.	.	.
9.500	271.0711	495.37	. Q V	.	.	.	.
9.583	274.5071	498.91	. Q V	.	.	.	.
9.667	277.9673	502.43	. Q V	.	.	.	.
9.750	281.4529	506.10	. Q V	.	.	.	.
9.833	284.9636	509.76	. Q V	.	.	.	.
9.917	288.5005	513.56	. Q V	.	.	.	.
10.000	292.0637	517.37	. Q V	.	.	.	.
10.083	295.6541	521.33	. Q V	.	.	.	.
10.167	299.2717	525.28	. Q V	.	.	.	.
10.250	302.9177	529.40	. Q V	.	.	.	.

10.333	306.5921	533.52	. Q V . . . .
10.417	310.2960	537.80	. Q V . . . .
10.500	314.0294	542.09	. Q V . . . .
10.583	317.7935	546.55	. Q V . . . .
10.667	321.5885	551.02	. Q V . . . .
10.750	325.4155	555.69	. Q V . . . .
10.833	329.2747	560.36	. Q V . . . .
10.917	333.1675	565.23	. Q V . . . .
11.000	337.0940	570.12	. Q V . . . .
11.083	341.0556	575.23	. Q V . . . .
11.167	345.0525	580.35	. Q V . . . .
11.250	349.0862	585.70	. Q V . . . .
11.333	353.1569	591.07	. Q V . . . .
11.417	357.2663	596.69	. Q V . . . .
11.500	361.4146	602.33	. Q V . . . .
11.583	365.6035	608.24	. Q V . . . .
11.667	369.8333	614.17	. Q V . . . .
11.750	374.1060	620.39	. Q V . . . .
11.833	378.4218	626.65	. Q V . . . .
11.917	382.7828	633.22	. Q V . . . .
12.000	387.1893	639.83	. Q V . . . .
12.083	391.6559	648.55	. Q V . . . .
12.167	396.1978	659.47	. Q V . . . .
12.250	400.8279	672.29	. Q V . . . .
12.333	405.5658	687.95	. Q V . . . .
12.417	410.4274	705.92	. Q V . . . .
12.500	415.4344	727.01	. Q V . . . .
12.583	420.6040	750.63	. Q V . . . .
12.667	425.9777	780.25	. Q V . . . .
12.750	431.6291	820.59	. Q V . . . .
12.833	437.4817	849.80	. Q V . . . .
12.917	443.5061	874.74	. Q V . . . .
13.000	449.6748	895.69	. Q V . . . .
13.083	455.9812	915.69	. Q V. . . . .
13.167	462.4160	934.33	. Q V. . . . .
13.250	468.9766	952.59	. Q V. . . . .
13.333	475.6536	969.51	. Q V. . . . .
13.417	482.4480	986.54	. Q V. . . . .
13.500	489.3592	1003.50	. Q V. . . . .
13.583	496.3859	1020.29	. Q V. . . . .
13.667	503.5298	1037.29	. Q V. . . . .
13.750	510.7961	1055.07	. Q V . . . .
13.833	518.1870	1073.16	. Q V . . . .
13.917	525.7136	1092.87	. Q V . . . .
14.000	533.3854	1113.96	. Q V . . . .
14.083	541.2859	1147.14	. Q V . . . .
14.167	549.5083	1193.89	. Q V . . . .
14.250	558.1329	1252.29	. Q .V . . . .
14.333	567.2855	1328.97	. Q .V . . . .
14.417	577.0646	1419.92	. Q .V . . . .
14.500	587.5966	1529.25	. Q .V . . . .
14.583	598.9811	1653.04	. Q .V . . . .
14.667	611.4451	1809.77	. Q . V . . . .
14.750	625.3917	2025.05	. Q V . . . .
14.833	640.4052	2179.95	. Q V . . . .
14.917	656.3291	2312.16	. .QV . . . .
15.000	673.0206	2423.61	. .Q V . . . .
15.083	690.4509	2530.88	. . QV . . . .
15.167	708.5805	2632.42	. . QV . . . .
15.250	727.4106	2734.13	. . QV . . . .
15.333	746.9093	2831.21	. . QV . . . .
15.417	766.9788	2914.10	. . QV . . . .
15.500	787.4969	2979.23	. . QV . . . .
15.583	808.3951	3034.41	. . QV . . . .
15.667	829.5411	3070.40	. . QV . . . .
15.750	850.9122	3103.09	. . QV . . . .
15.833	872.4171	3122.50	. . Q V . . . .
15.917	894.1872	3161.02	. . Q V . . . .
16.000	916.2424	3202.42	. . Q V . . . .
16.083	939.5098	3378.42	. . Q V . . . .
16.167	965.2238	3733.68	. . QV. . . . .
16.250	993.4692	4101.23	. . VQ . . . .
16.333	1025.3831	4633.90	. . V Q . . . .
16.417	1060.6456	5120.13	. . V Q . . . .
16.500	1100.1050	5729.51	. . .V Q . . . .
16.583	1143.4655	6295.94	. . V .Q . . . .
16.667	1192.7780	7160.17	. . V . Q . . . .
16.750	1248.5070	8091.85	. . V . Q. . . .
16.833	1293.8918	6589.89	. . V . Q . . . .
16.917	1333.4764	5747.68	. . V Q . . . . .
17.000	1368.6704	5110.16	. . Q V . . . . .
17.083	1402.4688	4907.53	. . Q V . . . . .
17.167	1434.3495	4629.08	. . Q V . . . . .
17.250	1464.4817	4375.20	. .Q V . . . . .
17.333	1492.3303	4043.62	. Q. V. . . . .
17.417	1518.5837	3811.99	. Q . V. . . . .
17.500	1543.3590	3597.36	. Q . V . . . .
17.583	1566.1343	3306.97	. Q . V . . . .
17.667	1587.2417	3064.80	. Q . .V . . . .
17.750	1606.1378	2743.72	. Q . .V . . . .
17.833	1623.2714	2487.78	. Q . . V . . . .
17.917	1639.1564	2306.51	.Q . . V . . . .
18.000	1654.0908	2168.49	Q . . V . . . .
18.083	1668.1936	2047.73	Q . . V . . . .
18.167	1681.3976	1917.22	Q. . . V . . . .
18.250	1693.8790	1812.30	Q . . . V . . . .
18.333	1705.5912	1700.61	Q . . . V . . . .
18.417	1716.6542	1606.34	Q . . . V . . . .
18.500	1727.1525	1524.35	Q . . . V . . . .
18.583	1736.9102	1416.82	Q . . . V . . . .
18.667	1745.9828	1317.35	Q . . . V . . . .
18.750	1754.5200	1239.60	Q . . . V . . . .
18.833	1762.6394	1178.94	Q . . . V . . . .
18.917	1770.3486	1119.38	Q . . . V . . . .
19.000	1777.6024	1053.25	Q . . . V . . . .
19.083	1784.2437	964.31	Q . . . V . . . .
19.167	1790.5671	918.18	Q . . . V . . . .
19.250	1796.6511	883.40	Q . . . V . . . .
19.333	1802.5364	854.54	Q . . . V . . . .
19.417	1808.2213	825.45	Q . . . V . . . .
19.500	1813.7134	797.44	Q . . . V . . . .
19.583	1819.0369	772.97	Q . . . V . . . .
19.667	1824.2148	751.84	Q . . . V . . . .
19.750	1829.2578	732.25	Q . . . V . . . .
19.833	1834.1747	713.93	Q . . . V . . . .
19.917	1838.9674	695.91	Q . . . V . . . .
20.000	1843.6428	678.87	Q . . . V . . . .
20.083	1848.2219	664.89	Q . . . V . . . .
20.167	1852.7145	652.32	Q . . . V . . . .
20.250	1857.1229	640.11	Q . . . V . . . .
20.333	1861.4519	628.57	Q . . . V . . . .
20.417	1865.6989	616.66	Q . . . V . . . .
20.500	1869.8691	605.53	Q . . . V . . . .
20.583	1873.9708	595.57	Q . . . V . . . .
20.667	1878.0073	586.10	Q . . . V . . . .
20.750	1881.9790	576.69	Q . . . V . . . .
20.833	1885.8864	567.34	Q . . . V . . . .
20.917	1889.7290	557.96	Q . . . V . . . .
21.000	1893.5035	548.06	Q . . . V . . . .
21.083	1897.2205	539.69	Q . . . V . . . .
21.167	1900.8866	532.32	Q . . . V . . . .
21.250	1904.5061	525.55	Q . . . V . . . .
21.333	1908.0785	518.71	Q . . . V . . . .
21.417	1911.6039	511.88	Q . . . V . . . .

21.500	1915.0817	504.98	.	Q	.	.	.	V	.
21.583	1918.5100	497.79	.	Q	.	.	.	V	.
21.667	1921.8829	489.75	.	Q	.	.	.	V	.
21.750	1925.1906	480.27	.	Q	.	.	.	V	.
21.833	1928.4030	466.44	.	Q	.	.	.	V	.
21.917	1931.5333	454.53	.	Q	.	.	.	V	.
22.000	1934.6207	448.29	.	Q	.	.	.	V	.
22.083	1937.6705	442.83	.	Q	.	.	.	V	.
22.167	1940.6820	437.27	.	Q	.	.	.	V	.
22.250	1943.6537	431.49	.	Q	.	.	.	V	.
22.333	1946.5870	425.92	.	Q	.	.	.	V	.
22.417	1949.4828	420.45	.	Q	.	.	.	V	.
22.500	1952.3413	415.07	.	Q	.	.	.	V	.
22.583	1955.1621	409.59	.	Q	.	.	.	V	.
22.667	1957.9415	403.57	.	Q	.	.	.	V	.
22.750	1960.6740	396.76	.	Q	.	.	.	V	.
22.833	1963.3748	392.16	.	Q	.	.	.	V	.
22.917	1966.0481	388.18	.	Q	.	.	.	V	.
23.000	1968.6952	384.37	.	Q	.	.	.	V	.
23.083	1971.3162	380.56	.	Q	.	.	.	V	.
23.167	1973.9115	376.84	.	Q	.	.	.	V	.
23.250	1976.4819	373.24	.	Q	.	.	.	V	.
23.333	1979.0283	369.73	.	Q	.	.	.	V	.
23.417	1981.5511	366.32	.	Q	.	.	.	V	.
23.500	1984.0509	362.97	.	Q	.	.	.	V	.
23.583	1986.5282	359.71	.	Q	.	.	.	V	.
23.667	1988.9839	356.57	.	Q	.	.	.	V	.
23.750	1991.4189	353.57	.	Q	.	.	.	V	.
23.833	1993.8344	350.73	.	Q	.	.	.	V	.
23.917	1996.2307	347.96	.	Q	.	.	.	V	.
24.000	1998.6085	345.26	.	Q	.	.	.	V	.
24.083	2000.9518	340.24	.	Q	.	.	.	V	.
24.167	2003.2413	332.44	.	Q	.	.	.	V	.
24.250	2005.4637	322.69	.	Q	.	.	.	V	.
24.333	2007.5938	309.29	.	Q	.	.	.	V	.
24.417	2009.6149	293.47	.	Q	.	.	.	V	.
24.500	2011.5000	273.71	.	Q	.	.	.	V	.
24.583	2013.2311	251.35	.	Q	.	.	.	V	.
24.667	2014.7552	221.32	.	Q	.	.	.	V	.
24.750	2015.9803	177.89	Q	.	.	.	.	V	.
24.833	2017.0125	149.86	Q	.	.	.	.	V	.
24.917	2017.8972	128.46	Q	.	.	.	.	V	.
25.000	2018.6738	112.76	Q	.	.	.	.	V	.
25.083	2019.3571	99.21	Q	.	.	.	.	V	.
25.167	2019.9618	87.81	Q	.	.	.	.	V	.
25.250	2020.4977	77.82	Q	.	.	.	.	V	.
25.333	2020.9795	69.96	Q	.	.	.	.	V	.
25.417	2021.4128	62.92	Q	.	.	.	.	V	.
25.500	2021.8007	56.31	Q	.	.	.	.	V	.
25.583	2022.1522	51.04	Q	.	.	.	.	V	.
25.667	2022.4695	46.06	Q	.	.	.	.	V	.
25.750	2022.7577	41.84	Q	.	.	.	.	V	.
25.833	2023.0221	38.40	Q	.	.	.	.	V	.
25.917	2023.2648	35.23	Q	.	.	.	.	V	.
26.000	2023.4868	32.25	Q	.	.	.	.	V	.
26.083	2023.6890	29.35	Q	.	.	.	.	V	.
26.167	2023.8733	26.77	Q	.	.	.	.	V	.
26.250	2024.0399	24.20	Q	.	.	.	.	V	.
26.333	2024.1901	21.79	Q	.	.	.	.	V	.
26.417	2024.3203	18.91	Q	.	.	.	.	V	.
26.500	2024.4370	16.95	Q	.	.	.	.	V	.
26.583	2024.5436	15.48	Q	.	.	.	.	V	.
26.667	2024.6425	14.36	Q	.	.	.	.	V	.
26.750	2024.7333	13.19	Q	.	.	.	.	V	.
26.833	2024.8163	12.06	Q	.	.	.	.	V	.
26.917	2024.8917	10.95	Q	.	.	.	.	V	.
27.000	2024.9603	9.97	Q	.	.	.	.	V	.
27.083	2025.0256	9.49	Q	.	.	.	.	V	.
27.167	2025.0881	9.08	Q	.	.	.	.	V	.
27.250	2025.1479	8.69	Q	.	.	.	.	V	.
27.333	2025.2052	8.31	Q	.	.	.	.	V	.
27.417	2025.2601	7.98	Q	.	.	.	.	V	.
27.500	2025.3129	7.66	Q	.	.	.	.	V	.
27.583	2025.3635	7.35	Q	.	.	.	.	V	.
27.667	2025.4120	7.04	Q	.	.	.	.	V	.
27.750	2025.4585	6.74	Q	.	.	.	.	V	.
27.833	2025.5029	6.45	Q	.	.	.	.	V	.
27.917	2025.5453	6.16	Q	.	.	.	.	V	.
28.000	2025.5858	5.88	Q	.	.	.	.	V	.
28.083	2025.6244	5.61	Q	.	.	.	.	V	.
28.167	2025.6611	5.33	Q	.	.	.	.	V	.
28.250	2025.6960	5.06	Q	.	.	.	.	V	.
28.333	2025.7291	4.80	Q	.	.	.	.	V	.
28.417	2025.7605	4.55	Q	.	.	.	.	V	.
28.500	2025.7902	4.31	Q	.	.	.	.	V	.
28.583	2025.8182	4.08	Q	.	.	.	.	V	.
28.667	2025.8447	3.85	Q	.	.	.	.	V	.
28.750	2025.8696	3.62	Q	.	.	.	.	V	.
28.833	2025.8929	3.39	Q	.	.	.	.	V	.
28.917	2025.9147	3.16	Q	.	.	.	.	V	.
29.000	2025.9351	2.95	Q	.	.	.	.	V	.
29.083	2025.9540	2.75	Q	.	.	.	.	V	.
29.167	2025.9714	2.54	Q	.	.	.	.	V	.
29.250	2025.9875	2.34	Q	.	.	.	.	V	.
29.333	2026.0023	2.14	Q	.	.	.	.	V	.
29.417	2026.0156	1.94	Q	.	.	.	.	V	.
29.500	2026.0276	1.74	Q	.	.	.	.	V	.
29.583	2026.0382	1.55	Q	.	.	.	.	V	.
29.667	2026.0476	1.36	Q	.	.	.	.	V	.
29.750	2026.0557	1.18	Q	.	.	.	.	V	.
29.833	2026.0630	1.07	Q	.	.	.	.	V	.
29.917	2026.0699	1.02	Q	.	.	.	.	V	.
30.000	2026.0767	0.97	Q	.	.	.	.	V	.
30.083	2026.0830	0.92	Q	.	.	.	.	V	.
30.167	2026.0890	0.87	Q	.	.	.	.	V	.
30.250	2026.0946	0.82	Q	.	.	.	.	V	.
30.333	2026.1000	0.77	Q	.	.	.	.	V	.
30.417	2026.1050	0.72	Q	.	.	.	.	V	.
30.500	2026.1096	0.68	Q	.	.	.	.	V	.
30.583	2026.1140	0.63	Q	.	.	.	.	V	.
30.667	2026.1180	0.59	Q	.	.	.	.	V	.
30.750	2026.1219	0.57	Q	.	.	.	.	V	.
30.833	2026.1257	0.56	Q	.	.	.	.	V	.
30.917	2026.1294	0.54	Q	.	.	.	.	V	.
31.000	2026.1331	0.52	Q	.	.	.	.	V	.
31.083	2026.1366	0.51	Q	.	.	.	.	V	.
31.167	2026.1400	0.49	Q	.	.	.	.	V	.
31.250	2026.1433	0.48	Q	.	.	.	.	V	.
31.333	2026.1465	0.46	Q	.	.	.	.	V	.
31.417	2026.1495	0.45	Q	.	.	.	.	V	.
31.500	2026.1525	0.43	Q	.	.	.	.	V	.
31.583	2026.1554	0.42	Q	.	.	.	.	V	.
31.667	2026.1582	0.40	Q	.	.	.	.	V	.
31.750	2026.1609	0.39	Q	.	.	.	.	V	.
31.833	2026.1635	0.38	Q	.	.	.	.	V	.
31.917	2026.1659	0.36	Q	.	.	.	.	V	.
32.000	2026.1683	0.35	Q	.	.	.	.	V	.
32.083	2026.1707	0.33	Q	.	.	.	.	V	.
32.167	2026.1729	0.32	Q	.	.	.	.	V	.
32.250	2026.1749	0.31	Q	.	.	.	.	V	.
32.333	2026.1769	0.29	Q	.	.	.	.	V	.
32.417	2026.1788	0.28	Q	.	.	.	.	V	.
32.500	2026.1807	0.27	Q	.	.	.	.	V	.
32.583	2026.1824	0.25	Q	.	.	.	.	V	.

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  32.667   2026.1841      0.24  Q          .          .          .        V.
  32.750   2026.1857      0.23  Q          .          .          .        V.
  32.833   2026.1871      0.21  Q          .          .          .        V.
  32.917   2026.1885      0.20  Q          .          .          .        V.
  33.000   2026.1898      0.19  Q          .          .          .        V.
  33.083   2026.1910      0.18  Q          .          .          .        V.
  33.167   2026.1921      0.16  Q          .          .          .        V.
  33.250   2026.1932      0.15  Q          .          .          .        V.
  33.333   2026.1942      0.14  Q          .          .          .        V.
  33.417   2026.1951      0.13  Q          .          .          .        V.
  33.500   2026.1958      0.12  Q          .          .          .        V.
  33.583   2026.1965      0.10  Q          .          .          .        V.
  33.667   2026.1971      0.09  Q          .          .          .        V.
  33.750   2026.1976      0.08  Q          .          .          .        V.
  33.833   2026.1981      0.07  Q          .          .          .        V.
  33.917   2026.1985      0.06  Q          .          .          .        V.
  34.000   2026.1989      0.04  Q          .          .          .        V.
  34.083   2026.1991      0.03  Q          .          .          .        V.
  34.167   2026.1992      0.02  Q          .          .          .        V.
  34.250   2026.1993      0.01  Q          .          .          .        V.


****************************************************************************
  FLOW PROCESS FROM NODE   6355.00 TO NODE   6355.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
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  END OF FLOODSCx ROUTING ANALYSIS
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PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

HYDROLOGY ANALYSIS FOR CANADA GOBERNADORA PROPOSED CONDITION 100-YEAR HIGH CONFIDENCE STORM EVENT (MULTI-DAY HYDROGRAPH)

Losses

Node	E0780
Total Area (ac)	4,741.3
24-Hour Rainfall Depth (in)	5.63
Fm (in/hr)	0.19
Y-Bar	0.45

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	45.1	64.8	11.0	0.0	45.1	64.8	11.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	896.8	0.0	0.0	0.0	896.8	0.0
2 Dwellings / Acre	70	32	56	69	75	0.0	0.0	1,034.3	0.0	0.0	0.0	1,034.3	0.0
1 Dwelling / 2.5 Acre	90	32	56	69	75	0.0	28.7	1,593.6	0.0	0.0	28.7	1,593.6	0.0
Public Park	85	32	56	69	75	0.0	0.0	1,067.0	0.0	0.0	0.0	1,067.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grass (Fair)	100	50	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Woodland (Fair)	100	36	60	73	79	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
2 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
1 Dwelling / 2.5 Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.58	0.72	0.82	0.86
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.07	0.34	0.53	0.63
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.23	0.48	0.63	0.72
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.17	0.43	0.60	0.68
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.01	0.27	0.46	0.58
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.13	0.39	0.56	0.67
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.04	0.30	0.49	0.60
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.56	0.72	0.82	0.88
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.11	0.37	0.56	0.65
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.16	0.43	0.60	0.68
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.11	0.37	0.56	0.65

Losses

Node	P6311
Total Area (ac)	299.3
24-Hour Rainfall Depth (in)	5.63
Fm (in/hr)	0.26
Y-Bar	0.49

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.6	9.3	6.4	0.2	0.6	9.3	6.4	0.2
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	6.5	0.0	0.0	0.0	6.5	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	15.4	46.7	13.6	0.0	15.4	46.7	13.6
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grass (Fair)	100	50	69	79	84	2.3	8.0	31.7	18.2	2.3	8.0	31.7	18.2
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	1.8	44.5	22.2	0.0	1.8	44.5	22.2
Woodland (Fair)	100	36	60	73	79	5.1	0.2	3.5	0.4	5.1	0.2	3.5	0.4
Fallow (Poor)	100	77	86	91	94	1.3	1.1	0.2	0.2	1.3	1.1	0.2	0.2
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	30.4	11.9	9.5	8.1	30.4	11.9	9.5	8.1
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.58	0.72	0.82	0.86
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.07	0.34	0.53	0.63
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.23	0.48	0.63	0.72
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.17	0.43	0.60	0.68
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.18	0.45	0.61	0.68
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.01	0.27	0.46	0.58
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.13	0.39	0.56	0.67
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.04	0.30	0.49	0.60
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.56	0.72	0.82	0.88
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.11	0.37	0.56	0.65
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.16	0.43	0.60	0.68
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.11	0.37	0.56	0.65

Losses

Node	P6330
Total Area (ac)	300.7
24-Hour Rainfall Depth (in)	5.63
Fm (in/hr)	0.24
Y-Bar	0.42

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-4 Dwellings / Acre	60	32	56	69	75	0.0	0.0	0.0	7.2	0.0	0.0	0.0	7.2
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	13.3	4.6	0.2	0.0	13.3	4.6	0.2	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	2.8	6.9	47.0	0.0	2.8	6.9	47.0
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grass (Fair)	100	50	69	79	84	0.0	8.4	0.0	4.4	0.0	8.4	0.0	4.4
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	1.3	7.8	34.5	35.8	1.3	7.8	34.5	35.8
Woodland (Fair)	100	36	60	73	79	1.5	3.7	0.4	6.2	1.5	3.7	0.4	6.2
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	5.1	38.2	15.2	56.2	5.1	38.2	15.2	56.2
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.58	0.72	0.82	0.86
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.07	0.34	0.53	0.63
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.23	0.48	0.63	0.72
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.17	0.43	0.60	0.68
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.18	0.45	0.61	0.68
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.01	0.27	0.46	0.58
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.13	0.39	0.56	0.67
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.04	0.30	0.49	0.60
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.56	0.72	0.82	0.88
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.11	0.37	0.56	0.65
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.16	0.43	0.60	0.68
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.11	0.37	0.56	0.65

Losses

Node	P6355
Total Area (ac)	697.9
24-Hour Rainfall Depth (in)	5.63
Fm (in/hr)	0.21
Y-Bar	0.36

Description	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	4.7	12.0	16.9	0.0	4.7	12.0	16.9
5-7 Dwellings / Acre	50	32	56	69	75	0.0	28.0	92.7	51.3	0.0	28.0	92.7	51.3
3-4 Dwellings / Acre	60	32	56	69	75	0.0	5.1	2.7	16.7	0.0	5.1	2.7	16.7
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	27.5	75.0	14.4	1.8	27.5	75.0	14.4	1.8
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	9.9	52.7	21.3	0.0	9.9	52.7	21.3
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	6.2	2.0	0.0	0.0	6.2	2.0
Grass (Fair)	100	50	69	79	84	0.0	17.5	61.8	20.4	0.0	17.5	61.8	20.4
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.4	0.0	4.0	0.0	0.4	0.0	4.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	5.4	39.7	31.9	0.0	5.4	39.7	31.9
Woodland (Fair)	100	36	60	73	79	1.8	8.1	9.6	3.8	1.8	8.1	9.6	3.8
Fallow (Poor)	100	77	86	91	94	0.0	2.2	8.0	10.7	0.0	2.2	8.0	10.7
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	2.2	12.3	5.7	11.5	2.2	12.3	5.7	11.5
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Description		S				Ia				Y			
		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.58	0.72	0.82	0.86
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.07	0.34	0.53	0.63
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.23	0.48	0.63	0.72
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.17	0.43	0.60	0.68
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.18	0.45	0.61	0.68
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.01	0.27	0.46	0.58
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.13	0.39	0.56	0.67
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.04	0.30	0.49	0.60
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.56	0.72	0.82	0.88
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.11	0.37	0.56	0.65
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.16	0.43	0.60	0.68
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.11	0.37	0.56	0.65

Losses

Node	P6371
Total Area (ac)	922.3
24-Hour Rainfall Depth (in)	5.63
Fm (in/hr)	0.12
Y-Bar	0.25

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.2	0.3	0.0	0.0	0.2	0.3
11+ Dwellings / Acre	20	32	56	69	75	1.9	27.1	200.9	212.2	1.9	27.1	200.9	212.2
5-7 Dwellings / Acre	50	32	56	69	75	0.0	1.0	3.5	34.3	0.0	1.0	3.5	34.3
3-4 Dwellings / Acre	60	32	56	69	75	0.0	49.2	120.2	98.1	0.0	49.2	120.2	98.1
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	37.5	28.4	0.9	0.0	37.5	28.4	0.9
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.2	4.4	0.0	0.0	0.2	4.4	0.0
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grass (Fair)	100	50	69	79	84	0.0	10.6	28.0	16.3	0.0	10.6	28.0	16.3
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	1.6	24.9	0.2	0.0	1.6	24.9	0.2
Woodland (Fair)	100	36	60	73	79	0.0	8.0	11.1	1.1	0.0	8.0	11.1	1.1
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.2	0.0	0.0	0.0	0.2	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.58	0.72	0.82	0.86
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.07	0.34	0.53	0.63
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.23	0.48	0.63	0.72
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.17	0.43	0.60	0.68
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.18	0.45	0.61	0.68
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.01	0.27	0.46	0.58
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.13	0.39	0.56	0.67
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.04	0.30	0.49	0.60
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.56	0.72	0.82	0.88
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.11	0.37	0.56	0.65
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.16	0.43	0.60	0.68
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.11	0.37	0.56	0.65

Losses

Node	P6395
Total Area (ac)	329.6
24-Hour Rainfall Depth (in)	5.63
Fm (in/hr)	0.15
Y-Bar	0.34

	Ap	Curve Number (AMC II)				Subarea (ac)				Total (ac)			
Description	%	A	B	C	D	A	B	C	D	A	B	C	D
Commercial	10	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11+ Dwellings / Acre	20	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5-7 Dwellings / Acre	50	32	56	69	75	0.0	0.0	0.2	0.2	0.0	0.0	0.2	0.2
3-4 Dwellings / Acre	60	32	56	69	75	0.0	22.5	69.8	185.8	0.0	22.5	69.8	185.8
Public Park	85	32	56	69	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barren (Poor)	100	78	86	91	93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chaparral, Broadleaf (Fair)	100	40	63	75	81	0.0	0.0	0.2	0.0	0.0	0.0	0.2	0.0
Chaparral, Narrowleaf (Fair)	100	55	72	81	86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grass (Fair)	100	50	69	79	84	0.2	2.3	5.8	18.4	0.2	2.3	5.8	18.4
Meadows or Cienegas (Fair)	100	51	70	80	84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meadows or Cienegas (Good)	100	30	58	71	78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open Brush (Fair)	100	46	66	77	83	0.0	0.0	5.3	4.6	0.0	0.0	5.3	4.6
Woodland (Fair)	100	36	60	73	79	0.2	3.8	3.9	5.0	0.2	3.8	3.9	5.0
Fallow (Poor)	100	77	86	91	94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orchards, Evergreen (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasture, Dryland (Fair)	100	49	69	79	84	0.0	0.0	0.0	1.4	0.0	0.0	0.0	1.4
Turf (Fair)	100	44	65	77	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

		S				Ia				Y			
Description		A	B	C	D	A	B	C	D	A	B	C	D
Commercial		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
11+ Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
5-7 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
3-4 Dwellings / Acre		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
Public Park		21.25	7.86	4.49	3.33	4.25	1.57	0.90	0.67	0.01	0.25	0.43	0.53
Impervious		0.20	0.20	0.20	0.20	0.04	0.04	0.04	0.04	0.96	0.96	0.96	0.96
Barren (Poor)		2.82	1.63	0.99	0.75	0.56	0.33	0.20	0.15	0.58	0.72	0.82	0.86
Chaparral, Broadleaf (Fair)		15.00	5.87	3.33	2.35	3.00	1.17	0.67	0.47	0.07	0.34	0.53	0.63
Chaparral, Narrowleaf (Fair)		8.18	3.89	2.35	1.63	1.64	0.78	0.47	0.33	0.23	0.48	0.63	0.72
Grass (Fair)		10.00	4.49	2.66	1.90	2.00	0.90	0.53	0.38	0.17	0.43	0.60	0.68
Meadows or Cienegas (Fair)		9.61	4.29	2.50	1.90	1.92	0.86	0.50	0.38	0.18	0.45	0.61	0.68
Meadows or Cienegas (Good)		23.33	7.24	4.08	2.82	4.67	1.45	0.82	0.56	0.01	0.27	0.46	0.58
Open Brush (Fair)		11.74	5.15	2.99	2.05	2.35	1.03	0.60	0.41	0.13	0.39	0.56	0.67
Woodland (Fair)		17.78	6.67	3.70	2.66	3.56	1.33	0.74	0.53	0.04	0.30	0.49	0.60
Fallow (Poor)		2.99	1.63	0.99	0.64	0.60	0.33	0.20	0.13	0.56	0.72	0.82	0.88
Orchards, Evergreen (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.11	0.37	0.56	0.65
Pasture, Dryland (Fair)		10.41	4.49	2.66	1.90	2.08	0.90	0.53	0.38	0.16	0.43	0.60	0.68
Turf (Fair)		12.73	5.38	2.99	2.20	2.55	1.08	0.60	0.44	0.11	0.37	0.56	0.65

```
**************************************************************************

             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
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                         Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: CP63CH-M.FLD
  TIME/DATE OF STUDY: 13:17 04/01/2004


**************************************************************************
  FLOW PROCESS FROM NODE    100.00 TO NODE    780.00 IS CODE =   1
--------------------------------------------------------------------------

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  4741.3 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

        WATERSHED AREA =    4741.300 ACRES
        BASEFLOW =   0.000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    0.480 HOURS
         CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
         THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
         MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
        VALLEY(DEVELOPED):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  1.000
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        VALLEY(UNDEVELOPED)/DESERT:
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.190
        LOW LOSS FRACTION = 0.550
        *HYDROGRAPH MODEL #1 SPECIFIED*

        SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.58
        SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.22
        SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.62
        SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.71
        SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  3.75
        SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  6.28

        *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR = 0.793
         30-MINUTE FACTOR = 0.793
          1-HOUR FACTOR = 0.793
          3-HOUR FACTOR = 0.969
          6-HOUR FACTOR = 0.984
         24-HOUR FACTOR = 0.990

        UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
        UNIT INTERVAL PERCENTAGE OF LAG-TIME =  17.361

        RUNOFF HYDROGRAPH LISTING LIMITS:
        MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
        MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


==========================================================================
                     UNIT HYDROGRAPH DETERMINATION

--------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------
        1                1.137               652.130
        2                4.082              1688.625
        3                8.525              2547.514
        4               14.577              3470.279
        5               24.203              5519.575
        6               43.203             10894.611
        7               57.937              8448.228
        8               65.484              4327.674
        9               70.911              3111.621
       10               75.443              2599.076
       11               78.982              2029.171
       12               82.133              1806.516
       13               84.749              1499.854
       14               87.075              1334.078
       15               88.974              1088.566
       16               90.645               958.165
       17               92.163               870.854
       18               93.467               747.418
       19               94.550               621.273
       20               95.489               538.119
       21               96.255               439.106
       22               96.815               321.374
       23               97.375               321.055
       24               97.900               301.316
       25               98.079               102.631
       26               98.169                51.477
       27               98.259                51.411
       28               98.349                51.608
       29               98.439                51.604
       30               98.528                51.219
       31               98.618                51.477
       32               98.708                51.477
       33               98.798                51.608
       34               98.887                51.346
       35               98.977                51.608
       36               99.067                51.604
       37               99.157                51.604
       38               99.247                51.604
       39               99.337                51.604
       40               99.427                51.604
       41               99.517                51.604
       42               99.607                51.604
       43               99.697                51.604
       44               99.787                51.604
       45               99.877                51.604
       46               99.967                51.604
       47              100.000                18.785


--------------------------------------------------------------------------
    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =     993.1859
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =    1463.6560
--------------------------------------------------------------------------
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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 2025.0 4050.0 6075.0 8100.0
14.000	382.5607	875.72	. Q V . . .
14.083	388.8354	911.09	. Q V . . .
14.167	395.4516	960.67	. Q V . . .
14.250	402.4846	1021.19	. Q V . . .
14.333	410.0252	1094.90	. Q .V . . .
14.417	418.2438	1193.34	. Q .V . . .
14.500	427.5862	1356.53	. Q .V . . .
14.583	437.8633	1492.23	. Q .V . . .
14.667	448.7657	1583.02	. Q . V . . .
14.750	460.2062	1661.17	. Q . V . . .
14.833	472.1692	1737.02	. Q . V . . .
14.917	484.6229	1808.27	. Q . V . . .
15.000	497.5807	1881.49	. Q. V . . .
15.083	511.0368	1953.82	. Q. V . . .
15.167	525.0175	2029.99	. Q V . . .
15.250	539.5292	2107.09	. Q V . . .
15.333	554.6136	2190.26	. Q V . . .
15.417	570.1863	2261.16	. .Q V . . .
15.500	586.1271	2314.61	. .Q V . . .
15.583	602.3378	2353.79	. .Q V . . .
15.667	618.7654	2385.29	. .Q V . . .
15.750	635.1664	2381.42	. .Q V . . .
15.833	650.8051	2270.74	. .Q V . . .
15.917	666.4456	2271.00	. .Q V . . .
16.000	683.4635	2471.00	. . Q V . . .
16.083	704.0692	2991.95	. . Q V. . .
16.167	729.6202	3710.00	. . QV. . .
16.250	759.8992	4396.52	. . VQ . .
16.333	795.6564	5191.94	. . .V Q . .
16.417	839.2965	6336.55	. . . V .Q .
16.500	895.0574	8096.49	. . . V . Q.
16.583	942.1941	6844.24	. . . V . Q .
16.667	976.4747	4977.55	. . . Q V . .
16.750	1005.6393	4234.69	. . Q V . .
16.833	1033.0155	3975.03	. . Q. V . .
16.917	1058.5345	3705.36	. . Q . V . .
17.000	1082.5542	3487.65	. . Q . V. .
17.083	1104.8390	3235.76	. . Q . V .
17.167	1125.6932	3028.04	. . Q . V .
17.250	1144.9094	2790.18	. . Q . .V .
17.333	1162.7605	2591.97	. . Q . .V .
17.417	1179.2396	2392.77	. .Q . . V .
17.500	1193.8737	2124.86	. Q . . V .
17.583	1206.8674	1886.69	. Q. . . V .
17.667	1218.6790	1715.04	. Q . . . V .
17.750	1229.4158	1558.98	. Q . . . V .
17.833	1239.1486	1413.20	. Q . . . V .
17.917	1248.2129	1316.13	. Q . . . V .
18.000	1256.5792	1214.79	. Q . . . V .
18.083	1263.9249	1066.59	. Q . . . V .
18.167	1270.6771	980.42	. Q . . . V .
18.250	1277.0466	924.85	. Q . . . V .
18.333	1283.0781	875.77	. Q . . . V .
18.417	1288.7410	822.24	. Q . . . V .
18.500	1293.9634	758.30	. Q . . . V .
18.583	1298.8234	705.67	. Q . . . V .
18.667	1303.4199	667.42	. Q . . . V .
18.750	1307.7977	635.65	. Q . . . V .
18.833	1311.9866	608.22	. Q . . . V .
18.917	1316.0081	583.92	. Q . . . V .
19.000	1319.8757	561.58	. Q . . . V .
19.083	1323.6180	543.39	. Q . . . V .
19.167	1327.2483	527.11	. Q . . . V .
19.250	1330.7816	513.04	. Q . . . V .
19.333	1334.2278	500.38	. Q . . . V .
19.417	1337.5909	488.33	. Q . . . V .
19.500	1340.8755	476.91	. Q . . . V .
19.583	1344.0837	465.84	. Q . . . V .
19.667	1347.2164	454.86	. Q . . . V .
19.750	1350.2689	443.22	. Q . . . V .
19.833	1353.2319	430.23	. Q . . . V .
19.917	1356.0327	406.68	. Q . . . V .
20.000	1358.7169	389.75	.Q . . . V .

****
FLOW PROCESS FROM NODE 780.00 TO NODE 6311.00 IS CODE = 5.2

>>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<

*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 4741.3 Ac. ***

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
INTERVALS(Reference: the National Engineering Handbook,
Hydrology, Chapter 17, page 17-52, August,1972,
U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 20.00 CHANNEL Z = 1.00
UPSTREAM ELEVATION(FT) = 408.00
DOWNSTREAM ELEVATION(FT) = 382.00
CHANNEL LENGTH(FT) = 2533.00 MANNING'S FACTOR = 0.040
CONSTANT LOSS RATE(CFS) = 0.00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 8096.49
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 5725.43
CHANNEL NORMAL VELOCITY FOR Q = 5725.43 CFS = 14.18 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.893

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
UNIT INTERVALS IS CSTAR = 0.971

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.000	875.72	860.42	860.42
14.083	911.09	891.37	891.37
14.167	960.67	933.07	933.07
14.250	1021.19	987.40	987.40
14.333	1094.90	1053.75	1053.75
14.417	1193.34	1138.49	1138.49
14.500	1356.53	1265.99	1265.99

14.583	1492.23	1415.65	1415.65
14.667	1583.02	1531.32	1531.32
14.750	1661.17	1617.08	1617.08
14.833	1737.02	1694.40	1694.40
14.917	1808.27	1768.20	1768.20
15.000	1881.49	1840.42	1840.42
15.083	1953.82	1913.21	1913.21
15.167	2029.99	1987.30	1987.30
15.250	2107.09	2063.83	2063.83
15.333	2190.26	2143.68	2143.68
15.417	2261.16	2221.17	2221.17
15.500	2314.61	2284.32	2284.32
15.583	2353.79	2331.56	2331.56
15.667	2385.29	2367.48	2367.48
15.750	2381.42	2383.02	2383.02
15.833	2270.74	2331.12	2331.12
15.917	2271.00	2272.60	2272.60
16.000	2471.00	2362.02	2362.02
16.083	2991.95	2704.83	2704.83
16.167	3710.00	3310.30	3310.30
16.250	4396.52	4010.77	4010.77
16.333	5191.94	4747.22	4747.22
16.417	6336.55	5699.78	5699.78
16.500	8096.49	7118.75	7118.75
16.583	6844.24	7498.70	7498.70
16.667	4977.55	6013.99	6013.99
16.750	4234.69	4669.51	4669.51
16.833	3975.03	4129.11	4129.11
16.917	3705.36	3856.80	3856.80
17.000	3487.65	3610.70	3610.70
17.083	3235.76	3376.62	3376.62
17.167	3028.04	3145.33	3145.33
17.250	2790.18	2923.23	2923.23
17.333	2591.97	2703.85	2703.85
17.417	2392.77	2504.58	2504.58
17.500	2124.86	2274.13	2274.13
17.583	1886.69	2020.82	2020.82
17.667	1715.04	1812.48	1812.48
17.750	1558.98	1646.86	1646.86
17.833	1413.20	1495.20	1495.20
17.917	1316.13	1371.41	1371.41
18.000	1214.79	1271.63	1271.63
18.083	1066.59	1149.02	1149.02
18.167	980.42	1029.77	1029.77
18.250	924.85	956.56	956.56
18.333	875.77	903.44	903.44
18.417	822.24	852.22	852.22
18.500	758.30	794.02	794.02
18.583	705.67	735.39	735.39
18.667	667.42	689.13	689.13
18.750	635.65	653.60	653.60
18.833	608.22	623.69	623.69
18.917	583.92	597.61	597.61
19.000	561.58	574.15	574.15
19.083	543.39	553.67	553.67
19.167	527.11	536.28	536.28
19.250	513.04	520.97	520.97
19.333	500.38	507.51	507.51
19.417	488.33	495.10	495.10
19.500	476.91	483.33	483.33
19.583	465.84	472.06	472.06
19.667	454.86	461.02	461.02
19.750	443.22	449.74	449.74
19.833	430.23	437.50	437.50
19.917	406.68	419.73	419.73
20.000	389.75	399.36	399.36

```
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   1463.656 AF
    OUTFLOW VOLUME =   1463.656 AF
    LOSS    VOLUME =      0.000 AF
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6300.00 TO NODE   6311.00 IS CODE =   1
--------------------------------------------------------------------------------

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of   299.3 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
================================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #2)

         WATERSHED AREA =     299.300 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.250 HOURS
          CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
          THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
          MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.250
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.750
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.260
         LOW LOSS FRACTION = 0.500
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.58
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.22
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.62
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.71
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  3.75
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  6.28

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.987
          30-MINUTE FACTOR = 0.987
           1-HOUR FACTOR = 0.987
           3-HOUR FACTOR = 0.998
           6-HOUR FACTOR = 0.999
          24-HOUR FACTOR = 0.999

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  33.333


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


================================================================================
                      UNIT HYDROGRAPH DETERMINATION

--------------------------------------------------------------------------------
     INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
      NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------------
```

1	3.852	139.411
2	18.445	528.231
3	39.624	766.604
4	55.845	587.160
5	64.124	299.680
6	70.038	214.036
7	74.639	166.538
8	78.230	130.017
9	81.158	105.957
10	83.587	87.936
11	85.638	74.235
12	87.267	58.971
13	88.619	48.932
14	89.699	39.084
15	90.702	36.306
16	91.629	33.565
17	92.506	31.749
18	93.325	29.632
19	94.080	27.335
20	94.768	24.914
21	95.424	23.727
22	95.971	19.796
23	96.509	19.477
24	97.020	18.507
25	97.406	13.985
26	97.766	13.021
27	98.126	13.018
28	98.458	12.019
29	98.594	4.931
30	98.692	3.557
31	98.791	3.557
32	98.889	3.550
33	98.987	3.557
34	99.085	3.551
35	99.183	3.557
36	99.281	3.550
37	99.380	3.550
38	99.478	3.550
39	99.576	3.550
40	99.674	3.550
41	99.772	3.550
42	99.870	3.550
43	99.968	3.550
44	100.000	1.157

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 63.4544

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 93.0370

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	175.0	350.0	525.0	700.0
14.000	27.4201	56.90	. Q	.V	.	.	.
14.083	27.8199	58.05	. Q	.V	.	.	.
14.167	28.2289	59.39	. Q	. V	.	.	.
14.250	28.6481	60.87	. Q	. V	.	.	.
14.333	29.0776	62.37	. Q	. V	.	.	.
14.417	29.5173	63.84	. Q	. V	.	.	.
14.500	29.9675	65.37	. Q	. V	.	.	.
14.583	30.4288	66.98	. Q	. V	.	.	.
14.667	30.9020	68.71	. Q	. V	.	.	.
14.750	31.3886	70.66	. Q	. V	.	.	.
14.833	31.8924	73.15	. Q	. V	.	.	.
14.917	32.4182	76.34	. Q	. V	.	.	.
15.000	32.9709	80.25	. Q	. V	.	.	.
15.083	33.5548	84.78	. Q	. V	.	.	.
15.167	34.1747	90.01	. Q	. V	.	.	.
15.250	34.8354	95.94	. Q	. V	.	.	.
15.333	35.5434	102.79	. Q	. V	.	.	.
15.417	36.2964	109.35	. Q	. V	.	.	.
15.500	37.0791	113.65	. Q	. V	.	.	.
15.583	37.8873	117.35	. Q	. V	.	.	.
15.667	38.7483	125.02	. Q	. V	.	.	.
15.750	39.7040	138.77	. Q	. V	.	.	.
15.833	40.7991	159.00	. Q.	V	.	.	.
15.917	42.1036	189.42	. Q	V	.	.	.
16.000	43.7587	240.31	. . Q	V	.	.	.
16.083	46.2830	366.54	. .	VQ	.	.	.
16.167	50.2558	576.85	. .	.V	. Q	.	.
16.250	54.8830	671.87	. .	. V	.	.	Q .
16.333	58.6946	553.44	. .	. V	.Q	.	.
16.417	61.3488	385.40	. .	. Q V	.	.	.
16.500	63.5069	313.35	. .	Q .	V .	.	.
16.583	65.3583	268.82	. .	Q .	V .	.	.
16.667	66.9643	233.20	. . Q	.	V .	.	.
16.750	68.3720	204.39	. .Q	.	V.	.	.
16.833	69.6157	180.59	. Q	.	V.	.	.
16.917	70.7246	161.01	. Q.	.	V	.	.
17.000	71.7117	143.32	. Q .	.	V	.	.
17.083	72.6072	130.03	. Q .	.	.V	.	.
17.167	73.4245	118.67	. Q .	.	.V	.	.
17.250	74.1925	111.51	. Q .	.	.V	.	.
17.333	74.9179	105.32	. Q .	.	. V	.	.
17.417	75.6078	100.18	. Q .	.	. V	.	.
17.500	76.2639	95.26	. Q .	.	. V	.	.
17.583	76.8878	90.59	. Q .	.	. V	.	.
17.667	77.4810	86.13	. Q .	.	. V	.	.
17.750	78.0483	82.38	. Q .	.	. V	.	.
17.833	78.5843	77.82	. Q .	.	. V	.	.
17.917	79.0999	74.86	. Q .	.	. V	.	.
18.000	79.5932	71.63	. Q .	.	. V	.	.
18.083	80.0531	66.78	. Q .	.	. V	.	.
18.167	80.4845	62.65	. Q .	.	. V	.	.
18.250	80.8860	58.29	. Q .	.	. V	.	.
18.333	81.2565	53.80	. Q .	.	. V	.	.
18.417	81.5859	47.83	. Q .	.	. V	.	.
18.500	81.8953	44.92	. Q .	.	. V	.	.
18.583	82.1922	43.12	. Q .	.	. V	.	.
18.667	82.4790	41.63	. Q .	.	. V	.	.
18.750	82.7565	40.30	. Q .	.	. V	.	.
18.833	83.0257	39.09	. Q .	.	. V	.	.
18.917	83.2874	38.00	. Q .	.	. V	.	.
19.000	83.5424	37.02	. Q .	.	. V	.	.
19.083	83.7913	36.13	. Q .	.	. V	.	.
19.167	84.0343	35.29	. Q .	.	. V	.	.
19.250	84.2718	34.47	.Q .	.	. V	.	.
19.333	84.5035	33.65	.Q .	.	. V	.	.
19.417	84.7296	32.82	.Q .	.	. V	.	.
19.500	84.9493	31.91	.Q .	.	. V	.	.
19.583	85.1619	30.86	.Q .	.	. V	.	.
19.667	85.3607	28.87	.Q .	.	. V	.	.
19.750	85.5505	27.55	.Q .	.	. V	.	.
19.833	85.7356	26.88	.Q .	.	. V	.	.
19.917	85.9168	26.31	.Q .	.	. V	.	.
20.000	86.0944	25.78	.Q .	.	. V	.	.

****
FLOW PROCESS FROM NODE 6311.00 TO NODE 6311.00 IS CODE = 7
>>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 5040.6 Ac. ***

****
FLOW PROCESS FROM NODE 6311.00 TO NODE 6311.00 IS CODE = 11
>>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<

*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 5040.6 Ac. ***

STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	1925.0	3850.0	5775.0	7700.0
14.000	406.7781	919.28	. Q	V	.	.	.
14.083	413.3387	952.59	. Q	V	.	.	.
14.167	420.2282	1000.36	. Q	V	.	.	.
14.250	427.5519	1063.39	. Q	.V	.	.	.
14.333	435.3869	1137.64	. Q	.V	.	.	.
14.417	443.8494	1228.76	. Q	.V	.	.	.
14.500	453.2410	1363.66	. Q	.V	.	.	.
14.583	463.7190	1521.40	. Q	.V	.	.	.
14.667	475.0388	1643.63	. Q .	V	.	.	.
14.750	486.9847	1734.55	. Q.	V	.	.	.
14.833	499.4959	1816.63	. Q.	V	.	.	.
14.917	512.5470	1895.01	. Q.	V	.	.	.
15.000	526.1264	1971.73	. Q	V	.	.	.
15.083	540.2385	2049.07	. Q	V	.	.	.
15.167	554.8931	2127.85	. .Q	V	.	.	.
15.250	570.1086	2209.29	. .Q	V	.	.	.
15.333	585.9102	2294.40	. .Q	V	.	.	.
15.417	602.2587	2373.81	. . Q	V	.	.	.
15.500	618.9868	2428.91	. . Q	V	.	.	.
15.583	635.9450	2462.34	. . Q	V	.	.	.

15.667	653.0961	2490.33	. . Q V . . .
15.750	670.3641	2507.31	. . Q V . . .
15.833	687.3168	2461.54	. . Q V . . .
15.917	703.9598	2416.55	. . Q V . . .
16.000	721.4357	2537.50	. . Q V . . .
16.083	741.9026	2971.80	. . Q V. . .
16.167	767.6212	3734.34	. . Q. . .
16.250	798.6147	4500.25	. . V Q . .
16.333	833.9616	5132.37	. . .V Q . .
16.417	874.8835	5941.85	. . . V Q .
16.500	925.1429	7297.67	. . . V . Q .
16.583	977.8814	7657.62	. . . V . Q.
16.667	1020.3975	6173.33	. . . V . Q .
16.750	1053.6354	4826.14	. . . Q V . .
16.833	1083.1179	4280.87	. . . Q V . .
16.917	1110.7048	4005.62	. . Q V . .
17.000	1136.5609	3754.31	. . Q. V. .
17.083	1160.7629	3514.13	. . Q . V. .
17.167	1183.3074	3273.44	. . Q . V .
17.250	1204.2601	3042.33	. . Q . .V .
17.333	1223.6487	2815.22	. . Q . .V .
17.417	1241.6259	2610.29	. . Q . .V .
17.500	1257.9701	2373.18	. . Q . . V .
17.583	1272.5198	2112.62	. . Q . . V .
17.667	1285.5945	1898.44	. . Q. . . V .
17.750	1297.5018	1728.96	. . Q . . . V .
17.833	1308.3369	1573.26	. . Q . . . V .
17.917	1318.3002	1446.67	. . Q . . . V .
18.000	1327.5559	1343.93	. . Q . . . V .
18.083	1335.9399	1217.36	. . Q . . . V .
18.167	1343.4760	1094.22	. . Q . . . V .
18.250	1350.4760	1016.41	. . Q . . . V .
18.333	1357.0786	958.70	. Q . . . . V .
18.417	1363.2899	901.88	. Q . . . . V .
18.500	1369.0786	840.52	. Q . . . . V .
18.583	1374.4480	779.64	. Q . . . . V .
18.667	1379.4858	731.49	. Q . . . . V .
18.750	1384.2666	694.16	. Q . . . . V .
18.833	1388.8303	662.66	. Q . . . . V .
18.917	1393.2046	635.14	. Q . . . . V .
19.000	1397.4086	610.41	. Q . . . . V .
19.083	1401.4640	588.85	. Q . . . . V .
19.167	1405.3932	570.52	. Q . . . . V .
19.250	1409.2109	554.33	. Q . . . . V .
19.333	1412.9302	540.03	. Q . . . . V .
19.417	1416.5587	526.86	. Q . . . . V .
19.500	1420.1006	514.28	. Q . . . . V .
19.583	1423.5586	502.10	. Q . . . . V .
19.667	1426.9293	489.42	. Q . . . . V .
19.750	1430.2148	477.06	. Q . . . . V .
19.833	1433.4124	464.27	. Q . . . . V .
19.917	1436.4847	446.10	. Q . . . . V .
20.000	1439.4141	425.33	. Q . . . . V .
20.083	1442.2500	411.78	. Q . . . . V .
20.167	1445.0288	403.49	. Q . . . . V .
20.250	1447.7559	395.97	. Q . . . . V .
20.333	1450.4308	388.39	. Q . . . . V .
20.417	1453.0549	381.03	.Q . . . . V .
20.500	1455.6311	374.05	.Q . . . . V .
20.583	1458.1615	367.41	.Q . . . . V .
20.667	1460.6483	361.09	.Q . . . . V .
20.750	1463.0935	355.04	.Q . . . . V .
20.833	1465.4987	349.24	.Q . . . . V .
20.917	1467.8666	343.83	.Q . . . . V .
21.000	1470.2009	338.94	.Q . . . . V .
21.083	1472.5038	334.38	.Q . . . . V .
21.167	1474.7765	330.00	.Q . . . . V .
21.250	1477.0203	325.79	.Q . . . . V .
21.333	1479.2361	321.74	.Q . . . . V .
21.417	1481.4250	317.84	.Q . . . . V .
21.500	1483.5880	314.07	.Q . . . . V .
21.583	1485.7260	310.42	.Q . . . . V .
21.667	1487.8395	306.89	.Q . . . . V .
21.750	1489.9294	303.46	.Q . . . . V .
21.833	1491.9963	300.12	.Q . . . . V .
21.917	1494.0411	296.91	.Q . . . . V .
22.000	1496.0649	293.86	.Q . . . . V .
22.083	1498.0685	290.91	.Q . . . . V .
22.167	1500.0522	288.05	.Q . . . . V .
22.250	1502.0168	285.26	.Q . . . . V .
22.333	1503.9626	282.54	.Q . . . . V .
22.417	1505.8903	279.89	.Q . . . . V .
22.500	1507.8000	277.30	.Q . . . . V .
22.583	1509.6925	274.78	.Q . . . . V .
22.667	1511.5680	272.31	.Q . . . . V .
22.750	1513.4269	269.91	.Q . . . . V .
22.833	1515.2695	267.56	.Q . . . . V.
22.917	1517.0964	265.26	.Q . . . . V.
23.000	1518.9078	263.01	.Q . . . . V.
23.083	1520.7041	260.82	.Q . . . . V.
23.167	1522.4856	258.67	.Q . . . . V.
23.250	1524.2526	256.56	.Q . . . . V.
23.333	1526.0054	254.51	.Q . . . . V.
23.417	1527.7443	252.49	.Q . . . . V.
23.500	1529.4696	250.52	.Q . . . . V.
23.583	1531.1816	248.59	.Q . . . . V.
23.667	1532.8806	246.69	.Q . . . . V.
23.750	1534.5668	244.84	.Q . . . . V.
23.833	1536.2405	243.02	.Q . . . . V.
23.917	1537.9019	241.23	.Q . . . . V.
24.000	1539.5511	239.48	.Q . . . . V.
24.083	1541.1772	236.12	.Q . . . . V.
24.167	1542.7491	228.23	.Q . . . . V.
24.250	1544.2366	215.98	.Q . . . . V.
24.333	1545.6229	201.30	.Q . . . . V.
24.417	1546.8810	182.66	Q . . . . V.
24.500	1547.9248	151.57	Q . . . . V.
24.583	1548.7126	114.40	Q . . . . V.
24.667	1549.3248	88.89	Q . . . . V.
24.750	1549.8330	73.79	Q . . . . V.
24.833	1550.2622	62.31	Q . . . . V.
24.917	1550.6272	52.99	Q . . . . V.
25.000	1550.9391	45.29	Q . . . . V.
25.083	1551.2054	38.67	Q . . . . V.
25.167	1551.4329	33.01	Q . . . . V.
25.250	1551.6267	28.15	Q . . . . V.
25.333	1551.7922	24.04	Q . . . . V.
25.417	1551.9326	20.38	Q . . . . V.
25.500	1552.0505	17.13	Q . . . . V.
25.583	1552.1495	14.37	Q . . . . V.
25.667	1552.2323	12.02	Q . . . . V.
25.750	1552.3014	10.03	Q . . . . V.
25.833	1552.3597	8.47	Q . . . . V.
25.917	1552.4089	7.14	Q . . . . V.
26.000	1552.4495	5.88	Q . . . . V.
26.083	1552.4839	5.00	Q . . . . V.
26.167	1552.5156	4.61	Q . . . . V.
26.250	1552.5455	4.34	Q . . . . V.
26.333	1552.5735	4.07	Q . . . . V.
26.417	1552.5999	3.83	Q . . . . V.
26.500	1552.6246	3.60	Q . . . . V.
26.583	1552.6478	3.37	Q . . . . V.
26.667	1552.6694	3.14	Q . . . . V.
26.750	1552.6896	2.92	Q . . . . V.

26.833	1552.7081	2.70	Q	.	.	.	V.
26.917	1552.7252	2.48	Q	.	.	.	V.
27.000	1552.7407	2.26	Q	.	.	.	V.
27.083	1552.7548	2.04	Q	.	.	.	V.
27.167	1552.7673	1.82	Q	.	.	.	V.
27.250	1552.7784	1.60	Q	.	.	.	V.
27.333	1552.7880	1.39	Q	.	.	.	V.
27.417	1552.7960	1.18	Q	.	.	.	V.
27.500	1552.8027	0.97	Q	.	.	.	V.
27.583	1552.8080	0.76	Q	.	.	.	V.
27.667	1552.8119	0.56	Q	.	.	.	V.
27.750	1552.8145	0.37	Q	.	.	.	V.
27.833	1552.8157	0.18	Q	.	.	.	V
27.917	1552.8159	0.04	Q	.	.	.	V
28.000	1552.8159	0.00	Q	.	.	.	V

****
FLOW PROCESS FROM NODE 6311.00 TO NODE 6330.00 IS CODE = 5.2

>>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
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*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 5040.6 Ac. ***

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
INTERVALS(Reference: the National Engineering Handbook,
Hydrology, Chapter 17, page 17-52, August,1972,
U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 30.00 CHANNEL Z = 1.00
UPSTREAM ELEVATION(FT) = 382.00
DOWNSTREAM ELEVATION(FT) = 375.00
CHANNEL LENGTH(FT) = 1141.00 MANNING'S FACTOR = 0.040
CONSTANT LOSS RATE(CFS) = 0.00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 7657.62
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 5535.08
CHANNEL NORMAL VELOCITY FOR Q = 5535.08 CFS = 11.37 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.870

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
UNIT INTERVALS IS CSTAR = 0.995

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.000	919.28	911.25	911.25
14.083	952.59	942.75	942.75
14.167	1000.36	986.25	986.25
14.250	1063.39	1044.77	1044.77
14.333	1137.64	1115.70	1115.70
14.417	1228.76	1201.83	1201.83
14.500	1363.66	1323.82	1323.82
14.583	1521.40	1474.78	1474.78
14.667	1643.63	1607.43	1607.43
14.750	1734.55	1707.61	1707.61
14.833	1816.63	1792.34	1792.34
14.917	1895.01	1871.82	1871.82
15.000	1971.73	1949.04	1949.04
15.083	2049.07	2026.20	2026.20
15.167	2127.85	2104.55	2104.55
15.250	2209.29	2185.21	2185.21
15.333	2294.40	2269.23	2269.23
15.417	2373.81	2350.31	2350.31
15.500	2428.91	2412.58	2412.58
15.583	2462.34	2452.42	2452.42
15.667	2490.33	2482.04	2482.04
15.750	2507.31	2502.28	2502.28
15.833	2461.54	2474.99	2474.99
15.917	2416.55	2429.86	2429.86
16.000	2537.50	2501.96	2501.96
16.083	2971.80	2843.78	2843.78
16.167	3734.34	3509.26	3509.26
16.250	4500.25	4273.72	4273.72
16.333	5132.37	4945.22	4945.22
16.417	5941.85	5702.67	5702.67
16.500	7297.67	6897.42	6897.42
16.583	7657.62	7549.77	7549.77
16.667	6173.33	6609.76	6609.76
16.750	4826.14	5224.79	5224.79
16.833	4280.87	4443.27	4443.27
16.917	4005.62	4087.42	4087.42
17.000	3754.31	3828.68	3828.68
17.083	3514.13	3585.19	3585.19
17.167	3273.44	3344.63	3344.63
17.250	3042.33	3110.70	3110.70
17.333	2815.22	2882.40	2882.40
17.417	2610.29	2670.94	2670.94
17.500	2373.18	2443.27	2443.27
17.583	2112.62	2189.66	2189.66
17.667	1898.44	1961.86	1961.86
17.750	1728.96	1779.15	1779.15
17.833	1573.26	1619.33	1619.33
17.917	1446.67	1484.15	1484.15
18.000	1343.93	1374.35	1374.35
18.083	1217.36	1254.76	1254.76
18.167	1094.22	1130.65	1130.65
18.250	1016.41	1039.49	1039.49
18.333	958.70	975.80	975.80
18.417	901.88	918.69	918.69
18.500	840.52	858.66	858.66
18.583	779.64	797.65	797.65
18.667	731.49	745.75	745.75
18.750	694.16	705.22	705.22
18.833	662.66	671.99	671.99
18.917	635.14	643.28	643.28
19.000	610.41	617.73	617.73
19.083	588.85	595.23	595.23
19.167	570.52	575.95	575.95
19.250	554.33	559.12	559.12
19.333	540.03	544.26	544.26
19.417	526.86	530.75	530.75
19.500	514.28	518.00	518.00
19.583	502.10	505.70	505.70
19.667	489.42	493.17	493.17
19.750	477.06	480.72	480.72
19.833	464.27	468.05	468.05
19.917	446.10	451.47	451.47
20.000	425.33	431.47	431.47

==========
PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 1552.816 AF

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    OUTFLOW VOLUME =   1552.816 AF
    LOSS    VOLUME =      0.000 AF
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6320.00 TO NODE   6330.00 IS CODE =   1
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        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of   300.7 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
================================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #2)

         WATERSHED AREA =     300.700 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.290 HOURS
          CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
          THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
          MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.250
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.750
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.240
         LOW LOSS FRACTION = 0.430
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.58
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.22
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.62
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.71
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  3.75
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  6.28

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.987
          30-MINUTE FACTOR = 0.987
           1-HOUR FACTOR = 0.987
           3-HOUR FACTOR = 0.998
           6-HOUR FACTOR = 0.999
          24-HOUR FACTOR = 0.999

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  28.736


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


================================================================================
                      UNIT HYDROGRAPH DETERMINATION

--------------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------------
        1                3.181               115.682
        2               14.148               398.807
        3               32.649               672.813
        4               49.391               608.859
        5               59.445               365.623
        6               65.754               229.414
        7               70.572               175.227
        8               74.508               143.109
        9               77.679               115.331
       10               80.307                95.584
       11               82.561                81.961
       12               84.486                69.998
       13               86.124                59.571
       14               87.475                49.137
       15               88.623                41.748
       16               89.558                33.981
       17               90.435                31.907
       18               91.248                29.581
       19               92.036                28.658
       20               92.761                26.336
       21               93.465                25.630
       22               94.104                23.223
       23               94.697                21.573
       24               95.280                21.195
       25               95.767                17.699
       26               96.231                16.876
       27               96.695                16.868
       28               97.112                15.192
       29               97.431                11.595
       30               97.741                11.275
       31               98.051                11.279
       32               98.361                11.271
       33               98.547                 6.740
       34               98.632                 3.085
       35               98.716                 3.070
       36               98.801                 3.077
       37               98.885                 3.077
       38               98.970                 3.077
       39               99.054                 3.077
       40               99.139                 3.077
       41               99.224                 3.085
       42               99.308                 3.070
       43               99.393                 3.070
       44               99.477                 3.070
       45               99.562                 3.070
       46               99.646                 3.070
       47               99.730                 3.070
       48               99.815                 3.070
       49               99.899                 3.070
       50               99.984                 3.070
       51              100.000                 0.594


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    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =      55.6322
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =     101.5866
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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 175.0 350.0 525.0 700.0
14.000	31.0565	64.20	. Q . V . . .
14.083	31.5075	65.49	. Q . V . . .
14.167	31.9685	66.94	. Q . V . . .
14.250	32.4408	68.57	. Q . V . . .
14.333	32.9246	70.25	. Q . V . . .
14.417	33.4200	71.93	. Q . V . . .
14.500	33.9272	73.65	. Q . V . . .
14.583	34.4469	75.46	. Q . V . . .
14.667	34.9798	77.39	. Q . V . . .
14.750	35.5269	79.44	. Q . V . . .
14.833	36.0890	81.62	. Q . V . . .
14.917	36.6681	84.08	. Q . V . . .
15.000	37.2674	87.01	. Q . V . . .
15.083	37.8921	90.71	. Q . V . . .
15.167	38.5479	95.22	. Q . V . . .
15.250	39.2407	100.60	. Q . V . . .
15.333	39.9765	106.84	. Q . V . . .
15.417	40.7552	113.06	. Q . V . . .
15.500	41.5667	117.83	. Q . V . . .
15.583	42.4047	121.68	. Q . V . . .
15.667	43.2870	128.10	. Q . V . . .
15.750	44.2512	140.01	. Q . V . . .
15.833	45.3389	157.93	. Q. V . . .
15.917	46.6148	185.26	. Q V . . .
16.000	48.1955	229.51	. Q V . . .
16.083	50.5217	337.76	. Q. . .
16.167	54.0127	506.90	. .V Q . .
16.250	58.3558	630.61	. . V . Q .
16.333	62.3015	572.92	. . V . Q .
16.417	65.2430	427.11	. . QV . .
16.500	67.5361	332.96	. Q. V . .
16.583	69.4949	284.42	. Q . V . .
16.667	71.2222	250.80	. Q . V . .
16.750	72.7453	221.16	. Q . V . .
16.833	74.1040	197.28	.Q . V. .
16.917	75.3342	178.63	Q . V. .
17.000	76.4555	162.81	Q. . V .
17.083	77.4821	149.07	Q . . V .
17.167	78.4221	136.48	Q . . V .
17.250	79.2915	126.24	Q . . .V .
17.333	80.0981	117.11	Q . . .V .
17.417	80.8653	111.40	Q . . .V .
17.500	81.5973	106.29	Q . . . V .
17.583	82.3009	102.15	Q . . . V .
17.667	82.9741	97.75	Q . . . V .
17.750	83.6230	94.22	Q . . . V .
17.833	84.2442	90.20	Q . . . V .
17.917	84.8410	86.66	Q . . . V .
18.000	85.4173	83.68	Q . . . V .
18.083	85.9636	79.33	Q . . . V .
18.167	86.4834	75.48	Q . . . V .
18.250	86.9736	71.17	Q . . . V .
18.333	87.4305	66.35	Q . . . V .
18.417	87.8550	61.64	Q . . . V .
18.500	88.2607	58.90	Q . . . V .
18.583	88.6496	56.47	Q . . . V .
18.667	89.0207	53.89	Q . . . V .
18.750	89.3620	49.55	Q . . . V .
18.833	89.6790	46.02	Q . . . V .
18.917	89.9850	44.44	Q . . . V .
19.000	90.2822	43.15	Q . . . V .
19.083	90.5714	41.99	Q . . . V .
19.167	90.8533	40.93	Q . . . V .
19.250	91.1285	39.96	Q . . . V .
19.333	91.3976	39.07	Q . . . V .
19.417	91.6609	38.24	Q . . . V .
19.500	91.9187	37.43	Q . . . V .
19.583	92.1713	36.68	Q . . . V .
19.667	92.4190	35.96	Q . . . V .
19.750	92.6618	35.25	Q . . . V .
19.833	92.8997	34.56	Q . . . V .
19.917	93.1329	33.85	Q . . . V .
20.000	93.3610	33.13	Q . . . V .

****
FLOW PROCESS FROM NODE 6330.00 TO NODE 6330.00 IS CODE = 7
>>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 5341.3 Ac. ***

****
FLOW PROCESS FROM NODE 6330.00 TO NODE 6330.00 IS CODE = 11
>>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<

*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 5341.3 Ac. ***

STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 1950.0 3900.0 5850.0 7800.0
14.000	436.1631	977.64	. Q V . . .
14.083	443.1287	1011.41	. Q V . . .
14.167	450.4287	1059.96	. Q V . . .
14.250	458.1863	1126.41	. Q .V . . .
14.333	466.4877	1205.36	. Q .V . . .
14.417	475.4289	1298.27	. Q .V . . .
14.500	485.2591	1427.34	. Q .V . . .
14.583	496.1832	1586.18	. Q . V . . .
14.667	508.0691	1725.83	. Q . V . . .
14.750	520.6832	1831.57	. Q. V . . .
14.833	533.9138	1921.08	. Q. V . . .
14.917	547.7231	2005.10	. Q V . . .
15.000	562.0945	2086.73	. Q V . . .
15.083	577.0278	2168.31	. .Q V . . .
15.167	592.5315	2251.14	. .Q V . . .
15.250	608.6227	2336.45	. .Q V . . .
15.333	625.3262	2425.33	. . Q V . . .
15.417	642.6027	2508.56	. . Q V . . .
15.500	660.2719	2565.57	. . Q V . . .
15.583	678.1307	2593.11	. . Q V . . .

15.667	696.1243	2612.66	. . Q V . . .
15.750	714.2440	2630.99	. . Q V . . .
15.833	732.2027	2607.60	. . Q V . . .
15.917	749.9245	2573.21	. . Q V . . .
16.000	768.3140	2670.15	. . Q V . . .
16.083	789.5765	3087.31	. . Q V. . .
16.167	816.2604	3874.50	. . Q. . .
16.250	848.8023	4725.08	. . V Q . .
16.333	885.5887	5341.38	. . .V Q . .
16.417	926.7455	5975.97	. . . V Q .
16.500	975.5790	7090.63	. . . V . Q .
16.583	1028.7042	7713.78	. . . V . Q.
16.667	1075.3481	6772.71	. . . V . Q .
16.750	1112.4542	5387.81	. . . VQ . .
16.833	1144.1587	4603.49	. . . Q V . .
16.917	1173.3995	4245.77	. . .Q V . .
17.000	1200.8412	3984.54	. . Q V. .
17.083	1226.5717	3736.07	. . Q. V. .
17.167	1250.5878	3487.13	. . Q . V .
17.250	1272.9236	3243.16	. . Q . V .
17.333	1293.6205	3005.19	. . Q . .V .
17.417	1312.8190	2787.62	. . Q . .V .
17.500	1330.4062	2553.68	. . Q . . V .
17.583	1346.2020	2293.55	. .Q . . V .
17.667	1360.3861	2059.53	. .Q . . V .
17.750	1373.2830	1872.62	. Q. . . V .
17.833	1385.0524	1708.92	. Q . . . V .
17.917	1395.8676	1570.36	. Q . . . V .
18.000	1405.9064	1457.63	. Q . . . V .
18.083	1415.0958	1334.30	. Q . . . V .
18.167	1423.4062	1206.67	. Q . . . V .
18.250	1431.0581	1111.04	. Q . . . V .
18.333	1438.2378	1042.49	. Q . . . V .
18.417	1444.9926	980.80	. Q . . . V .
18.500	1451.3136	917.81	. Q . . . V .
18.583	1457.1958	854.10	. Q . . . V .
18.667	1462.7015	799.43	. Q . . . V .
18.750	1467.8999	754.80	. Q . . . V .
18.833	1472.8462	718.21	. Q . . . V .
18.917	1477.5828	687.75	. Q . . . V .
19.000	1482.1332	660.73	. Q . . . V .
19.083	1486.5193	636.86	. Q . . . V .
19.167	1490.7637	616.29	. Q . . . V .
19.250	1494.8843	598.31	. Q . . . V .
19.333	1498.8954	582.41	. Q . . . V .
19.417	1502.8070	567.96	. Q . . . V .
19.500	1506.6246	554.32	. Q . . . V .
19.583	1510.3522	541.24	. Q . . . V .
19.667	1513.9885	528.00	. Q . . . V .
19.750	1517.5345	514.89	. Q . . . V .
19.833	1520.9893	501.63	. Q . . . V .
19.917	1524.3260	484.50	. Q . . . V .
20.000	1527.5215	463.98	. Q . . . V .
20.083	1530.6047	447.68	. Q . . . V .
20.167	1533.6147	437.06	. Q . . . V .
20.250	1536.5608	427.76	. Q . . . V .
20.333	1539.4491	419.38	. Q . . . V .
20.417	1542.2826	411.43	. Q . . . V .
20.500	1545.0641	403.87	. Q . . . V .
20.583	1547.7957	396.63	. Q . . . V .
20.667	1550.4796	389.72	.Q . . . V .
20.750	1553.1183	383.13	.Q . . . V .
20.833	1555.7135	376.83	.Q . . . V .
20.917	1558.2679	370.91	.Q . . . V .
21.000	1560.7852	365.49	.Q . . . V .
21.083	1563.2678	360.48	.Q . . . V .
21.167	1565.7175	355.70	.Q . . . V .
21.250	1568.1359	351.13	.Q . . . V .
21.333	1570.5239	346.74	.Q . . . V .
21.417	1572.8828	342.51	.Q . . . V .
21.500	1575.2136	338.43	.Q . . . V .
21.583	1577.5172	334.48	.Q . . . V .
21.667	1579.7944	330.66	.Q . . . V .
21.750	1582.0461	326.94	.Q . . . V .
21.833	1584.2729	323.33	.Q . . . V .
21.917	1586.4758	319.85	.Q . . . V .
22.000	1588.6558	316.52	.Q . . . V .
22.083	1590.8136	313.32	.Q . . . V .
22.167	1592.9501	310.21	.Q . . . V .
22.250	1595.0657	307.19	.Q . . . V .
22.333	1597.1611	304.26	.Q . . . V .
22.417	1599.2368	301.39	.Q . . . V .
22.500	1601.2933	298.60	.Q . . . V .
22.583	1603.3311	295.87	.Q . . . V .
22.667	1605.3505	293.21	.Q . . . V .
22.750	1607.3519	290.61	.Q . . . V .
22.833	1609.3359	288.07	.Q . . . V.
22.917	1611.3029	285.59	.Q . . . V.
23.000	1613.2531	283.17	.Q . . . V.
23.083	1615.1869	280.80	.Q . . . V.
23.167	1617.1047	278.48	.Q . . . V.
23.250	1619.0070	276.21	.Q . . . V.
23.333	1620.8939	273.99	.Q . . . V.
23.417	1622.7659	271.82	.Q . . . V.
23.500	1624.6232	269.69	.Q . . . V.
23.583	1626.4662	267.60	.Q . . . V.
23.667	1628.2950	265.56	.Q . . . V.
23.750	1630.1102	263.56	.Q . . . V.
23.833	1631.9119	261.59	.Q . . . V.
23.917	1633.7002	259.67	.Q . . . V.
24.000	1635.4756	257.78	.Q . . . V.
24.083	1637.2266	254.23	.Q . . . V.
24.167	1638.9188	245.72	.Q . . . V.
24.250	1640.5135	231.55	.Q . . . V.
24.333	1641.9922	214.69	.Q . . . V.
24.417	1643.3384	195.47	.Q . . . V.
24.500	1644.4883	166.96	Q . . . V.
24.583	1645.3887	130.74	Q . . . V.
24.667	1646.0848	101.09	Q . . . V.
24.750	1646.6519	82.33	Q . . . V.
24.833	1647.1292	69.30	Q . . . V.
24.917	1647.5349	58.92	Q . . . V.
25.000	1647.8820	50.40	Q . . . V.
25.083	1648.1792	43.16	Q . . . V.
25.167	1648.4338	36.97	Q . . . V.
25.250	1648.6519	31.66	Q . . . V.
25.333	1648.8389	27.15	Q . . . V.
25.417	1648.9987	23.19	Q . . . V.
25.500	1649.1342	19.67	Q . . . V.
25.583	1649.2487	16.62	Q . . . V.
25.667	1649.3452	14.02	Q . . . V.
25.750	1649.4265	11.80	Q . . . V.
25.833	1649.4954	9.99	Q . . . V.
25.917	1649.5538	8.49	Q . . . V.
26.000	1649.6028	7.10	Q . . . V.
26.083	1649.6443	6.02	Q . . . V.
26.167	1649.6815	5.40	Q . . . V.
26.250	1649.7161	5.01	Q . . . V.
26.333	1649.7482	4.66	Q . . . V.
26.417	1649.7782	4.36	Q . . . V.
26.500	1649.8063	4.07	Q . . . V.
26.583	1649.8324	3.79	Q . . . V.
26.667	1649.8566	3.51	Q . . . V.
26.750	1649.8789	3.25	Q . . . V.

26.833	1649.8997	3.01	Q	.	.	.	V.
26.917	1649.9187	2.77	Q	.	.	.	V.
27.000	1649.9362	2.53	Q	.	.	.	V.
27.083	1649.9520	2.30	Q	.	.	.	V.
27.167	1649.9663	2.07	Q	.	.	.	V.
27.250	1649.9790	1.83	Q	.	.	.	V.
27.333	1649.9901	1.60	Q	.	.	.	V.
27.417	1649.9996	1.38	Q	.	.	.	V.
27.500	1650.0076	1.15	Q	.	.	.	V.
27.583	1650.0139	0.93	Q	.	.	.	V.
27.667	1650.0188	0.71	Q	.	.	.	V.
27.750	1650.0222	0.50	Q	.	.	.	V.
27.833	1650.0240	0.27	Q	.	.	.	V
27.917	1650.0247	0.10	Q	.	.	.	V
28.000	1650.0249	0.03	Q	.	.	.	V
28.083	1650.0250	0.02	Q	.	.	.	V
28.167	1650.0250	0.00	Q	.	.	.	V

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****
FLOW PROCESS FROM NODE 6330.00 TO NODE 6355.00 IS CODE = 5.2

>>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
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*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 5341.3 Ac. ***

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
INTERVALS(Reference: the National Engineering Handbook,
Hydrology, Chapter 17, page 17-52, August,1972,
U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 30.00 CHANNEL Z = 1.00
UPSTREAM ELEVATION(FT) = 375.00
DOWNSTREAM ELEVATION(FT) = 314.00
CHANNEL LENGTH(FT) = 6086.00 MANNING'S FACTOR = 0.040
CONSTANT LOSS RATE(CFS) = 0.00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 7713.78
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 5428.70
CHANNEL NORMAL VELOCITY FOR Q = 5428.70 CFS = 13.47 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.888

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
UNIT INTERVALS IS CSTAR = 0.838

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.000	977.64	935.96	935.96
14.083	1011.41	963.01	963.01
14.167	1059.96	994.01	994.01
14.250	1126.41	1035.53	1035.53
14.333	1205.36	1092.88	1092.88
14.417	1298.27	1164.79	1164.79
14.500	1427.34	1250.35	1250.35
14.583	1586.18	1362.14	1362.14
14.667	1725.83	1504.93	1504.93
14.750	1831.57	1650.52	1650.52
14.833	1921.08	1772.31	1772.31
14.917	2005.10	1871.65	1871.65
15.000	2086.73	1959.70	1959.70
15.083	2168.31	2043.05	2043.05
15.167	2251.14	2124.93	2124.93
15.250	2336.45	2207.25	2207.25
15.333	2425.33	2291.38	2291.38
15.417	2508.56	2378.48	2378.48
15.500	2565.57	2463.93	2463.93
15.583	2593.11	2532.97	2532.97
15.667	2612.66	2575.57	2575.57
15.750	2630.99	2601.12	2601.12
15.833	2607.60	2620.96	2620.96
15.917	2573.21	2616.38	2616.38
16.000	2670.15	2589.94	2589.94
16.083	3087.31	2629.72	2629.72
16.167	3874.50	2895.12	2895.12
16.250	4725.08	3493.06	3493.06
16.333	5341.38	4284.77	4284.77
16.417	5975.97	4995.79	4995.79
16.500	7090.63	5637.58	5637.58
16.583	7713.78	6539.78	6539.78
16.667	6772.71	7347.23	7347.23
16.750	5387.81	7132.10	7132.10
16.833	4603.49	6062.32	6062.32
16.917	4245.77	5061.79	5061.79
17.000	3984.54	4479.21	4479.21
17.083	3736.07	4138.61	4138.61
17.167	3487.13	3871.60	3871.60
17.250	3243.16	3619.87	3619.87
17.333	3005.19	3373.24	3373.24
17.417	2787.62	3132.16	3132.16
17.500	2553.68	2905.01	2905.01
17.583	2293.55	2676.80	2676.80
17.667	2059.53	2429.25	2429.25
17.750	1872.62	2185.66	2185.66
17.833	1708.92	1976.23	1976.23
17.917	1570.36	1798.56	1798.56
18.000	1457.63	1646.55	1646.55
18.083	1334.30	1520.14	1520.14
18.167	1206.67	1399.31	1399.31
18.250	1111.04	1274.00	1274.00
18.333	1042.49	1164.51	1164.51
18.417	980.80	1081.66	1081.66
18.500	917.81	1014.60	1014.60
18.583	854.10	951.32	951.32
18.667	799.43	887.88	887.88
18.750	754.80	829.23	829.23
18.833	718.21	779.49	779.49
18.917	687.75	738.49	738.49
19.000	660.73	704.59	704.59
19.083	636.86	675.48	675.48
19.167	616.29	649.87	649.87
19.250	598.31	627.55	627.55
19.333	582.41	608.13	608.13
19.417	567.96	591.08	591.08
19.500	554.32	575.80	575.80
19.583	541.24	561.66	561.66
19.667	528.00	548.25	548.25
19.750	514.89	535.03	535.03
19.833	501.63	521.86	521.86
19.917	484.50	508.66	508.66
20.000	463.98	493.26	493.26

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  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   1650.024 AF
    OUTFLOW VOLUME =   1650.025 AF
    LOSS    VOLUME =      0.000 AF
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  FLOW PROCESS FROM NODE   6340.00 TO NODE   6355.00 IS CODE =   1
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        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of   697.9 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
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      (UNIT-HYDROGRAPH ADDED TO STREAM #2)

         WATERSHED AREA =     697.900 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.340 HOURS
          CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
          THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
          MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.900
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.210
         LOW LOSS FRACTION = 0.450
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.58
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.22
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.62
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.71
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  3.75
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  6.28

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.969
          30-MINUTE FACTOR = 0.969
           1-HOUR FACTOR = 0.969
           3-HOUR FACTOR = 0.995
           6-HOUR FACTOR = 0.998
          24-HOUR FACTOR = 0.999

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  24.510


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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                      UNIT HYDROGRAPH DETERMINATION

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     INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
      NUMBER          MEAN VALUES          ORDINATES(CFS)
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1	1.545	130.419
2	7.337	488.804
3	20.261	1090.852
4	37.173	1427.448
5	57.561	1720.753
6	73.834	1373.504
7	84.155	871.070
8	90.157	506.624
9	93.846	311.340
10	95.934	176.209
11	96.823	75.053
12	97.453	53.201
13	98.047	50.140
14	98.563	43.554
15	98.877	26.445
16	99.042	13.975
17	99.137	8.025
18	99.206	5.797
19	99.261	4.649
20	99.315	4.546
21	99.365	4.228
22	99.414	4.161
23	99.461	3.902
24	99.505	3.743
25	99.548	3.674
26	99.587	3.272
27	99.625	3.204
28	99.663	3.169
29	99.695	2.719
30	99.726	2.582
31	99.756	2.583
32	99.787	2.570
33	99.813	2.195
34	99.830	1.492
35	99.848	1.489
36	99.866	1.488
37	99.883	1.487
38	99.899	1.328
39	99.905	0.518
40	99.910	0.406
41	99.915	0.406
42	99.919	0.404
43	99.924	0.406
44	99.929	0.406
45	99.934	0.405
46	99.939	0.408
47	99.944	0.405
48	99.948	0.408
49	99.953	0.404
50	99.958	0.405
51	99.963	0.405
52	99.968	0.405
53	99.972	0.405
54	99.977	0.404
55	99.982	0.405
56	99.987	0.405
57	99.992	0.405
58	99.996	0.405
59	100.000	0.311

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    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =     130.0823
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =     234.5189
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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 400.0 800.0 1200.0 1600.0
14.000	71.1105	147.86	. Q . V . . .
14.083	72.1489	150.77	. Q . V . . .
14.167	73.2102	154.10	. Q . V . . .
14.250	74.2996	158.17	. Q . V . . .
14.333	75.4201	162.70	. Q . V . . .
14.417	76.5767	167.94	. Q . V . . .
14.500	77.7714	173.47	. Q . V . . .
14.583	79.0080	179.55	. Q . V . . .
14.667	80.2912	186.32	. Q . V . . .
14.750	81.6286	194.19	. Q . V . . .
14.833	83.0251	202.78	. Q . V . . .
14.917	84.4881	212.42	. Q . V . . .
15.000	86.0229	222.86	. Q . V . . .
15.083	87.6385	234.58	. Q . V . . .
15.167	89.3417	247.30	. Q . V . . .
15.250	91.1439	261.69	. Q . V . . .
15.333	93.0551	277.50	. Q . V . . .
15.417	95.0819	294.30	. Q . V . . .
15.500	97.2126	309.37	. Q . V . . .
15.583	99.4271	321.55	. Q . V . . .
15.667	101.7259	333.78	. Q . V . . .
15.750	104.1331	349.53	. Q . V . . .
15.833	106.7326	377.44	. Q. V . . .
15.917	109.6766	427.47	. Q V . . .
16.000	113.1778	508.38	. . Q V. . .
16.083	117.8757	682.13	. . Q V . .
16.167	124.5391	967.53	. . .V Q . .
16.250	133.6750	1326.53	. . . V . Q .
16.333	144.0990	1513.58	. . . V . Q .
16.417	155.0234	1586.22	. . . V . Q.
16.500	164.1875	1330.62	. . . V . Q .
16.583	171.0479	996.13	. . . Q V. .
16.667	176.1199	736.46	. . Q . V .
16.750	180.0661	572.98	. . Q . V .
16.833	183.1875	453.22	. .Q . .V .
16.917	185.6866	362.87	. Q. . .V .
17.000	187.8660	316.44	. Q . . . V .
17.083	189.8290	285.04	. Q . . . V .
17.167	191.5923	256.02	. Q . . . V .
17.250	193.1485	225.96	. Q . . . V .
17.333	194.5403	202.09	. Q . . . . V .
17.417	195.8141	184.96	. Q . . . . V .
17.500	197.0043	172.81	. Q . . . . V .
17.583	198.1304	163.52	. Q . . . . V .
17.667	199.2067	156.28	. Q . . . . V .
17.750	200.2403	150.07	. Q . . . . V .
17.833	201.2373	144.76	. Q . . . . V .
17.917	202.2013	139.98	. Q . . . . V .
18.000	203.1359	135.70	. Q . . . . V .
18.083	204.0411	131.44	. Q . . . . V .
18.167	204.9113	126.36	. Q . . . . V .
18.250	205.7377	119.99	. Q . . . . V .
18.333	206.5154	112.92	. Q . . . . V .
18.417	207.2391	105.07	. Q . . . . V .
18.500	207.9178	98.56	. Q . . . . V .
18.583	208.5632	93.70	. Q . . . . V .
18.667	209.1830	89.99	. Q . . . . V .
18.750	209.7808	86.80	. Q . . . . V .
18.833	210.3593	84.01	. Q . . . . V .
18.917	210.9235	81.92	. Q . . . . V .
19.000	211.4746	80.01	. Q . . . . V .
19.083	212.0129	78.17	.Q . . . . V .
19.167	212.5385	76.31	.Q . . . . V .
19.250	213.0506	74.35	.Q . . . . V .
19.333	213.5522	72.83	.Q . . . . V .
19.417	214.0444	71.47	.Q . . . . V .
19.500	214.5278	70.19	.Q . . . . V .
19.583	215.0028	68.97	.Q . . . . V .
19.667	215.4698	67.81	.Q . . . . V .
19.750	215.9291	66.70	.Q . . . . V .
19.833	216.3811	65.64	.Q . . . . V .
19.917	216.8261	64.62	.Q . . . . V .
20.000	217.2644	63.64	.Q . . . . V .

FLOW PROCESS FROM NODE 6355.00 TO NODE 6355.00 IS CODE = 7

>>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 6039.2 Ac. ***

FLOW PROCESS FROM NODE 6355.00 TO NODE 6355.00 IS CODE = 11

>>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<

*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 6039.2 Ac. ***

STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 1950.0 3900.0 5850.0 7800.0
14.000	497.4364	1088.60	. Q V . . .
14.083	505.1494	1119.93	. Q V . . .
14.167	513.1381	1159.95	. Q V . . .
14.250	521.5336	1219.03	. Q .V . . .
14.333	530.4852	1299.77	. Q .V . . .
14.417	540.1303	1400.46	. Q .V . . .
14.500	550.5427	1511.88	. Q .V . . .
14.583	561.8763	1645.64	. Q .V . . .
14.667	574.3333	1808.75	. Q. V . . .
14.750	587.9247	1973.48	. Q V . . .
14.833	602.4632	2110.99	. Q V . . .
14.917	617.7724	2222.90	. .Q V . . .
15.000	633.7646	2322.07	. .Q V . . .
15.083	650.4062	2416.35	. . QV . . .
15.167	667.6856	2508.97	. . Q V . . .
15.250	685.6081	2602.35	. . QV . . .
15.333	704.1873	2697.69	. . Q V . . .
15.417	723.4247	2793.29	. . QV . . .
15.500	743.2448	2877.87	. . QV . . .
15.583	763.4275	2930.53	. . QV . . .

15.667	783.7325	2948.29	. . QV . . .
15.750	804.0083	2944.04	. . Q V . . .
15.833	824.3171	2948.84	. . Q V . . .
15.917	844.6627	2954.19	. . Q V . . .
16.000	865.0842	2965.20	. . Q V . . .
16.083	886.5428	3115.79	. . Q V . . .
16.167	911.1877	3578.45	. . QV. . . .
16.250	941.6856	4428.29	. . V Q . . .
16.333	978.4500	5338.18	. . V Q . . .
16.417	1020.3721	6087.09	. . .V .Q . .
16.500	1065.2610	6517.88	. . . V . Q . .
16.583	1114.5055	7150.30	. . . V . Q . .
16.667	1168.0330	7772.19	. . . V . Q.
16.750	1219.6559	7495.64	. . . V . Q .
16.833	1263.7520	6402.75	. . . V . Q . .
16.917	1300.7917	5378.17	. . . Q . . .
17.000	1333.7954	4792.13	. . . Q V . . .
17.083	1364.4658	4453.34	. . . Q V. . .
17.167	1393.2494	4179.38	. . .Q V. . .
17.250	1420.1484	3905.73	. . Q V . .
17.333	1445.1702	3633.16	. . Q . V . .
17.417	1468.3423	3364.59	. . Q . .V . .
17.500	1489.7966	3115.18	. . Q . .V . .
17.583	1509.5616	2869.89	. . Q . . V . .
17.667	1527.5219	2607.81	. . Q . . V . .
17.750	1543.7144	2351.15	. . Q . . V . .
17.833	1558.3977	2132.02	. . Q . . V . .
17.917	1571.8145	1948.11	. Q. . . V . .
18.000	1584.1508	1791.24	. Q. . . V . .
18.083	1595.5828	1659.93	. Q . . . V . .
18.167	1606.1470	1533.93	. Q . . . V . .
18.250	1615.8042	1402.23	. Q . . . V . .
18.333	1624.6530	1284.85	. Q . . . V . .
18.417	1632.8679	1192.81	. Q . . . V . .
18.500	1640.5681	1118.06	. Q . . . V . .
18.583	1647.7925	1048.98	. Q . . . V . .
18.667	1654.5480	980.91	. Q . . . V . .
18.750	1660.8710	918.11	. Q . . . V . .
18.833	1666.8267	864.77	. Q . . . V . .
18.917	1672.4811	821.03	. Q . . . V . .
19.000	1677.8853	784.69	. Q . . . V . .
19.083	1683.0731	753.28	. Q . . . V . .
19.167	1688.0693	725.46	. Q . . . V . .
19.250	1692.8971	700.98	. Q . . . V . .
19.333	1697.5796	679.89	. Q . . . V . .
19.417	1702.1346	661.40	. Q . . . V . .
19.500	1706.5754	644.81	. Q . . . V . .
19.583	1710.9105	629.45	. Q . . . V . .
19.667	1715.1454	614.90	. Q . . . V . .
19.750	1719.2819	600.62	. Q . . . V . .
19.833	1723.3209	586.48	. Q . . . V . .
19.917	1727.2629	572.38	. Q . . . V . .
20.000	1731.0939	556.25	. Q . . . V . .
20.083	1734.7916	536.91	. Q . . . V . .
20.167	1738.3615	518.33	. Q . . . V . .
20.250	1741.8336	504.15	. Q . . . V . .
20.333	1745.2294	493.05	. Q . . . V . .
20.417	1748.5581	483.34	. Q . . . V . .
20.500	1751.8248	474.33	. Q . . . V . .
20.583	1755.0326	465.77	. Q . . . V . .
20.667	1758.1840	457.59	. Q . . . V . .
20.750	1761.2814	449.74	. Q . . . V . .
20.833	1764.3270	442.23	. Q . . . V . .
20.917	1767.3229	435.00	. Q . . . V . .
21.000	1770.2710	428.07	. Q . . . V . .
21.083	1773.1754	421.72	. Q . . . V . .
21.167	1776.0396	415.86	. Q . . . V . .
21.250	1778.8657	410.36	. Q . . . V . .
21.333	1781.6556	405.10	. Q . . . V . .
21.417	1784.4108	400.05	. Q . . . V . .
21.500	1787.1324	395.19	. Q . . . V . .
21.583	1789.8219	390.51	. Q . . . V . .
21.667	1792.4801	385.97	.Q . . . V . .
21.750	1795.1082	381.58	.Q . . . V . .
21.833	1797.7068	377.33	.Q . . . V . .
21.917	1800.2770	373.19	.Q . . . V . .
22.000	1802.8196	369.19	.Q . . . V . .
22.083	1805.3357	365.34	.Q . . . V . .
22.167	1807.8263	361.63	.Q . . . V . .
22.250	1810.2922	358.05	.Q . . . V . .
22.333	1812.7343	354.57	.Q . . . V . .
22.417	1815.1530	351.19	.Q . . . V . .
22.500	1817.5490	347.89	.Q . . . V . .
22.583	1819.9227	344.68	.Q . . . V . .
22.667	1822.2749	341.54	.Q . . . V . .
22.750	1824.6061	338.48	.Q . . . V . .
22.833	1826.9166	335.49	.Q . . . V . .
22.917	1829.2070	332.57	.Q . . . V.
23.000	1831.4778	329.72	.Q . . . V.
23.083	1833.7294	326.93	.Q . . . V.
23.167	1835.9622	324.20	.Q . . . V.
23.250	1838.1765	321.53	.Q . . . V.
23.333	1840.3729	318.92	.Q . . . V.
23.417	1842.5518	316.36	.Q . . . V.
23.500	1844.7134	313.86	.Q . . . V.
23.583	1846.8580	311.41	.Q . . . V.
23.667	1848.9862	309.01	.Q . . . V.
23.750	1851.0981	306.66	.Q . . . V.
23.833	1853.1942	304.35	.Q . . . V.
23.917	1855.2748	302.09	.Q . . . V.
24.000	1857.3401	299.87	.Q . . . V.
24.083	1859.3864	297.12	.Q . . . V.
24.167	1861.3966	291.88	.Q . . . V.
24.250	1863.3295	280.64	.Q . . . V.
24.333	1865.1399	262.87	.Q . . . V.
24.417	1866.7920	239.89	.Q . . . V.
24.500	1868.2782	215.80	.Q . . . V.
24.583	1869.5718	187.84	Q . . . V.
24.667	1870.6295	153.59	Q . . . V.
24.750	1871.4574	120.21	Q . . . V.
24.833	1872.1135	95.27	Q . . . V.
24.917	1872.6533	78.39	Q . . . V.
25.000	1873.1077	65.97	Q . . . V.
25.083	1873.4939	56.07	Q . . . V.
25.167	1873.8235	47.86	Q . . . V.
25.250	1874.1055	40.94	Q . . . V.
25.333	1874.3469	35.06	Q . . . V.
25.417	1874.5540	30.07	Q . . . V.
25.500	1874.7313	25.75	Q . . . V.
25.583	1874.8826	21.96	Q . . . V.
25.667	1875.0109	18.62	Q . . . V.
25.750	1875.1194	15.76	Q . . . V.
25.833	1875.2109	13.30	Q . . . V.
25.917	1875.2883	11.24	Q . . . V.
26.000	1875.3541	9.55	Q . . . V.
26.083	1875.4097	8.06	Q . . . V.
26.167	1875.4565	6.81	Q . . . V.
26.250	1875.4974	5.94	Q . . . V.
26.333	1875.5345	5.39	Q . . . V.
26.417	1875.5688	4.98	Q . . . V.
26.500	1875.6008	4.64	Q . . . V.
26.583	1875.6306	4.33	Q . . . V.
26.667	1875.6583	4.03	Q . . . V.
26.750	1875.6841	3.74	Q . . . V.

26.833	1875.7079	3.46	Q	.	.	.	V.
26.917	1875.7300	3.20	Q	.	.	.	V.
27.000	1875.7504	2.95	Q	.	.	.	V.
27.083	1875.7690	2.71	Q	.	.	.	V.
27.167	1875.7860	2.47	Q	.	.	.	V.
27.250	1875.8014	2.23	Q	.	.	.	V.
27.333	1875.8152	2.00	Q	.	.	.	V.
27.417	1875.8274	1.77	Q	.	.	.	V.
27.500	1875.8380	1.53	Q	.	.	.	V.
27.583	1875.8470	1.30	Q	.	.	.	V.
27.667	1875.8545	1.08	Q	.	.	.	V.
27.750	1875.8604	0.85	Q	.	.	.	V.
27.833	1875.8647	0.64	Q	.	.	.	V.
27.917	1875.8673	0.37	Q	.	.	.	V.
28.000	1875.8685	0.17	Q	.	.	.	V.
28.083	1875.8691	0.09	Q	.	.	.	V
28.167	1875.8695	0.06	Q	.	.	.	V
28.250	1875.8698	0.03	Q	.	.	.	V
28.333	1875.8699	0.02	Q	.	.	.	V
28.417	1875.8700	0.01	Q	.	.	.	V
28.500	1875.8701	0.01	Q	.	.	.	V
28.583	1875.8701	0.01	Q	.	.	.	V
28.667	1875.8701	0.01	Q	.	.	.	V
28.750	1875.8701	0.00	Q	.	.	.	V
28.833	1875.8701	0.00	Q	.	.	.	V
28.917	1875.8701	0.00	Q	.	.	.	V
29.000	1875.8701	0.00	Q	.	.	.	V
29.083	1875.8701	0.00	Q	.	.	.	V
29.167	1875.8701	0.00	Q	.	.	.	V
29.250	1875.8701	0.00	Q	.	.	.	V
29.333	1875.8701	0.00	Q	.	.	.	V
29.417	1875.8701	0.00	Q	.	.	.	V
29.500	1875.8701	0.00	Q	.	.	.	V
29.583	1875.8701	0.00	Q	.	.	.	V
29.667	1875.8701	0.00	Q	.	.	.	V
29.750	1875.8701	0.00	Q	.	.	.	V
29.833	1875.8701	0.00	Q	.	.	.	V
29.917	1875.8701	0.00	Q	.	.	.	V
30.000	1875.8701	0.00	Q	.	.	.	V

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****
FLOW PROCESS FROM NODE 6355.00 TO NODE 6371.00 IS CODE = 5.2

>>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
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*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 6039.2 Ac. ***

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
INTERVALS(Reference: the National Engineering Handbook,
Hydrology, Chapter 17, page 17-52, August,1972,
U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 30.00 CHANNEL Z = 1.00
UPSTREAM ELEVATION(FT) = 314.00
DOWNSTREAM ELEVATION(FT) = 220.00
CHANNEL LENGTH(FT) = 5919.00 MANNING'S FACTOR = 0.040
CONSTANT LOSS RATE(CFS) = 0.00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 7772.19
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 5684.70
CHANNEL NORMAL VELOCITY FOR Q = 5684.70 CFS = 16.07 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.904

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
UNIT INTERVALS IS CSTAR = 0.888

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.000	1088.60	1054.32	1054.32
14.083	1119.93	1082.02	1082.02
14.167	1159.95	1112.63	1112.63
14.250	1219.03	1150.75	1150.75
14.333	1299.77	1205.62	1205.62
14.417	1400.46	1281.35	1281.35
14.500	1511.88	1377.30	1377.30
14.583	1645.64	1485.95	1485.95
14.667	1808.75	1614.71	1614.71
14.750	1973.48	1771.11	1771.11
14.833	2110.99	1934.75	1934.75
14.917	2222.90	2077.84	2077.84
15.000	2322.07	2195.74	2195.74
15.083	2416.35	2298.26	2298.26
15.167	2508.97	2393.93	2393.93
15.250	2602.35	2487.06	2487.06
15.333	2697.69	2580.33	2580.33
15.417	2793.29	2675.25	2675.25
15.500	2877.87	2770.75	2770.75
15.583	2930.53	2857.62	2857.62
15.667	2948.29	2917.23	2917.23
15.750	2944.04	2943.08	2943.08
15.833	2948.84	2944.35	2944.35
15.917	2954.19	2947.87	2947.87
16.000	2965.20	2952.96	2952.96
16.083	3115.79	2962.75	2962.75
16.167	3578.45	3083.96	3083.96
16.250	4428.29	3477.94	3477.94
16.333	5338.18	4238.96	4238.96
16.417	6087.09	5126.34	5126.34
16.500	6517.88	5906.48	5906.48
16.583	7150.30	6407.42	6407.42
16.667	7772.19	7005.43	7005.43
16.750	7495.64	7625.67	7625.67
16.833	6402.75	7537.23	7537.23
16.917	5378.17	6636.43	6636.43
17.000	4792.13	5619.00	5619.00
17.083	4453.34	4941.85	4941.85
17.167	4179.38	4541.07	4541.07
17.250	3905.73	4246.60	4246.60
17.333	3633.16	3970.59	3970.59
17.417	3364.59	3697.53	3697.53
17.500	3115.18	3428.07	3428.07
17.583	2869.89	3174.54	3174.54
17.667	2607.81	2927.92	2927.92
17.750	2351.15	2669.22	2669.22
17.833	2132.02	2411.80	2411.80
17.917	1948.11	2184.72	2184.72
18.000	1791.24	1992.54	1992.54
18.083	1659.93	1829.08	1829.08
18.167	1533.93	1691.67	1691.67
18.250	1402.23	1563.88	1563.88

18.333	1284.85	1433.18	1433.18
18.417	1192.81	1312.90	1312.90
18.500	1118.06	1215.23	1215.23
18.583	1048.98	1136.23	1136.23
18.667	980.91	1065.49	1065.49
18.750	918.11	997.02	997.02
18.833	864.77	933.07	933.07
18.917	821.03	877.62	877.62
19.000	784.69	831.63	831.63
19.083	753.28	793.49	793.49
19.167	725.46	760.85	760.85
19.250	700.98	732.14	732.14
19.333	679.89	706.86	706.86
19.417	661.40	684.97	684.97
19.500	644.81	665.84	665.84
19.583	629.45	648.78	648.78
19.667	614.90	633.12	633.12
19.750	600.62	618.36	618.36
19.833	586.48	604.00	604.00
19.917	572.38	589.82	589.82
20.000	556.25	575.71	575.71

PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 1875.869 AF
OUTFLOW VOLUME = 1875.869 AF
LOSS VOLUME = 0.000 AF

FLOW PROCESS FROM NODE 6360.00 TO NODE 6371.00 IS CODE = 1

*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 922.3 Ac. ***
>>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<

(UNIT-HYDROGRAPH ADDED TO STREAM #2)

WATERSHED AREA = 922.300 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.250 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY(DEVELOPED):
"S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.900
FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.050
MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.050
VALLEY(UNDEVELOPED)/DESERT:
"S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.000
DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.000
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.120
LOW LOSS FRACTION = 0.510
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL(INCH)= 0.58
SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)= 1.22
SPECIFIED PEAK 1-HOUR RAINFALL(INCH) = 1.62
SPECIFIED PEAK 3-HOUR RAINFALL(INCH) = 2.71
SPECIFIED PEAK 6-HOUR RAINFALL(INCH) = 3.75
SPECIFIED PEAK 24-HOUR RAINFALL(INCH) = 6.28

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.959
30-MINUTE FACTOR = 0.959
1-HOUR FACTOR = 0.959
3-HOUR FACTOR = 0.994
6-HOUR FACTOR = 0.997
24-HOUR FACTOR = 0.998

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 33.333

RUNOFF HYDROGRAPH LISTING LIMITS:
MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 14.00
MODEL TIME(HOURS) FOR END OF RESULTS = 20.00

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	2.292	255.704
2	13.821	1285.900
3	35.522	2420.567
4	62.164	2971.648
5	80.648	2061.668
6	89.997	1042.866
7	94.646	518.513
8	96.625	220.790
9	97.489	96.296
10	98.211	80.598
11	98.708	55.360
12	99.005	33.223
13	99.174	18.845
14	99.253	8.821
15	99.326	8.100
16	99.394	7.535
17	99.458	7.164
18	99.518	6.727
19	99.574	6.257
20	99.626	5.759
21	99.675	5.514
22	99.718	4.708
23	99.759	4.643
24	99.799	4.443
25	99.827	3.130
26	99.851	2.675
27	99.875	2.675
28	99.897	2.469
29	99.906	1.014
30	99.913	0.730
31	99.919	0.731
32	99.926	0.729
33	99.932	0.731
34	99.939	0.729
35	99.946	0.730
36	99.952	0.729
37	99.959	0.729
38	99.965	0.729
39	99.972	0.730
40	99.978	0.729
41	99.985	0.729
42	99.991	0.729
43	99.998	0.729
44	100.000	0.237

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--------------------------------------------------------------------------------
    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =     154.5061
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =     327.1010
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                    2 4 - H O U R    S T O R M
                  R U N O F F    H Y D R O G R A P H

================================================================================
          HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
       (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      650.0    1300.0    1950.0    2600.0
--------------------------------------------------------------------------------
  14.000     92.0759    251.80  .  Q      .V        .         .         .
  14.083     93.8620    259.34  .  Q      .V        .         .         .
  14.167     95.7183    269.54  .   Q     .V        .         .         .
  14.250     97.6636    282.46  .   Q     .V        .         .         .
  14.333     99.7101    297.14  .   Q     . V       .         .         .
  14.417    101.8475    310.36  .   Q     . V       .         .         .
  14.500    104.0665    322.20  .   Q     . V       .         .         .
  14.583    106.3633    333.49  .    Q    .  V      .         .         .
  14.667    108.7398    345.08  .    Q    .  V      .         .         .
  14.750    111.1993    357.12  .    Q    .  V      .         .         .
  14.833    113.7496    370.30  .    Q    .  V      .         .         .
  14.917    116.3968    384.38  .    Q    .   V     .         .         .
  15.000    119.1512    399.94  .     Q   .   V     .         .         .
  15.083    122.0217    416.80  .     Q   .   V     .         .         .
  15.167    125.0226    435.72  .     Q   .    V    .         .         .
  15.250    128.1668    456.54  .      Q  .    V    .         .         .
  15.333    131.4750    480.36  .      Q  .     V   .         .         .
  15.417    134.9463    504.03  .      Q  .     V   .         .         .
  15.500    138.5274    519.98  .      Q  .     V   .         .         .
  15.583    142.1582    527.19  .       Q .      V  .         .         .
  15.667    145.8463    535.52  .       Q .      V  .         .         .
  15.750    149.7333    564.39  .       Q .       V .         .         .
  15.833    154.0253    623.20  .        Q.       V .         .         .
  15.917    158.9539    715.63  .         .Q      V.         .         .
  16.000    164.9456    869.99  .          . Q     V         .         .
  16.083    173.1975   1198.18  .          .       Q .V      .         .
  16.167    185.8843   1842.12  .          .         . V     Q .       .
  16.250    202.4754   2409.04  .          .          .  V     .      Q  .
  16.333    219.9588   2538.58  .          .           .    V   .       Q.
  16.417    233.4155   1953.91  .          .           .      V Q        .
  16.500    242.5146   1321.20  .          .           Q       V.        .
  16.583    249.0268    945.57  .          .   Q       .       V         .
  16.667    254.0078    723.23  .          .Q          .        .V       .
  16.750    258.1585    602.69  .        Q.            .        .V       .
  16.833    261.8781    540.07  .       Q .            .        . V      .
  16.917    265.2047    483.02  .      Q  .            .        . V      .
  17.000    268.1934    433.96  .     Q   .            .        . V      .
  17.083    270.9070    394.02  .     Q    .           .        .  V     .
  17.167    273.3862    359.97  .    Q     .           .        .  V     .
  17.250    275.6710    331.75  .    Q     .           .        .  V     .
  17.333    277.7761    305.67  .   Q      .           .        .  V     .
  17.417    279.7319    283.98  .   Q      .           .        .   V    .
  17.500    281.5658    266.28  .   Q      .           .        .   V    .
  17.583    283.2964    251.30  .  Q       .           .        .   V    .
  17.667    284.9374    238.27  .  Q       .           .        .   V    .
  17.750    286.4989    226.73  .  Q       .           .        .    V   .
  17.833    287.9863    215.98  .  Q       .           .        .    V   .
  17.917    289.4077    206.38  .  Q       .           .        .    V   .
  18.000    290.7675    197.44  .  Q       .           .        .    V   .
  18.083    292.0585    187.45  . Q        .           .        .    V   .
  18.167    293.2521    173.31  . Q        .           .        .    V   .
  18.250    294.3161    154.50  . Q        .           .        .    V   .
  18.333    295.2383    133.89  . Q        .           .        .     V  .
  18.417    296.0549    118.57  .Q         .           .        .     V  .
  18.500    296.8109    109.76  .Q         .           .        .     V  .
  18.583    297.5290    104.27  .Q         .           .        .     V  .
  18.667    298.2219    100.61  .Q         .           .        .     V  .
  18.750    298.8954     97.79  .Q         .           .        .     V  .
  18.833    299.5511     95.21  .Q         .           .        .     V  .
  18.917    300.1909     92.90  .Q         .           .        .     V  .
  19.000    300.8163     90.82  .Q         .           .        .     V  .
  19.083    301.4288     88.93  .Q         .           .        .     V  .
  19.167    302.0292     87.18  .Q         .           .        .     V  .
  19.250    302.6182     85.52  .Q         .           .        .      V .
  19.333    303.1962     83.92  .Q         .           .        .      V .
  19.417    303.7636     82.39  .Q         .           .        .      V .
  19.500    304.3209     80.91  .Q         .           .        .      V .
  19.583    304.8681     79.46  .Q         .           .        .      V .
  19.667    305.4044     77.87  .Q         .           .        .      V .
  19.750    305.9311     76.47  .Q         .           .        .      V .
  19.833    306.4493     75.24  .Q         .           .        .      V .
  19.917    306.9595     74.08  .Q         .           .        .      V .
  20.000    307.4620     72.96  .Q         .           .        .      V .
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********************************************************************************
  FLOW PROCESS FROM NODE   6371.00 TO NODE   6371.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  6961.5 Ac. ***
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  FLOW PROCESS FROM NODE   6371.00 TO NODE   6371.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  6961.5 Ac. ***

           STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
         (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.     2000.0    4000.0    6000.0    8000.0
--------------------------------------------------------------------------------
  14.000    581.1647   1315.27  .     Q   V         .         .         .
  14.083    590.4868   1353.55  .     Q   V         .         .         .
  14.167    600.2031   1410.82  .      Q  V         .         .         .
  14.250    610.4882   1493.40  .      Q  .V        .         .         .
  14.333    621.5263   1602.73  .       Q .V        .         .         .
  14.417    633.3804   1721.21  .       Q .V        .         .         .
  14.500    646.0998   1846.86  .        Q.V        .         .         .
  14.583    659.7250   1978.38  .        Q. V       .         .         .
  14.667    674.3729   2126.87  .         Q V       .         .         .
  14.750    690.2389   2303.75  .         .QV       .         .         .
  14.833    707.3878   2490.02  .         . Q       .         .         .
  14.917    725.6682   2654.31  .         .  Q      .         .         .
  15.000    744.8865   2790.50  .         .  Q      .         .         .
  15.083    764.9208   2908.99  .         .  VQ     .         .         .
  15.167    785.7191   3019.91  .         .   VQ    .         .         .
  15.250    807.2625   3128.10  .         .   VQ    .         .         .
  15.333    829.5572   3237.18  .         .    VQ   .         .         .
  15.417    852.5674   3341.09  .         .    VQ   .         .         .
  15.500    876.0992   3416.82  .         .    V Q  .         .         .
  15.583    899.8770   3452.53  .         .     VQ  .         .         .
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15.667	923.6304	3449.00	. . VQ . . .
15.750	947.3521	3444.39	. . Q . . .
15.833	971.1559	3456.31	. . Q . . .
15.917	995.2927	3504.66	. . QV . . .
16.000	1020.1286	3606.17	. . Q . . .
16.083	1046.5994	3843.56	. . Q. . .
16.167	1077.0850	4426.50	. . V. Q . .
16.250	1112.9871	5212.99	. . V Q . .
16.333	1154.4578	6021.55	. . .V Q . .
16.417	1198.6753	6420.39	. . .V . Q . .
16.500	1244.8997	6711.78	. . . V . Q . .
16.583	1292.8148	6957.29	. . . V . Q . .
16.667	1343.9041	7418.16	. . . V . . Q .
16.750	1398.8912	7984.14	. . . V . . Q.
16.833	1453.4918	7928.00	. . . V . . Q.
16.917	1502.1854	7070.31	. . . V . Q .
17.000	1543.9683	6066.87	. . . V Q .
17.083	1581.0564	5385.19	. . . Q V . .
17.167	1615.2737	4968.35	. . . Q V. .
17.250	1647.2622	4644.74	. . . Q V .
17.333	1677.0668	4327.62	. . .Q V .
17.417	1704.7675	4022.15	. . Q .V .
17.500	1730.4656	3731.37	. . Q . .V .
17.583	1754.3065	3461.70	. . Q . . V .
17.667	1776.3566	3201.66	. . Q . . V .
17.750	1796.5292	2929.06	. . Q . . V .
17.833	1814.8185	2655.61	. . Q . . V .
17.917	1831.4424	2413.78	. . Q . . V .
18.000	1846.6630	2210.02	. .Q . . V .
18.083	1860.6805	2035.35	. .Q . . V .
18.167	1873.6422	1882.03	. Q. . . V .
18.250	1885.5823	1733.69	. Q . . . V .
18.333	1896.4688	1580.72	. Q . . . V .
18.417	1906.4084	1443.25	. Q . . . V .
18.500	1915.6008	1334.74	. Q . . . V .
18.583	1924.2004	1248.67	. Q . . . V .
18.667	1932.2800	1173.16	. Q . . . V .
18.750	1939.8612	1100.78	. Q . . . V .
18.833	1946.9747	1032.89	. Q . . . V .
18.917	1953.6809	973.73	. Q . . . V .
19.000	1960.0479	924.48	. Q . . . V .
19.083	1966.1326	883.49	. Q . . . V .
19.167	1971.9751	848.34	. Q . . . V .
19.250	1977.6040	817.32	. Q . . . V .
19.333	1983.0446	789.96	. Q . . . V .
19.417	1988.3217	766.23	. Q . . . V .
19.500	1993.4556	745.45	. Q . . . V .
19.583	1998.4615	726.87	. Q . . . V .
19.667	2003.3491	709.67	. Q . . . V .
19.750	2008.1259	693.58	. Q . . . V .
19.833	2012.7959	678.09	. Q . . . V .
19.917	2017.3612	662.88	. Q . . . V .
20.000	2021.8228	647.81	. Q . . . V .
20.083	2026.1711	631.38	. Q . . . V .
20.167	2030.3875	612.21	. Q . . . V .
20.250	2034.4707	592.89	. Q . . . V .
20.333	2038.4440	576.91	. Q . . . V .
20.417	2042.3297	564.20	. Q . . . V .
20.500	2046.1401	553.27	. Q . . . V .
20.583	2049.8813	543.23	. Q . . . V .
20.667	2053.5571	533.72	. Q . . . V .
20.750	2057.1702	524.61	. Q . . . V .
20.833	2060.7229	515.86	. Q . . . V .
20.917	2064.2178	507.47	. Q . . . V .
21.000	2067.6570	499.38	. Q . . . V .
21.083	2071.0427	491.61	. Q . . . V .
21.167	2074.3789	484.40	. Q . . . V .
21.250	2077.6689	477.73	. Q . . . V .
21.333	2080.9160	471.47	. Q . . . V .
21.417	2084.1221	465.52	. Q . . . V .
21.500	2087.2888	459.81	. Q . . . V .
21.583	2090.4177	454.31	. Q . . . V .
21.667	2093.5100	449.01	. Q . . . V .
21.750	2096.5671	443.88	. Q . . . V .
21.833	2099.5901	438.92	. Q . . . V .
21.917	2102.5798	434.10	. Q . . . V .
22.000	2105.5374	429.42	. Q . . . V .
22.083	2108.4636	424.88	. Q . . . V .
22.167	2111.3596	420.50	. Q . . . V .
22.250	2114.2266	416.28	. Q . . . V .
22.333	2117.0654	412.21	. Q . . . V .
22.417	2119.8770	408.25	. Q . . . V .
22.500	2122.6621	404.40	. Q . . . V .
22.583	2125.4214	400.64	. Q . . . V .
22.667	2128.1555	396.98	.Q . . . V .
22.750	2130.8650	393.41	.Q . . . V .
22.833	2133.5503	389.92	.Q . . . V .
22.917	2136.2122	386.51	.Q . . . V .
23.000	2138.8511	383.18	.Q . . . V.
23.083	2141.4675	379.92	.Q . . . V.
23.167	2144.0623	376.74	.Q . . . V.
23.250	2146.6355	373.63	.Q . . . V.
23.333	2149.1877	370.59	.Q . . . V.
23.417	2151.7195	367.61	.Q . . . V.
23.500	2154.2312	364.69	.Q . . . V.
23.583	2156.7231	361.83	.Q . . . V.
23.667	2159.1958	359.04	.Q . . . V.
23.750	2161.6497	356.29	.Q . . . V.
23.833	2164.0850	353.61	.Q . . . V.
23.917	2166.5022	350.97	.Q . . . V.
24.000	2168.9016	348.39	.Q . . . V.
24.083	2171.2766	344.84	.Q . . . V.
24.167	2173.5962	336.79	.Q . . . V.
24.250	2175.8154	322.24	.Q . . . V.
24.333	2177.8848	300.47	.Q . . . V.
24.417	2179.7864	276.11	.Q . . . V.
24.500	2181.5107	250.37	.Q . . . V.
24.583	2183.0583	224.71	.Q . . . V.
24.667	2184.4150	197.00	Q . . . V.
24.750	2185.5454	164.12	Q . . . V.
24.833	2186.4431	130.36	Q . . . V.
24.917	2187.1531	103.09	Q . . . V.
25.000	2187.7305	83.85	Q . . . V.
25.083	2188.2126	70.01	Q . . . V.
25.167	2188.6211	59.29	Q . . . V.
25.250	2188.9692	50.54	Q . . . V.
25.333	2189.2668	43.21	Q . . . V.
25.417	2189.5217	37.00	Q . . . V.
25.500	2189.7402	31.72	Q . . . V.
25.583	2189.9275	27.19	Q . . . V.
25.667	2190.0874	23.21	Q . . . V.
25.750	2190.2231	19.73	Q . . . V.
25.833	2190.3381	16.71	Q . . . V.
25.917	2190.4353	14.11	Q . . . V.
26.000	2190.5173	11.93	Q . . . V.
26.083	2190.5869	10.11	Q . . . V.
26.167	2190.6458	8.55	Q . . . V.
26.250	2190.6956	7.22	Q . . . V.
26.333	2190.7385	6.24	Q . . . V.
26.417	2190.7771	5.60	Q . . . V.
26.500	2190.8125	5.14	Q . . . V.
26.583	2190.8455	4.78	Q . . . V.
26.667	2190.8762	4.45	Q . . . V.
26.750	2190.9048	4.14	Q . . . V.

26.833	2190.9312	3.85	Q	.	.	.	V.
26.917	2190.9556	3.56	Q	.	.	.	V.
27.000	2190.9783	3.30	Q	.	.	.	V.
27.083	2190.9993	3.04	Q	.	.	.	V.
27.167	2191.0186	2.79	Q	.	.	.	V.
27.250	2191.0361	2.55	Q	.	.	.	V.
27.333	2191.0520	2.31	Q	.	.	.	V.
27.417	2191.0662	2.07	Q	.	.	.	V.
27.500	2191.0789	1.83	Q	.	.	.	V.
27.583	2191.0898	1.60	Q	.	.	.	V.
27.667	2191.0994	1.37	Q	.	.	.	V.
27.750	2191.1072	1.14	Q	.	.	.	V.
27.833	2191.1135	0.92	Q	.	.	.	V.
27.917	2191.1184	0.70	Q	.	.	.	V.
28.000	2191.1218	0.48	Q	.	.	.	V.
28.083	2191.1238	0.28	Q	.	.	.	V.
28.167	2191.1248	0.14	Q	.	.	.	V
28.250	2191.1252	0.07	Q	.	.	.	V
28.333	2191.1255	0.03	Q	.	.	.	V
28.417	2191.1257	0.02	Q	.	.	.	V
28.500	2191.1257	0.01	Q	.	.	.	V
28.583	2191.1257	0.01	Q	.	.	.	V
28.667	2191.1257	0.01	Q	.	.	.	V
28.750	2191.1257	0.01	Q	.	.	.	V
28.833	2191.1257	0.00	Q	.	.	.	V
28.917	2191.1257	0.00	Q	.	.	.	V
29.000	2191.1257	0.00	Q	.	.	.	V
29.083	2191.1257	0.00	Q	.	.	.	V
29.167	2191.1257	0.00	Q	.	.	.	V
29.250	2191.1257	0.00	Q	.	.	.	V
29.333	2191.1257	0.00	Q	.	.	.	V
29.417	2191.1257	0.00	Q	.	.	.	V
29.500	2191.1257	0.00	Q	.	.	.	V
29.583	2191.1257	0.00	Q	.	.	.	V
29.667	2191.1257	0.00	Q	.	.	.	V
29.750	2191.1257	0.00	Q	.	.	.	V
29.833	2191.1257	0.00	Q	.	.	.	V
29.917	2191.1257	0.00	Q	.	.	.	V
30.000	2191.1257	0.00	Q	.	.	.	V

****
FLOW PROCESS FROM NODE 6371.00 TO NODE 6395.00 IS CODE = 5.2

>>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
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*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 6961.5 Ac. ***

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
INTERVALS(Reference: the National Engineering Handbook,
Hydrology, Chapter 17, page 17-52, August,1972,
U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 35.00 CHANNEL Z = 1.00
UPSTREAM ELEVATION(FT) = 220.00
DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 959.00 MANNING'S FACTOR = 0.040
CONSTANT LOSS RATE(CFS) = 0.00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 7984.14
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 5972.88
CHANNEL NORMAL VELOCITY FOR Q = 5972.88 CFS = 12.17 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.877

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
UNIT INTERVALS IS CSTAR = 0.999

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.000	1315.27	1307.70	1307.70
14.083	1353.55	1344.69	1344.69
14.167	1410.82	1397.55	1397.55
14.250	1493.40	1474.27	1474.27
14.333	1602.73	1577.40	1577.40
14.417	1721.21	1693.76	1693.76
14.500	1846.86	1817.75	1817.75
14.583	1978.38	1947.91	1947.91
14.667	2126.87	2092.47	2092.47
14.750	2303.75	2262.77	2262.77
14.833	2490.02	2446.87	2446.87
14.917	2654.31	2616.24	2616.24
15.000	2790.50	2758.94	2758.94
15.083	2908.99	2881.53	2881.53
15.167	3019.91	2994.21	2994.21
15.250	3128.10	3103.03	3103.03
15.333	3237.18	3211.91	3211.91
15.417	3341.09	3317.01	3317.01
15.500	3416.82	3399.26	3399.26
15.583	3452.53	3444.24	3444.24
15.667	3449.00	3449.81	3449.81
15.750	3444.39	3445.46	3445.46
15.833	3456.31	3453.55	3453.55
15.917	3504.66	3493.47	3493.47
16.000	3606.17	3582.66	3582.66
16.083	3843.56	3788.60	3788.60
16.167	4426.50	4291.53	4291.53
16.250	5212.99	5030.83	5030.83
16.333	6021.55	5834.22	5834.22
16.417	6420.39	6327.88	6327.88
16.500	6711.78	6644.24	6644.24
16.583	6957.29	6900.40	6900.40
16.667	7418.16	7311.44	7311.44
16.750	7984.14	7853.04	7853.04
16.833	7928.00	7940.84	7940.84
16.917	7070.31	7268.81	7268.81
17.000	6066.87	6299.31	6299.31
17.083	5385.19	5543.21	5543.21
17.167	4968.35	5064.99	5064.99
17.250	4644.74	4719.74	4719.74
17.333	4327.62	4401.09	4401.09
17.417	4022.15	4092.92	4092.92
17.500	3731.37	3798.74	3798.74
17.583	3461.70	3524.19	3524.19
17.667	3201.66	3261.91	3261.91
17.750	2929.06	2992.22	2992.22
17.833	2655.61	2718.97	2718.97
17.917	2413.78	2469.82	2469.82
18.000	2210.02	2257.24	2257.24
18.083	2035.35	2075.83	2075.83
18.167	1882.03	1917.56	1917.56
18.250	1733.69	1768.06	1768.06

18.333	1580.72	1616.16	1616.16
18.417	1443.25	1475.10	1475.10
18.500	1334.74	1359.88	1359.88
18.583	1248.67	1268.61	1268.61
18.667	1173.16	1190.66	1190.66
18.750	1100.78	1117.55	1117.55
18.833	1032.89	1048.62	1048.62
18.917	973.73	987.44	987.44
19.000	924.48	935.89	935.89
19.083	883.49	892.99	892.99
19.167	848.34	856.49	856.49
19.250	817.32	824.51	824.51
19.333	789.96	796.30	796.30
19.417	766.23	771.73	771.73
19.500	745.45	750.26	750.26
19.583	726.87	731.18	731.18
19.667	709.67	713.66	713.66
19.750	693.58	697.31	697.31
19.833	678.09	681.68	681.68
19.917	662.88	666.40	666.40
20.000	647.81	651.30	651.30

PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 2191.124 AF
OUTFLOW VOLUME = 2191.125 AF
LOSS VOLUME = 0.000 AF

FLOW PROCESS FROM NODE 6380.00 TO NODE 6395.00 IS CODE = 1

*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 329.6 Ac. ***
>>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<

(UNIT-HYDROGRAPH ADDED TO STREAM #2)

WATERSHED AREA = 329.600 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.330 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY(DEVELOPED):
"S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.900
FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.050
MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.050
VALLEY(UNDEVELOPED)/DESERT:
"S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.000
DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.000
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.150
LOW LOSS FRACTION = 0.500
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL(INCH)= 0.58
SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)= 1.22
SPECIFIED PEAK 1-HOUR RAINFALL(INCH) = 1.62
SPECIFIED PEAK 3-HOUR RAINFALL(INCH) = 2.71
SPECIFIED PEAK 6-HOUR RAINFALL(INCH) = 3.75
SPECIFIED PEAK 24-HOUR RAINFALL(INCH) = 6.28

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.985
30-MINUTE FACTOR = 0.985
1-HOUR FACTOR = 0.985
3-HOUR FACTOR = 0.998
6-HOUR FACTOR = 0.999
24-HOUR FACTOR = 0.999

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 25.253

RUNOFF HYDROGRAPH LISTING LIMITS:
MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 14.00
MODEL TIME(HOURS) FOR END OF RESULTS = 20.00

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.602	63.859
2	7.797	246.932
3	21.404	542.405
4	39.370	716.138
5	60.064	824.885
6	75.891	630.876
7	85.613	387.515
8	91.167	221.417
9	94.489	132.407
10	96.293	71.884
11	97.026	29.243
12	97.665	25.478
13	98.270	24.118
14	98.850	23.087
15	98.984	5.349
16	99.089	4.176
17	99.176	3.468
18	99.236	2.391
19	99.292	2.234
20	99.345	2.124
21	99.396	2.026
22	99.445	1.965
23	99.491	1.826
24	99.536	1.815
25	99.577	1.639
26	99.617	1.559
27	99.656	1.556
28	99.690	1.365
29	99.721	1.257
30	99.753	1.257
31	99.784	1.254
32	99.812	1.082
33	99.830	0.737
34	99.848	0.724
35	99.866	0.724
36	99.885	0.724
37	99.900	0.614
38	99.906	0.230
39	99.911	0.198
40	99.916	0.197
41	99.921	0.199
42	99.926	0.197
43	99.930	0.197
44	99.935	0.198
45	99.940	0.198

46	99.945	0.197
47	99.950	0.199
48	99.955	0.197
49	99.960	0.197
50	99.965	0.196
51	99.970	0.197
52	99.975	0.197
53	99.980	0.197
54	99.985	0.196
55	99.990	0.197
56	99.995	0.197
57	100.000	0.197
58	100.000	0.013

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 59.4543

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 112.8638

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 200.0 400.0 600.0 800.0
14.000	31.3450	77.30	. Q .V . . .
14.083	31.8943	79.76	. Q .V . . .
14.167	32.4621	82.45	. Q .V . . .
14.250	33.0512	85.54	. Q .V . . .
14.333	33.6634	88.89	. Q .V . . .
14.417	34.3007	92.53	. Q . V . . .
14.500	34.9632	96.20	. Q . V . . .
14.583	35.6517	99.96	. Q . V . . .
14.667	36.3666	103.81	. Q . V . . .
14.750	37.1099	107.93	. Q . V . . .
14.833	37.8831	112.27	. Q . V . . .
14.917	38.6890	117.01	. Q . V . . .
15.000	39.5300	122.11	. Q . V . . .
15.083	40.4100	127.78	. Q . V . . .
15.167	41.3325	133.95	. Q . V . . .
15.250	42.3028	140.89	. Q . V . . .
15.333	43.3260	148.56	. Q . V . . .
15.417	44.4057	156.77	. Q . V . . .
15.500	45.5378	164.38	. Q . V . . .
15.583	46.7154	170.99	. Q . V . . .
15.667	47.9404	177.87	. Q . V . . .
15.750	49.2283	187.00	. Q. V . . .
15.833	50.6208	202.19	. Q V . . .
15.917	52.1899	227.84	. .Q V . . .
16.000	54.0403	268.68	. . Q V. . .
16.083	56.4886	355.50	. . Q V . .
16.167	59.9356	500.50	. . .V Q . .
16.250	64.6034	677.76	. . . V . Q .
16.333	69.9046	769.73	. . . V . . Q .
16.417	75.3201	786.33	. . . V . . Q.
16.500	79.7728	646.54	. . . V . Q .
16.583	83.0865	481.15	. . . Q V. .
16.667	85.5544	358.33	. . Q . V .
16.750	87.4884	280.83	. . Q . .V .
16.833	89.0372	224.88	. .Q . .V .
16.917	90.3057	184.19	. Q. . . V .
17.000	91.4430	165.13	. Q . . . V .
17.083	92.4766	150.08	. Q . . . V .
17.167	93.4151	136.28	. Q . . . V .
17.250	94.2231	117.32	. Q . . . V .
17.333	94.9609	107.13	. Q . . . V .
17.417	95.6407	98.70	. Q . . . V .
17.500	96.2702	91.40	. Q . . . V .
17.583	96.8581	85.36	. Q . . . V .
17.667	97.4099	80.13	. Q . . . V .
17.750	97.9299	75.50	. Q . . . V .
17.833	98.4213	71.35	. Q . . . V .
17.917	98.8866	67.57	. Q . . . V .
18.000	99.3284	64.15	. Q . . . V .
18.083	99.7471	60.80	. Q . . . V .
18.167	100.1419	57.33	. Q . . . V .
18.250	100.5105	53.51	. Q . . . V .
18.333	100.8517	49.55	. Q . . . V .
18.417	101.1666	45.72	. Q . . . V .
18.500	101.4608	42.72	. Q . . . V .
18.583	101.7398	40.51	. Q . . . V .
18.667	102.0068	38.78	. Q . . . V .
18.750	102.2638	37.31	. Q . . . V .
18.833	102.5133	36.23	. Q . . . V .
18.917	102.7565	35.31	. Q . . . V .
19.000	102.9937	34.45	. Q . . . V .
19.083	103.2249	33.56	. Q . . . V .
19.167	103.4496	32.63	. Q . . . V .
19.250	103.6696	31.94	. Q . . . V .
19.333	103.8853	31.32	. Q . . . V .
19.417	104.0970	30.74	. Q . . . V .
19.500	104.3048	30.18	. Q . . . V .
19.583	104.5090	29.65	. Q . . . V .
19.667	104.7098	29.15	. Q . . . V .
19.750	104.9072	28.67	. Q . . . V .
19.833	105.1015	28.20	. Q . . . V .
19.917	105.2927	27.76	. Q . . . V .
20.000	105.4809	27.34	. Q . . . V .

****
FLOW PROCESS FROM NODE 6395.00 TO NODE 6395.00 IS CODE = 7
>>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 7291.1 Ac. ***

****
FLOW PROCESS FROM NODE 6395.00 TO NODE 6395.00 IS CODE = 11
>>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<

*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 7291.1 Ac. ***

STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 2025.0 4050.0 6075.0 8100.0
0.083	0.0072	1.04	Q . . . .
0.167	0.0525	6.58	Q . . . .
0.250	0.1863	19.43	Q . . . .
0.333	0.4632	40.20	Q . . . .
0.417	0.9128	65.28	Q . . . .
0.500	1.5430	91.50	Q . . . .
0.583	2.3507	117.28	Q . . . .
0.667	3.3437	144.19	Q . . . .
0.750	4.5521	175.46	Q . . . .
0.833	5.9897	208.73	VQ . . . .
0.917	7.6251	237.46	VQ . . . .
1.000	9.4075	258.80	VQ . . . .
1.083	11.2967	274.31	VQ . . . .
1.167	13.2685	286.30	VQ . . . .
1.250	15.3077	296.10	VQ . . . .
1.333	17.4043	304.43	VQ . . . .
1.417	19.5507	311.65	VQ . . . .
1.500	21.7405	317.96	VQ . . . .
1.583	23.9687	323.54	VQ . . . .
1.667	26.2317	328.58	VQ . . . .

1.750	28.5262	333.16	VQ	.	.	.	.
1.833	30.8493	337.32	VQ	.	.	.	.
1.917	33.1984	341.08	VQ	.	.	.	.
2.000	35.5707	344.47	VQ	.	.	.	.
2.083	37.9640	347.50	VQ	.	.	.	.
2.167	40.3765	350.29	VQ	.	.	.	.
2.250	42.8067	352.87	VQ	.	.	.	.
2.333	45.2526	355.15	VQ	.	.	.	.
2.417	47.7121	357.11	VQ	.	.	.	.
2.500	50.1836	358.87	VQ	.	.	.	.
2.583	52.6666	360.53	VQ	.	.	.	.
2.667	55.1608	362.16	VQ	.	.	.	.
2.750	57.6662	363.77	.Q	.	.	.	.
2.833	60.1827	365.39	.Q	.	.	.	.
2.917	62.7103	367.02	.Q	.	.	.	.
3.000	65.2492	368.64	.Q	.	.	.	.
3.083	67.7992	370.27	.Q	.	.	.	.
3.167	70.3605	371.90	.Q	.	.	.	.
3.250	72.9332	373.55	.Q	.	.	.	.
3.333	75.5172	375.21	.Q	.	.	.	.
3.417	78.1128	376.88	.Q	.	.	.	.
3.500	80.7200	378.56	.Q	.	.	.	.
3.583	83.3389	380.27	.Q	.	.	.	.
3.667	85.9696	381.98	.Q	.	.	.	.
3.750	88.6123	383.72	.Q	.	.	.	.
3.833	91.2670	385.46	.Q	.	.	.	.
3.917	93.9338	387.22	.Q	.	.	.	.
4.000	96.6128	388.99	.Q	.	.	.	.
4.083	99.3040	390.77	.Q	.	.	.	.
4.167	102.0073	392.52	.Q	.	.	.	.
4.250	104.7224	394.23	.Q	.	.	.	.
4.333	107.4490	395.91	.Q	.	.	.	.
4.417	110.1872	397.58	.Q	.	.	.	.
4.500	112.9369	399.26	.Q	.	.	.	.
4.583	115.6983	400.95	.QV	.	.	.	.
4.667	118.4714	402.66	.QV	.	.	.	.
4.750	121.2565	404.39	.QV	.	.	.	.
4.833	124.0535	406.13	. Q	.	.	.	.
4.917	126.8628	407.90	. Q	.	.	.	.
5.000	129.6843	409.69	. Q	.	.	.	.
5.083	132.5183	411.49	. Q	.	.	.	.
5.167	135.3648	413.32	. Q	.	.	.	.
5.250	138.2241	415.17	. Q	.	.	.	.
5.333	141.0963	417.04	. Q	.	.	.	.
5.417	143.9814	418.93	. Q	.	.	.	.
5.500	146.8798	420.84	. Q	.	.	.	.
5.583	149.7915	422.78	. Q	.	.	.	.
5.667	152.7167	424.74	. Q	.	.	.	.
5.750	155.6555	426.72	. Q	.	.	.	.
5.833	158.6082	428.73	. Q	.	.	.	.
5.917	161.5749	430.76	. Q	.	.	.	.
6.000	164.5557	432.82	. Q	.	.	.	.
6.083	167.5510	434.91	. Q	.	.	.	.
6.167	170.5607	437.02	. Q	.	.	.	.
6.250	173.5852	439.16	. QV	.	.	.	.
6.333	176.6246	441.32	. QV	.	.	.	.
6.417	179.6791	443.51	. QV	.	.	.	.
6.500	182.7490	445.74	. QV	.	.	.	.
6.583	185.8343	447.99	. QV	.	.	.	.
6.667	188.9353	450.27	. QV	.	.	.	.
6.750	192.0523	452.58	. QV	.	.	.	.
6.833	195.1854	454.93	. QV	.	.	.	.
6.917	198.3349	457.30	. QV	.	.	.	.
7.000	201.5009	459.71	. QV	.	.	.	.
7.083	204.6838	462.15	. QV	.	.	.	.
7.167	207.8837	464.63	. QV	.	.	.	.
7.250	211.1010	467.14	. QV	.	.	.	.
7.333	214.3357	469.69	. QV	.	.	.	.
7.417	217.5883	472.27	. QV	.	.	.	.
7.500	220.8589	474.89	. QV	.	.	.	.
7.583	224.1478	477.55	. QV	.	.	.	.
7.667	227.4553	480.25	. QV	.	.	.	.
7.750	230.7817	482.99	. Q V	.	.	.	.
7.833	234.1272	485.77	. Q V	.	.	.	.
7.917	237.4922	488.59	. Q V	.	.	.	.
8.000	240.8769	491.46	. Q V	.	.	.	.
8.083	244.2816	494.37	. Q V	.	.	.	.
8.167	247.7067	497.32	. Q V	.	.	.	.
8.250	251.1525	500.33	. Q V	.	.	.	.
8.333	254.6193	503.38	. Q V	.	.	.	.
8.417	258.1074	506.48	. Q V	.	.	.	.
8.500	261.6172	509.63	. Q V	.	.	.	.
8.583	265.1491	512.83	. Q V	.	.	.	.
8.667	268.7034	516.09	. Q V	.	.	.	.
8.750	272.2805	519.40	. Q V	.	.	.	.
8.833	275.8808	522.76	. Q V	.	.	.	.
8.917	279.5047	526.19	. Q V	.	.	.	.
9.000	283.1526	529.67	. Q V	.	.	.	.
9.083	286.8248	533.21	. Q V	.	.	.	.
9.167	290.5219	536.82	. Q V	.	.	.	.
9.250	294.2443	540.49	. Q V	.	.	.	.
9.333	297.9925	544.23	. Q V	.	.	.	.
9.417	301.7668	548.04	. Q V	.	.	.	.
9.500	305.5679	551.91	. Q V	.	.	.	.
9.583	309.3961	555.86	. Q V	.	.	.	.
9.667	313.2521	559.89	. Q V	.	.	.	.
9.750	317.1363	563.99	. Q V	.	.	.	.
9.833	321.0494	568.17	. Q V	.	.	.	.
9.917	324.9918	572.44	. Q V	.	.	.	.
10.000	328.9641	576.79	. Q V	.	.	.	.
10.083	332.9670	581.22	. Q V	.	.	.	.
10.167	337.0011	585.75	. Q V	.	.	.	.
10.250	341.0670	590.37	. Q V	.	.	.	.
10.333	345.1654	595.09	. Q V	.	.	.	.
10.417	349.2970	599.91	. Q V	.	.	.	.
10.500	353.4625	604.83	. Q V	.	.	.	.
10.583	357.6626	609.86	. Q V	.	.	.	.
10.667	361.8982	615.00	. Q V	.	.	.	.
10.750	366.1699	620.25	. Q V	.	.	.	.
10.833	370.4786	625.63	. Q V	.	.	.	.
10.917	374.8252	631.12	. Q V	.	.	.	.
11.000	379.2105	636.75	. Q V	.	.	.	.
11.083	383.6355	642.51	. Q V	.	.	.	.
11.167	388.1012	648.41	. Q V	.	.	.	.
11.250	392.6084	654.45	. Q V	.	.	.	.
11.333	397.1583	660.65	. Q V	.	.	.	.
11.417	401.7520	666.99	. Q V	.	.	.	.
11.500	406.3905	673.51	. Q V	.	.	.	.
11.583	411.0750	680.19	. Q V	.	.	.	.
11.667	415.8068	687.05	. Q V	.	.	.	.
11.750	420.5870	694.09	. Q V	.	.	.	.
11.833	425.4172	701.33	. Q V	.	.	.	.
11.917	430.2985	708.77	. Q V	.	.	.	.
12.000	435.2326	716.42	. Q V	.	.	.	.
12.083	440.2304	725.69	. Q V	.	.	.	.
12.167	445.3353	741.22	. Q V	.	.	.	.
12.250	450.6114	766.09	. Q V	.	.	.	.
12.333	456.1188	799.67	. Q V	.	.	.	.
12.417	461.8734	835.58	. Q V	.	.	.	.
12.500	467.8658	870.08	. Q V	.	.	.	.
12.583	474.0839	902.88	. Q V	.	.	.	.
12.667	480.5299	935.96	. Q V	.	.	.	.
12.750	487.2260	972.28	. Q V	.	.	.	.
12.833	494.1850	1010.44	. Q V	.	.	.	.

12.917	501.3854	1045.50	. Q V . . . .
13.000	508.7915	1075.37	. Q V . . . .
13.083	516.3760	1101.26	. Q V . . . .
13.167	524.1238	1124.99	. Q V. . . .
13.250	532.0275	1147.62	. Q V. . . .
13.333	540.0847	1169.90	. Q V. . . .
13.417	548.2957	1192.24	. Q V. . . .
13.500	556.6642	1215.11	. Q V. . . .
13.583	565.1969	1238.94	. Q V. . . .
13.667	573.9053	1264.45	. Q V. . . .
13.750	582.8046	1292.18	. Q V . . .
13.833	591.9114	1322.31	. Q V . . .
13.917	601.2409	1354.65	. Q V . . .
14.000	610.8074	1389.06	. Q V . . .
14.083	620.6521	1429.45	. Q V . . .
14.167	630.9080	1489.16	. Q V . . .
14.250	641.7773	1578.22	. Q .V . . .
14.333	653.4666	1697.28	. Q .V . . .
14.417	666.0818	1831.73	. Q.V . . .
14.500	679.6559	1970.95	. Q.V . . .
14.583	694.2061	2112.70	. Q V . . .
14.667	709.8152	2266.45	. .QV . . .
14.750	726.6564	2445.33	. . Q . . .
14.833	744.8221	2637.67	. . VQ . . .
14.917	764.2051	2814.41	. . Q . . .
15.000	784.6144	2963.43	. . VQ . . .
15.083	805.9061	3091.55	. . VQ . . .
15.167	828.0082	3209.23	. . VQ . . .
15.250	850.8918	3322.69	. . V Q . . .
15.333	874.5566	3436.12	. . VQ . . .
15.417	898.9642	3543.99	. . V Q . . .
15.500	923.9176	3623.23	. . VQ . . .
15.583	949.0990	3656.34	. . V Q . . .
15.667	974.2032	3645.14	. . V Q . . .
15.750	999.1525	3622.64	. . Q . . .
15.833	1024.0914	3621.14	. . Q . . .
15.917	1049.3269	3664.20	. . Q . . .
16.000	1075.2950	3770.58	. . Q . . .
16.083	1103.0299	4027.11	. . Q. . . .
16.167	1134.8494	4620.19	. . V. Q . . .
16.250	1172.5322	5471.55	. . V Q . . .
16.333	1216.0887	6324.40	. . .V .Q . .
16.417	1263.0579	6819.92	. . .V . Q . .
16.500	1311.4933	7032.82	. . . V . Q . .
16.583	1360.9264	7177.68	. . . V . Q . .
16.667	1412.6570	7511.28	. . . V . Q . .
16.750	1467.8464	8013.51	. . . V . Q.
16.833	1523.5411	8086.88	. . . V . Q.
16.917	1574.6166	7416.16	. . . V . Q . .
17.000	1619.0906	6457.62	. . . V .Q . .
17.083	1658.3915	5706.49	. . . Q . . .
17.167	1694.3896	5226.93	. . . Q V. . .
17.250	1727.9224	4868.96	. . . Q V . .
17.333	1759.1812	4538.78	. . Q V . .
17.417	1788.2201	4216.45	. . Q .V . .
17.500	1815.1495	3910.16	. . Q. .V . .
17.583	1840.1245	3626.38	. . Q . V . .
17.667	1863.2435	3356.88	. . Q . V . .
17.750	1884.4592	3080.53	. . Q . V . .
17.833	1903.7488	2800.84	. . Q . V . .
17.917	1921.2837	2546.06	. . Q . V . .
18.000	1937.3226	2328.86	. .Q . V . .
18.083	1952.0845	2143.41	. . Q . V . .
18.167	1965.7275	1980.98	. . Q. . V .
18.250	1978.3109	1827.11	. . Q. . V .
18.333	1989.8173	1670.72	. . Q . V .
18.417	2000.3203	1525.04	. . Q . . V .
18.500	2010.0034	1405.99	. . Q . . V .
18.583	2019.0381	1311.84	. . Q . . V .
18.667	2027.5206	1231.67	. . Q . . V .
18.750	2035.4868	1156.69	. . Q . . V .
18.833	2042.9678	1086.23	. . Q . . V .
18.917	2050.0181	1023.71	. . Q . . V .
19.000	2056.7048	970.91	. Q . . V .
19.083	2063.0879	926.82	. Q . . V .
19.167	2069.2117	889.16	. Q . . V .
19.250	2075.1089	856.29	. Q . . V .
19.333	2080.8064	827.29	. Q . . V .
19.417	2086.3298	802.02	. Q . . V .
19.500	2091.7012	779.92	. Q . . V .
19.583	2096.9370	760.26	. Q . . V .
19.667	2102.0488	742.22	. Q . . V .
19.750	2107.0447	725.39	. Q . . V .
19.833	2111.9297	709.32	. Q . . V .
19.917	2116.7068	693.63	. Q . . V .
20.000	2121.3772	678.16	. Q . . V .
20.083	2125.9346	661.72	. Q . . V .
20.167	2130.3625	642.94	. Q . . V .
20.250	2134.6560	623.41	. Q . . V .
20.333	2138.8320	606.38	. Q . . V .
20.417	2142.9133	592.60	. Q . . V .
20.500	2146.9143	580.94	. Q . . V .
20.583	2150.8425	570.38	. Q . . V .
20.667	2154.7021	560.42	. Q . . V .
20.750	2158.4961	550.89	. Q . . V .
20.833	2162.2266	541.68	. Q . . V .
20.917	2165.8965	532.88	. Q . . V .
21.000	2169.5083	524.43	. Q . . V .
21.083	2173.0640	516.30	. Q . . V .
21.167	2176.5671	508.67	. Q . . V .
21.250	2180.0217	501.61	. Q . . V .
21.333	2183.4309	495.00	. Q . . V .
21.417	2186.7969	488.74	. Q . . V .
21.500	2190.1216	482.74	. Q . . V .
21.583	2193.4065	476.97	. Q . . V .
21.667	2196.6531	471.40	. Q . . V .
21.750	2199.8625	466.02	. Q . . V .
21.833	2203.0361	460.81	. Q . . V .
21.917	2206.1750	455.75	. Q . . V .
22.000	2209.2800	450.85	. Q . . V .
22.083	2212.3523	446.09	. Q . . V .
22.167	2215.3928	441.49	. Q . . V .
22.250	2218.4028	437.05	. Q . . V .
22.333	2221.3833	432.76	. Q . . V .
22.417	2224.3352	428.61	. Q . . V .
22.500	2227.2593	424.56	. Q . . V .
22.583	2230.1562	420.62	. Q . . V .
22.667	2233.0266	416.78	. Q . . V .
22.750	2235.8711	413.03	. Q . . V .
22.833	2238.6904	409.37	. Q . . V .
22.917	2241.4851	405.79	. Q . . V .
23.000	2244.2559	402.30	.Q . . . V.
23.083	2247.0029	398.88	.Q . . . V.
23.167	2249.7271	395.55	.Q . . . V.
23.250	2252.4287	392.28	.Q . . . V.
23.333	2255.1084	389.08	.Q . . . V.
23.417	2257.7666	385.96	.Q . . . V.
23.500	2260.4036	382.90	.Q . . . V.
23.583	2263.0200	379.90	.Q . . . V.
23.667	2265.6162	376.96	.Q . . . V.
23.750	2268.1926	374.09	.Q . . . V.
23.833	2270.7495	371.27	.Q . . . V.
23.917	2273.2874	368.50	.Q . . . V.
24.000	2275.8066	365.79	.Q . . . V.

24.083	2278.3003	362.09	.Q	.	.	.	V.
24.167	2280.7380	353.97	.Q	.	.	.	V.
24.250	2283.0703	338.64	.Q	.	.	.	V.
24.333	2285.2437	315.58	.Q	.	.	.	V.
24.417	2287.2302	288.46	.Q	.	.	.	V.
24.500	2289.0242	260.48	.Q	.	.	.	V.
24.583	2290.6304	233.24	.Q	.	.	.	V.
24.667	2292.0432	205.15	.Q	.	.	.	V.
24.750	2293.2346	172.99	Q	.	.	.	V.
24.833	2294.1929	139.15	Q	.	.	.	V.
24.917	2294.9517	110.19	Q	.	.	.	V.
25.000	2295.5640	88.91	Q	.	.	.	V.
25.083	2296.0713	73.66	Q	.	.	.	V.
25.167	2296.4988	62.09	Q	.	.	.	V.
25.250	2296.8625	52.83	Q	.	.	.	V.
25.333	2297.1733	45.14	Q	.	.	.	V.
25.417	2297.4395	38.65	Q	.	.	.	V.
25.500	2297.6677	33.13	Q	.	.	.	V.
25.583	2297.8633	28.41	Q	.	.	.	V.
25.667	2298.0305	24.29	Q	.	.	.	V.
25.750	2298.1729	20.68	Q	.	.	.	V.
25.833	2298.2937	17.53	Q	.	.	.	V.
25.917	2298.3958	14.83	Q	.	.	.	V.
26.000	2298.4822	12.54	Q	.	.	.	V.
26.083	2298.5554	10.63	Q	.	.	.	V.
26.167	2298.6174	9.00	Q	.	.	.	V.
26.250	2298.6699	7.61	Q	.	.	.	V.
26.333	2298.7148	6.53	Q	.	.	.	V.
26.417	2298.7549	5.80	Q	.	.	.	V.
26.500	2298.7913	5.29	Q	.	.	.	V.
26.583	2298.8250	4.90	Q	.	.	.	V.
26.667	2298.8564	4.56	Q	.	.	.	V.
26.750	2298.8857	4.25	Q	.	.	.	V.
26.833	2298.9128	3.94	Q	.	.	.	V.
26.917	2298.9380	3.65	Q	.	.	.	V.
27.000	2298.9612	3.38	Q	.	.	.	V.
27.083	2298.9827	3.12	Q	.	.	.	V.
27.167	2299.0024	2.87	Q	.	.	.	V.
27.250	2299.0205	2.62	Q	.	.	.	V.
27.333	2299.0369	2.38	Q	.	.	.	V.
27.417	2299.0515	2.14	Q	.	.	.	V.
27.500	2299.0647	1.90	Q	.	.	.	V.
27.583	2299.0762	1.67	Q	.	.	.	V.
27.667	2299.0862	1.44	Q	.	.	.	V.
27.750	2299.0945	1.21	Q	.	.	.	V.
27.833	2299.1013	0.98	Q	.	.	.	V.
27.917	2299.1064	0.76	Q	.	.	.	V.
28.000	2299.1101	0.54	Q	.	.	.	V.
28.083	2299.1123	0.34	Q	.	.	.	V.
28.167	2299.1130	0.10	Q	.	.	.	V.
28.250	2299.1135	0.06	Q	.	.	.	V.
28.333	2299.1138	0.04	Q	.	.	.	V.
28.417	2299.1140	0.03	Q	.	.	.	V.
28.500	2299.1143	0.02	Q	.	.	.	V.
28.583	2299.1143	0.01	Q	.	.	.	V.
28.667	2299.1143	0.01	Q	.	.	.	V.
28.750	2299.1143	0.01	Q	.	.	.	V.
28.833	2299.1143	0.00	Q	.	.	.	V.
28.917	2299.1143	0.00	Q	.	.	.	V.
29.000	2299.1143	0.00	Q	.	.	.	V.
29.083	2299.1143	0.00	Q	.	.	.	V.
29.167	2299.1143	0.00	Q	.	.	.	V.
29.250	2299.1143	0.00	Q	.	.	.	V.
29.333	2299.1143	0.00	Q	.	.	.	V.
29.417	2299.1143	0.00	Q	.	.	.	V.
29.500	2299.1143	0.00	Q	.	.	.	V.
29.583	2299.1143	0.00	Q	.	.	.	V.
29.667	2299.1143	0.00	Q	.	.	.	V.
29.750	2299.1143	0.00	Q	.	.	.	V.
29.833	2299.1143	0.00	Q	.	.	.	V.
29.917	2299.1143	0.00	Q	.	.	.	V.
30.000	2299.1143	0.00	Q	.	.	.	V.

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

HYDROLOGY ANALYSIS FOR CANADA GOBERNADORA PROPOSED CONDITION 100-YEAR HIGH CONFIDENCE STORM EVENT (MULTI-DAY HYDROGRAPH)

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**************************************************************************

             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
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                         Analysis prepared by:

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                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: CP63CH-M.FLD
  TIME/DATE OF STUDY: 13:17 04/01/2004


**************************************************************************
  FLOW PROCESS FROM NODE    100.00 TO NODE    780.00 IS CODE =   1
--------------------------------------------------------------------------

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  4741.3 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

        WATERSHED AREA =    4741.300 ACRES
        BASEFLOW =   0.000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    0.480 HOURS
         CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
         THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
         MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
        VALLEY(DEVELOPED):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  1.000
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        VALLEY(UNDEVELOPED)/DESERT:
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.190
        LOW LOSS FRACTION = 0.550
        *HYDROGRAPH MODEL #1 SPECIFIED*

        SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.58
        SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.22
        SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.62
        SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.71
        SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  3.75
        SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  6.28

        *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR = 0.793
         30-MINUTE FACTOR = 0.793
          1-HOUR FACTOR = 0.793
          3-HOUR FACTOR = 0.969
          6-HOUR FACTOR = 0.984
         24-HOUR FACTOR = 0.990

        UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
        UNIT INTERVAL PERCENTAGE OF LAG-TIME =  17.361

        RUNOFF HYDROGRAPH LISTING LIMITS:
        MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
        MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


==========================================================================
                     UNIT HYDROGRAPH DETERMINATION

--------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------
        1                1.137               652.130
        2                4.082              1688.625
        3                8.525              2547.514
        4               14.577              3470.279
        5               24.203              5519.575
        6               43.203             10894.611
        7               57.937              8448.228
        8               65.484              4327.674
        9               70.911              3111.621
       10               75.443              2599.076
       11               78.982              2029.171
       12               82.133              1806.516
       13               84.749              1499.854
       14               87.075              1334.078
       15               88.974              1088.566
       16               90.645               958.165
       17               92.163               870.854
       18               93.467               747.418
       19               94.550               621.273
       20               95.489               538.119
       21               96.255               439.106
       22               96.815               321.374
       23               97.375               321.055
       24               97.900               301.316
       25               98.079               102.631
       26               98.169                51.477
       27               98.259                51.411
       28               98.349                51.608
       29               98.439                51.604
       30               98.528                51.219
       31               98.618                51.477
       32               98.708                51.477
       33               98.798                51.608
       34               98.887                51.346
       35               98.977                51.608
       36               99.067                51.604
       37               99.157                51.604
       38               99.247                51.604
       39               99.337                51.604
       40               99.427                51.604
       41               99.517                51.604
       42               99.607                51.604
       43               99.697                51.604
       44               99.787                51.604
       45               99.877                51.604
       46               99.967                51.604
       47              100.000                18.785


--------------------------------------------------------------------------
    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =     993.1859
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =    1463.6560
--------------------------------------------------------------------------
```

2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 2025.0 4050.0 6075.0 8100.0
14.000	382.5607	875.72	. Q V . . .
14.083	388.8354	911.09	. Q V . . .
14.167	395.4516	960.67	. Q V . . .
14.250	402.4846	1021.19	. Q V . . .
14.333	410.0252	1094.90	. Q .V . . .
14.417	418.2438	1193.34	. Q .V . . .
14.500	427.5862	1356.53	. Q .V . . .
14.583	437.8633	1492.23	. Q .V . . .
14.667	448.7657	1583.02	. Q . V . . .
14.750	460.2062	1661.17	. Q . V . . .
14.833	472.1692	1737.02	. Q . V . . .
14.917	484.6229	1808.27	. Q . V . . .
15.000	497.5807	1881.49	. Q. V . . .
15.083	511.0368	1953.82	. Q. V . . .
15.167	525.0175	2029.99	. Q V . . .
15.250	539.5292	2107.09	. Q V . . .
15.333	554.6136	2190.26	. Q V . . .
15.417	570.1863	2261.16	. .Q V . . .
15.500	586.1271	2314.61	. .Q V . . .
15.583	602.3378	2353.79	. .Q V . . .
15.667	618.7654	2385.29	. .Q V . . .
15.750	635.1664	2381.42	. .Q V . . .
15.833	650.8051	2270.74	. .Q V . . .
15.917	666.4456	2271.00	. .Q V . . .
16.000	683.4635	2471.00	. . Q V . . .
16.083	704.0692	2991.95	. . Q V. . .
16.167	729.6202	3710.00	. . QV. . .
16.250	759.8992	4396.52	. . VQ . .
16.333	795.6564	5191.94	. . .V Q . .
16.417	839.2965	6336.55	. . . V .Q .
16.500	895.0574	8096.49	. . . V . Q.
16.583	942.1941	6844.24	. . . V . Q .
16.667	976.4747	4977.55	. . . Q V . .
16.750	1005.6393	4234.69	. . Q V . .
16.833	1033.0155	3975.03	. . Q. V . .
16.917	1058.5345	3705.36	. . Q . V . .
17.000	1082.5542	3487.65	. . Q . V. .
17.083	1104.8390	3235.76	. . Q . V .
17.167	1125.6932	3028.04	. . Q . V .
17.250	1144.9094	2790.18	. . Q . .V .
17.333	1162.7605	2591.97	. . Q . .V .
17.417	1179.2396	2392.77	. .Q . . V .
17.500	1193.8737	2124.86	. Q . . V .
17.583	1206.8674	1886.69	. Q. . . V .
17.667	1218.6790	1715.04	. Q . . . V .
17.750	1229.4158	1558.98	. Q . . . V .
17.833	1239.1486	1413.20	. Q . . . V .
17.917	1248.2129	1316.13	. Q . . . V .
18.000	1256.5792	1214.79	. Q . . . V .
18.083	1263.9249	1066.59	. Q . . . V .
18.167	1270.6771	980.42	. Q . . . V .
18.250	1277.0466	924.85	. Q . . . V .
18.333	1283.0781	875.77	. Q . . . V .
18.417	1288.7410	822.24	. Q . . . V .
18.500	1293.9634	758.30	. Q . . . V .
18.583	1298.8234	705.67	. Q . . . V .
18.667	1303.4199	667.42	. Q . . . V .
18.750	1307.7977	635.65	. Q . . . V .
18.833	1311.9866	608.22	. Q . . . V .
18.917	1316.0081	583.92	. Q . . . V .
19.000	1319.8757	561.58	. Q . . . V .
19.083	1323.6180	543.39	. Q . . . V .
19.167	1327.2483	527.11	. Q . . . V .
19.250	1330.7816	513.04	. Q . . . V .
19.333	1334.2278	500.38	. Q . . . V .
19.417	1337.5909	488.33	. Q . . . V .
19.500	1340.8755	476.91	. Q . . . V .
19.583	1344.0837	465.84	. Q . . . V .
19.667	1347.2164	454.86	. Q . . . V .
19.750	1350.2689	443.22	. Q . . . V .
19.833	1353.2319	430.23	. Q . . . V .
19.917	1356.0327	406.68	. Q . . . V .
20.000	1358.7169	389.75	.Q . . . V .

****
FLOW PROCESS FROM NODE 780.00 TO NODE 6311.00 IS CODE = 5.2

>>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<

*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 4741.3 Ac. ***

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
INTERVALS(Reference: the National Engineering Handbook,
Hydrology, Chapter 17, page 17-52, August,1972,
U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 20.00 CHANNEL Z = 1.00
UPSTREAM ELEVATION(FT) = 408.00
DOWNSTREAM ELEVATION(FT) = 382.00
CHANNEL LENGTH(FT) = 2533.00 MANNING'S FACTOR = 0.040
CONSTANT LOSS RATE(CFS) = 0.00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 8096.49
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 5725.43
CHANNEL NORMAL VELOCITY FOR Q = 5725.43 CFS = 14.18 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.893

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
UNIT INTERVALS IS CSTAR = 0.971

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.000	875.72	860.42	860.42
14.083	911.09	891.37	891.37
14.167	960.67	933.07	933.07
14.250	1021.19	987.40	987.40
14.333	1094.90	1053.75	1053.75
14.417	1193.34	1138.49	1138.49
14.500	1356.53	1265.99	1265.99

14.583	1492.23	1415.65	1415.65
14.667	1583.02	1531.32	1531.32
14.750	1661.17	1617.08	1617.08
14.833	1737.02	1694.40	1694.40
14.917	1808.27	1768.20	1768.20
15.000	1881.49	1840.42	1840.42
15.083	1953.82	1913.21	1913.21
15.167	2029.99	1987.30	1987.30
15.250	2107.09	2063.83	2063.83
15.333	2190.26	2143.68	2143.68
15.417	2261.16	2221.17	2221.17
15.500	2314.61	2284.32	2284.32
15.583	2353.79	2331.56	2331.56
15.667	2385.29	2367.48	2367.48
15.750	2381.42	2383.02	2383.02
15.833	2270.74	2331.12	2331.12
15.917	2271.00	2272.60	2272.60
16.000	2471.00	2362.02	2362.02
16.083	2991.95	2704.83	2704.83
16.167	3710.00	3310.30	3310.30
16.250	4396.52	4010.77	4010.77
16.333	5191.94	4747.22	4747.22
16.417	6336.55	5699.78	5699.78
16.500	8096.49	7118.75	7118.75
16.583	6844.24	7498.70	7498.70
16.667	4977.55	6013.99	6013.99
16.750	4234.69	4669.51	4669.51
16.833	3975.03	4129.11	4129.11
16.917	3705.36	3856.80	3856.80
17.000	3487.65	3610.70	3610.70
17.083	3235.76	3376.62	3376.62
17.167	3028.04	3145.33	3145.33
17.250	2790.18	2923.23	2923.23
17.333	2591.97	2703.85	2703.85
17.417	2392.77	2504.58	2504.58
17.500	2124.86	2274.13	2274.13
17.583	1886.69	2020.82	2020.82
17.667	1715.04	1812.48	1812.48
17.750	1558.98	1646.86	1646.86
17.833	1413.20	1495.20	1495.20
17.917	1316.13	1371.41	1371.41
18.000	1214.79	1271.63	1271.63
18.083	1066.59	1149.02	1149.02
18.167	980.42	1029.77	1029.77
18.250	924.85	956.56	956.56
18.333	875.77	903.44	903.44
18.417	822.24	852.22	852.22
18.500	758.30	794.02	794.02
18.583	705.67	735.39	735.39
18.667	667.42	689.13	689.13
18.750	635.65	653.60	653.60
18.833	608.22	623.69	623.69
18.917	583.92	597.61	597.61
19.000	561.58	574.15	574.15
19.083	543.39	553.67	553.67
19.167	527.11	536.28	536.28
19.250	513.04	520.97	520.97
19.333	500.38	507.51	507.51
19.417	488.33	495.10	495.10
19.500	476.91	483.33	483.33
19.583	465.84	472.06	472.06
19.667	454.86	461.02	461.02
19.750	443.22	449.74	449.74
19.833	430.23	437.50	437.50
19.917	406.68	419.73	419.73
20.000	389.75	399.36	399.36

```
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   1463.656 AF
    OUTFLOW VOLUME =   1463.656 AF
    LOSS    VOLUME =      0.000 AF
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6300.00 TO NODE   6311.00 IS CODE =   1
--------------------------------------------------------------------------------

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of   299.3 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
================================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #2)

         WATERSHED AREA =     299.300 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.250 HOURS
          CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
          THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
          MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.250
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.750
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.260
         LOW LOSS FRACTION = 0.500
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.58
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.22
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.62
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.71
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  3.75
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  6.28

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.987
          30-MINUTE FACTOR = 0.987
           1-HOUR FACTOR = 0.987
           3-HOUR FACTOR = 0.998
           6-HOUR FACTOR = 0.999
          24-HOUR FACTOR = 0.999

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  33.333


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


================================================================================
                      UNIT HYDROGRAPH DETERMINATION

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     INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
      NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------------
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1	3.852	139.411
2	18.445	528.231
3	39.624	766.604
4	55.845	587.160
5	64.124	299.680
6	70.038	214.036
7	74.639	166.538
8	78.230	130.017
9	81.158	105.957
10	83.587	87.936
11	85.638	74.235
12	87.267	58.971
13	88.619	48.932
14	89.699	39.084
15	90.702	36.306
16	91.629	33.565
17	92.506	31.749
18	93.325	29.632
19	94.080	27.335
20	94.768	24.914
21	95.424	23.727
22	95.971	19.796
23	96.509	19.477
24	97.020	18.507
25	97.406	13.985
26	97.766	13.021
27	98.126	13.018
28	98.458	12.019
29	98.594	4.931
30	98.692	3.557
31	98.791	3.557
32	98.889	3.550
33	98.987	3.557
34	99.085	3.551
35	99.183	3.557
36	99.281	3.550
37	99.380	3.550
38	99.478	3.550
39	99.576	3.550
40	99.674	3.550
41	99.772	3.550
42	99.870	3.550
43	99.968	3.550
44	100.000	1.157

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 63.4544

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 93.0370

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	175.0	350.0	525.0	700.0
14.000	27.4201	56.90	. Q	.V	.	.	.
14.083	27.8199	58.05	. Q	.V	.	.	.
14.167	28.2289	59.39	. Q	. V	.	.	.
14.250	28.6481	60.87	. Q	. V	.	.	.
14.333	29.0776	62.37	. Q	. V	.	.	.
14.417	29.5173	63.84	. Q	. V	.	.	.
14.500	29.9675	65.37	. Q	. V	.	.	.
14.583	30.4288	66.98	. Q	. V	.	.	.
14.667	30.9020	68.71	. Q	. V	.	.	.
14.750	31.3886	70.66	. Q	. V	.	.	.
14.833	31.8924	73.15	. Q	. V	.	.	.
14.917	32.4182	76.34	. Q	. V	.	.	.
15.000	32.9709	80.25	. Q	. V	.	.	.
15.083	33.5548	84.78	. Q	. V	.	.	.
15.167	34.1747	90.01	. Q	. V	.	.	.
15.250	34.8354	95.94	. Q	. V	.	.	.
15.333	35.5434	102.79	. Q	. V	.	.	.
15.417	36.2964	109.35	. Q	. V	.	.	.
15.500	37.0791	113.65	. Q	. V	.	.	.
15.583	37.8873	117.35	. Q	. V	.	.	.
15.667	38.7483	125.02	. Q	. V	.	.	.
15.750	39.7040	138.77	. Q	. V	.	.	.
15.833	40.7991	159.00	. Q.	V	.	.	.
15.917	42.1036	189.42	. Q	V	.	.	.
16.000	43.7587	240.31	. . Q	V	.	.	.
16.083	46.2830	366.54	. .	VQ	.	.	.
16.167	50.2558	576.85	. .	.V	. Q	.	.
16.250	54.8830	671.87	. .	. V	.	.	Q .
16.333	58.6946	553.44	. .	. V	.Q	.	.
16.417	61.3488	385.40	. .	. Q V	.	.	.
16.500	63.5069	313.35	. .	Q .	V .	.	.
16.583	65.3583	268.82	. .	Q .	V .	.	.
16.667	66.9643	233.20	. . Q	.	V .	.	.
16.750	68.3720	204.39	. .Q	.	V.	.	.
16.833	69.6157	180.59	. Q	.	V.	.	.
16.917	70.7246	161.01	. Q.	.	V	.	.
17.000	71.7117	143.32	. Q .	.	V	.	.
17.083	72.6072	130.03	. Q .	.	.V	.	.
17.167	73.4245	118.67	. Q .	.	.V	.	.
17.250	74.1925	111.51	. Q .	.	.V	.	.
17.333	74.9179	105.32	. Q .	.	. V	.	.
17.417	75.6078	100.18	. Q .	.	. V	.	.
17.500	76.2639	95.26	. Q .	.	. V	.	.
17.583	76.8878	90.59	. Q .	.	. V	.	.
17.667	77.4810	86.13	. Q .	.	. V	.	.
17.750	78.0483	82.38	. Q .	.	. V	.	.
17.833	78.5843	77.82	. Q .	.	. V	.	.
17.917	79.0999	74.86	. Q .	.	. V	.	.
18.000	79.5932	71.63	. Q .	.	. V	.	.
18.083	80.0531	66.78	. Q .	.	. V	.	.
18.167	80.4845	62.65	. Q .	.	. V	.	.
18.250	80.8860	58.29	. Q .	.	. V	.	.
18.333	81.2565	53.80	. Q .	.	. V	.	.
18.417	81.5859	47.83	. Q .	.	. V	.	.
18.500	81.8953	44.92	. Q .	.	. V	.	.
18.583	82.1922	43.12	. Q .	.	. V	.	.
18.667	82.4790	41.63	. Q .	.	. V	.	.
18.750	82.7565	40.30	. Q .	.	. V	.	.
18.833	83.0257	39.09	. Q .	.	. V	.	.
18.917	83.2874	38.00	. Q .	.	. V	.	.
19.000	83.5424	37.02	. Q .	.	. V	.	.
19.083	83.7913	36.13	. Q .	.	. V	.	.
19.167	84.0343	35.29	. Q .	.	. V	.	.
19.250	84.2718	34.47	.Q .	.	. V	.	.
19.333	84.5035	33.65	.Q .	.	. V	.	.
19.417	84.7296	32.82	.Q .	.	. V	.	.
19.500	84.9493	31.91	.Q .	.	. V	.	.
19.583	85.1619	30.86	.Q .	.	. V	.	.
19.667	85.3607	28.87	.Q .	.	. V	.	.
19.750	85.5505	27.55	.Q .	.	. V	.	.
19.833	85.7356	26.88	.Q .	.	. V	.	.
19.917	85.9168	26.31	.Q .	.	. V	.	.
20.000	86.0944	25.78	.Q .	.	. V	.	.

****
FLOW PROCESS FROM NODE 6311.00 TO NODE 6311.00 IS CODE = 7
>>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 5040.6 Ac. ***

****
FLOW PROCESS FROM NODE 6311.00 TO NODE 6311.00 IS CODE = 11
>>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<

*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 5040.6 Ac. ***

STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	1925.0	3850.0	5775.0	7700.0
14.000	406.7781	919.28	. Q	V	.	.	.
14.083	413.3387	952.59	. Q	V	.	.	.
14.167	420.2282	1000.36	. Q	V	.	.	.
14.250	427.5519	1063.39	. Q	.V	.	.	.
14.333	435.3869	1137.64	. Q	.V	.	.	.
14.417	443.8494	1228.76	. Q	.V	.	.	.
14.500	453.2410	1363.66	. Q	.V	.	.	.
14.583	463.7190	1521.40	. Q	.V	.	.	.
14.667	475.0388	1643.63	. Q .	V	.	.	.
14.750	486.9847	1734.55	. Q.	V	.	.	.
14.833	499.4959	1816.63	. Q.	V	.	.	.
14.917	512.5470	1895.01	. Q.	V	.	.	.
15.000	526.1264	1971.73	. Q	V	.	.	.
15.083	540.2385	2049.07	. Q	V	.	.	.
15.167	554.8931	2127.85	. .Q	V	.	.	.
15.250	570.1086	2209.29	. .Q	V	.	.	.
15.333	585.9102	2294.40	. .Q	V	.	.	.
15.417	602.2587	2373.81	. . Q	V	.	.	.
15.500	618.9868	2428.91	. . Q	V	.	.	.
15.583	635.9450	2462.34	. . Q	V	.	.	.

15.667	653.0961	2490.33	. . Q V . . .
15.750	670.3641	2507.31	. . Q V . . .
15.833	687.3168	2461.54	. . Q V . . .
15.917	703.9598	2416.55	. . Q V . . .
16.000	721.4357	2537.50	. . Q V . . .
16.083	741.9026	2971.80	. . Q V. . .
16.167	767.6212	3734.34	. . Q. . .
16.250	798.6147	4500.25	. . V Q . .
16.333	833.9616	5132.37	. . .V Q . .
16.417	874.8835	5941.85	. . . V Q .
16.500	925.1429	7297.67	. . . V . Q .
16.583	977.8814	7657.62	. . . V . Q.
16.667	1020.3975	6173.33	. . . V . Q .
16.750	1053.6354	4826.14	. . . Q V . .
16.833	1083.1179	4280.87	. . . Q V . .
16.917	1110.7048	4005.62	. . Q V . .
17.000	1136.5609	3754.31	. . Q. V. .
17.083	1160.7629	3514.13	. . Q . V. .
17.167	1183.3074	3273.44	. . Q . V .
17.250	1204.2601	3042.33	. . Q . .V .
17.333	1223.6487	2815.22	. . Q . .V .
17.417	1241.6259	2610.29	. . Q . .V .
17.500	1257.9701	2373.18	. . Q . . V .
17.583	1272.5198	2112.62	. . Q . . V .
17.667	1285.5945	1898.44	. . Q. . . V .
17.750	1297.5018	1728.96	. . Q . . . V .
17.833	1308.3369	1573.26	. . Q . . . V .
17.917	1318.3002	1446.67	. . Q . . . V .
18.000	1327.5559	1343.93	. . Q . . . V .
18.083	1335.9399	1217.36	. . Q . . . V .
18.167	1343.4760	1094.22	. . Q . . . V .
18.250	1350.4760	1016.41	. . Q . . . V .
18.333	1357.0786	958.70	. Q . . . . V .
18.417	1363.2899	901.88	. Q . . . . V .
18.500	1369.0786	840.52	. Q . . . . V .
18.583	1374.4480	779.64	. Q . . . . V .
18.667	1379.4858	731.49	. Q . . . . V .
18.750	1384.2666	694.16	. Q . . . . V .
18.833	1388.8303	662.66	. Q . . . . V .
18.917	1393.2046	635.14	. Q . . . . V .
19.000	1397.4086	610.41	. Q . . . . V .
19.083	1401.4640	588.85	. Q . . . . V .
19.167	1405.3932	570.52	. Q . . . . V .
19.250	1409.2109	554.33	. Q . . . . V .
19.333	1412.9302	540.03	. Q . . . . V .
19.417	1416.5587	526.86	. Q . . . . V .
19.500	1420.1006	514.28	. Q . . . . V .
19.583	1423.5586	502.10	. Q . . . . V .
19.667	1426.9293	489.42	. Q . . . . V .
19.750	1430.2148	477.06	. Q . . . . V .
19.833	1433.4124	464.27	. Q . . . . V .
19.917	1436.4847	446.10	. Q . . . . V .
20.000	1439.4141	425.33	. Q . . . . V .
20.083	1442.2500	411.78	. Q . . . . V .
20.167	1445.0288	403.49	. Q . . . . V .
20.250	1447.7559	395.97	. Q . . . . V .
20.333	1450.4308	388.39	. Q . . . . V .
20.417	1453.0549	381.03	.Q . . . . V .
20.500	1455.6311	374.05	.Q . . . . V .
20.583	1458.1615	367.41	.Q . . . . V .
20.667	1460.6483	361.09	.Q . . . . V .
20.750	1463.0935	355.04	.Q . . . . V .
20.833	1465.4987	349.24	.Q . . . . V .
20.917	1467.8666	343.83	.Q . . . . V .
21.000	1470.2009	338.94	.Q . . . . V .
21.083	1472.5038	334.38	.Q . . . . V .
21.167	1474.7765	330.00	.Q . . . . V .
21.250	1477.0203	325.79	.Q . . . . V .
21.333	1479.2361	321.74	.Q . . . . V .
21.417	1481.4250	317.84	.Q . . . . V .
21.500	1483.5880	314.07	.Q . . . . V .
21.583	1485.7260	310.42	.Q . . . . V .
21.667	1487.8395	306.89	.Q . . . . V .
21.750	1489.9294	303.46	.Q . . . . V .
21.833	1491.9963	300.12	.Q . . . . V .
21.917	1494.0411	296.91	.Q . . . . V .
22.000	1496.0649	293.86	.Q . . . . V .
22.083	1498.0685	290.91	.Q . . . . V .
22.167	1500.0522	288.05	.Q . . . . V .
22.250	1502.0168	285.26	.Q . . . . V .
22.333	1503.9626	282.54	.Q . . . . V .
22.417	1505.8903	279.89	.Q . . . . V .
22.500	1507.8000	277.30	.Q . . . . V .
22.583	1509.6925	274.78	.Q . . . . V .
22.667	1511.5680	272.31	.Q . . . . V .
22.750	1513.4269	269.91	.Q . . . . V .
22.833	1515.2695	267.56	.Q . . . . V.
22.917	1517.0964	265.26	.Q . . . . V.
23.000	1518.9078	263.01	.Q . . . . V.
23.083	1520.7041	260.82	.Q . . . . V.
23.167	1522.4856	258.67	.Q . . . . V.
23.250	1524.2526	256.56	.Q . . . . V.
23.333	1526.0054	254.51	.Q . . . . V.
23.417	1527.7443	252.49	.Q . . . . V.
23.500	1529.4696	250.52	.Q . . . . V.
23.583	1531.1816	248.59	.Q . . . . V.
23.667	1532.8806	246.69	.Q . . . . V.
23.750	1534.5668	244.84	.Q . . . . V.
23.833	1536.2405	243.02	.Q . . . . V.
23.917	1537.9019	241.23	.Q . . . . V.
24.000	1539.5511	239.48	.Q . . . . V.
24.083	1541.1772	236.12	.Q . . . . V.
24.167	1542.7491	228.23	.Q . . . . V.
24.250	1544.2366	215.98	.Q . . . . V.
24.333	1545.6229	201.30	.Q . . . . V.
24.417	1546.8810	182.66	Q . . . . V.
24.500	1547.9248	151.57	Q . . . . V.
24.583	1548.7126	114.40	Q . . . . V.
24.667	1549.3248	88.89	Q . . . . V.
24.750	1549.8330	73.79	Q . . . . V.
24.833	1550.2622	62.31	Q . . . . V.
24.917	1550.6272	52.99	Q . . . . V.
25.000	1550.9391	45.29	Q . . . . V.
25.083	1551.2054	38.67	Q . . . . V.
25.167	1551.4329	33.01	Q . . . . V.
25.250	1551.6267	28.15	Q . . . . V.
25.333	1551.7922	24.04	Q . . . . V.
25.417	1551.9326	20.38	Q . . . . V.
25.500	1552.0505	17.13	Q . . . . V.
25.583	1552.1495	14.37	Q . . . . V.
25.667	1552.2323	12.02	Q . . . . V.
25.750	1552.3014	10.03	Q . . . . V.
25.833	1552.3597	8.47	Q . . . . V.
25.917	1552.4089	7.14	Q . . . . V.
26.000	1552.4495	5.88	Q . . . . V.
26.083	1552.4839	5.00	Q . . . . V.
26.167	1552.5156	4.61	Q . . . . V.
26.250	1552.5455	4.34	Q . . . . V.
26.333	1552.5735	4.07	Q . . . . V.
26.417	1552.5999	3.83	Q . . . . V.
26.500	1552.6246	3.60	Q . . . . V.
26.583	1552.6478	3.37	Q . . . . V.
26.667	1552.6694	3.14	Q . . . . V.
26.750	1552.6896	2.92	Q . . . . V.

26.833	1552.7081	2.70	Q	.	.	.	V.
26.917	1552.7252	2.48	Q	.	.	.	V.
27.000	1552.7407	2.26	Q	.	.	.	V.
27.083	1552.7548	2.04	Q	.	.	.	V.
27.167	1552.7673	1.82	Q	.	.	.	V.
27.250	1552.7784	1.60	Q	.	.	.	V.
27.333	1552.7880	1.39	Q	.	.	.	V.
27.417	1552.7960	1.18	Q	.	.	.	V.
27.500	1552.8027	0.97	Q	.	.	.	V.
27.583	1552.8080	0.76	Q	.	.	.	V.
27.667	1552.8119	0.56	Q	.	.	.	V.
27.750	1552.8145	0.37	Q	.	.	.	V.
27.833	1552.8157	0.18	Q	.	.	.	V
27.917	1552.8159	0.04	Q	.	.	.	V
28.000	1552.8159	0.00	Q	.	.	.	V

****
FLOW PROCESS FROM NODE 6311.00 TO NODE 6330.00 IS CODE = 5.2

>>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
==========

*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 5040.6 Ac. ***

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
INTERVALS(Reference: the National Engineering Handbook,
Hydrology, Chapter 17, page 17-52, August,1972,
U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 30.00 CHANNEL Z = 1.00
UPSTREAM ELEVATION(FT) = 382.00
DOWNSTREAM ELEVATION(FT) = 375.00
CHANNEL LENGTH(FT) = 1141.00 MANNING'S FACTOR = 0.040
CONSTANT LOSS RATE(CFS) = 0.00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 7657.62
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 5535.08
CHANNEL NORMAL VELOCITY FOR Q = 5535.08 CFS = 11.37 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.870

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
UNIT INTERVALS IS CSTAR = 0.995

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.000	919.28	911.25	911.25
14.083	952.59	942.75	942.75
14.167	1000.36	986.25	986.25
14.250	1063.39	1044.77	1044.77
14.333	1137.64	1115.70	1115.70
14.417	1228.76	1201.83	1201.83
14.500	1363.66	1323.82	1323.82
14.583	1521.40	1474.78	1474.78
14.667	1643.63	1607.43	1607.43
14.750	1734.55	1707.61	1707.61
14.833	1816.63	1792.34	1792.34
14.917	1895.01	1871.82	1871.82
15.000	1971.73	1949.04	1949.04
15.083	2049.07	2026.20	2026.20
15.167	2127.85	2104.55	2104.55
15.250	2209.29	2185.21	2185.21
15.333	2294.40	2269.23	2269.23
15.417	2373.81	2350.31	2350.31
15.500	2428.91	2412.58	2412.58
15.583	2462.34	2452.42	2452.42
15.667	2490.33	2482.04	2482.04
15.750	2507.31	2502.28	2502.28
15.833	2461.54	2474.99	2474.99
15.917	2416.55	2429.86	2429.86
16.000	2537.50	2501.96	2501.96
16.083	2971.80	2843.78	2843.78
16.167	3734.34	3509.26	3509.26
16.250	4500.25	4273.72	4273.72
16.333	5132.37	4945.22	4945.22
16.417	5941.85	5702.67	5702.67
16.500	7297.67	6897.42	6897.42
16.583	7657.62	7549.77	7549.77
16.667	6173.33	6609.76	6609.76
16.750	4826.14	5224.79	5224.79
16.833	4280.87	4443.27	4443.27
16.917	4005.62	4087.42	4087.42
17.000	3754.31	3828.68	3828.68
17.083	3514.13	3585.19	3585.19
17.167	3273.44	3344.63	3344.63
17.250	3042.33	3110.70	3110.70
17.333	2815.22	2882.40	2882.40
17.417	2610.29	2670.94	2670.94
17.500	2373.18	2443.27	2443.27
17.583	2112.62	2189.66	2189.66
17.667	1898.44	1961.86	1961.86
17.750	1728.96	1779.15	1779.15
17.833	1573.26	1619.33	1619.33
17.917	1446.67	1484.15	1484.15
18.000	1343.93	1374.35	1374.35
18.083	1217.36	1254.76	1254.76
18.167	1094.22	1130.65	1130.65
18.250	1016.41	1039.49	1039.49
18.333	958.70	975.80	975.80
18.417	901.88	918.69	918.69
18.500	840.52	858.66	858.66
18.583	779.64	797.65	797.65
18.667	731.49	745.75	745.75
18.750	694.16	705.22	705.22
18.833	662.66	671.99	671.99
18.917	635.14	643.28	643.28
19.000	610.41	617.73	617.73
19.083	588.85	595.23	595.23
19.167	570.52	575.95	575.95
19.250	554.33	559.12	559.12
19.333	540.03	544.26	544.26
19.417	526.86	530.75	530.75
19.500	514.28	518.00	518.00
19.583	502.10	505.70	505.70
19.667	489.42	493.17	493.17
19.750	477.06	480.72	480.72
19.833	464.27	468.05	468.05
19.917	446.10	451.47	451.47
20.000	425.33	431.47	431.47

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PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 1552.816 AF

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    OUTFLOW VOLUME =   1552.816 AF
    LOSS    VOLUME =      0.000 AF
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********************************************************************************
  FLOW PROCESS FROM NODE   6320.00 TO NODE   6330.00 IS CODE =   1
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        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of   300.7 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
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      (UNIT-HYDROGRAPH ADDED TO STREAM #2)

         WATERSHED AREA =     300.700 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.290 HOURS
          CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
          THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
          MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.250
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.750
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.240
         LOW LOSS FRACTION = 0.430
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.58
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.22
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.62
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.71
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  3.75
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  6.28

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.987
          30-MINUTE FACTOR = 0.987
           1-HOUR FACTOR = 0.987
           3-HOUR FACTOR = 0.998
           6-HOUR FACTOR = 0.999
          24-HOUR FACTOR = 0.999

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  28.736


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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                      UNIT HYDROGRAPH DETERMINATION

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    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------------
        1                3.181               115.682
        2               14.148               398.807
        3               32.649               672.813
        4               49.391               608.859
        5               59.445               365.623
        6               65.754               229.414
        7               70.572               175.227
        8               74.508               143.109
        9               77.679               115.331
       10               80.307                95.584
       11               82.561                81.961
       12               84.486                69.998
       13               86.124                59.571
       14               87.475                49.137
       15               88.623                41.748
       16               89.558                33.981
       17               90.435                31.907
       18               91.248                29.581
       19               92.036                28.658
       20               92.761                26.336
       21               93.465                25.630
       22               94.104                23.223
       23               94.697                21.573
       24               95.280                21.195
       25               95.767                17.699
       26               96.231                16.876
       27               96.695                16.868
       28               97.112                15.192
       29               97.431                11.595
       30               97.741                11.275
       31               98.051                11.279
       32               98.361                11.271
       33               98.547                 6.740
       34               98.632                 3.085
       35               98.716                 3.070
       36               98.801                 3.077
       37               98.885                 3.077
       38               98.970                 3.077
       39               99.054                 3.077
       40               99.139                 3.077
       41               99.224                 3.085
       42               99.308                 3.070
       43               99.393                 3.070
       44               99.477                 3.070
       45               99.562                 3.070
       46               99.646                 3.070
       47               99.730                 3.070
       48               99.815                 3.070
       49               99.899                 3.070
       50               99.984                 3.070
       51              100.000                 0.594


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    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =      55.6322
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =     101.5866
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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 175.0 350.0 525.0 700.0
14.000	31.0565	64.20	. Q . V . . .
14.083	31.5075	65.49	. Q . V . . .
14.167	31.9685	66.94	. Q . V . . .
14.250	32.4408	68.57	. Q . V . . .
14.333	32.9246	70.25	. Q . V . . .
14.417	33.4200	71.93	. Q . V . . .
14.500	33.9272	73.65	. Q . V . . .
14.583	34.4469	75.46	. Q . V . . .
14.667	34.9798	77.39	. Q . V . . .
14.750	35.5269	79.44	. Q . V . . .
14.833	36.0890	81.62	. Q . V . . .
14.917	36.6681	84.08	. Q . V . . .
15.000	37.2674	87.01	. Q . V . . .
15.083	37.8921	90.71	. Q . V . . .
15.167	38.5479	95.22	. Q . V . . .
15.250	39.2407	100.60	. Q . V . . .
15.333	39.9765	106.84	. Q . V . . .
15.417	40.7552	113.06	. Q . V . . .
15.500	41.5667	117.83	. Q . V . . .
15.583	42.4047	121.68	. Q . V . . .
15.667	43.2870	128.10	. Q . V . . .
15.750	44.2512	140.01	. Q . V . . .
15.833	45.3389	157.93	. Q. V . . .
15.917	46.6148	185.26	. Q V . . .
16.000	48.1955	229.51	. Q V . . .
16.083	50.5217	337.76	. Q. . .
16.167	54.0127	506.90	. .V Q . .
16.250	58.3558	630.61	. . V . Q .
16.333	62.3015	572.92	. . V . Q .
16.417	65.2430	427.11	. . QV . .
16.500	67.5361	332.96	. Q. V . .
16.583	69.4949	284.42	. Q . V . .
16.667	71.2222	250.80	. Q . V . .
16.750	72.7453	221.16	. Q . V . .
16.833	74.1040	197.28	.Q . V. .
16.917	75.3342	178.63	Q . V. .
17.000	76.4555	162.81	Q. . V .
17.083	77.4821	149.07	Q . . V .
17.167	78.4221	136.48	Q . . V .
17.250	79.2915	126.24	Q . . .V .
17.333	80.0981	117.11	Q . . .V .
17.417	80.8653	111.40	Q . . .V .
17.500	81.5973	106.29	Q . . . V .
17.583	82.3009	102.15	Q . . . V .
17.667	82.9741	97.75	Q . . . V .
17.750	83.6230	94.22	Q . . . V .
17.833	84.2442	90.20	Q . . . V .
17.917	84.8410	86.66	Q . . . V .
18.000	85.4173	83.68	Q . . . V .
18.083	85.9636	79.33	Q . . . V .
18.167	86.4834	75.48	Q . . . V .
18.250	86.9736	71.17	Q . . . V .
18.333	87.4305	66.35	Q . . . V .
18.417	87.8550	61.64	Q . . . V .
18.500	88.2607	58.90	Q . . . V .
18.583	88.6496	56.47	Q . . . V .
18.667	89.0207	53.89	Q . . . V .
18.750	89.3620	49.55	Q . . . V .
18.833	89.6790	46.02	Q . . . V .
18.917	89.9850	44.44	Q . . . V .
19.000	90.2822	43.15	Q . . . V .
19.083	90.5714	41.99	Q . . . V .
19.167	90.8533	40.93	Q . . . V .
19.250	91.1285	39.96	Q . . . V .
19.333	91.3976	39.07	Q . . . V .
19.417	91.6609	38.24	Q . . . V .
19.500	91.9187	37.43	Q . . . V .
19.583	92.1713	36.68	Q . . . V .
19.667	92.4190	35.96	Q . . . V .
19.750	92.6618	35.25	Q . . . V .
19.833	92.8997	34.56	Q . . . V .
19.917	93.1329	33.85	Q . . . V .
20.000	93.3610	33.13	Q . . . V .

****
FLOW PROCESS FROM NODE 6330.00 TO NODE 6330.00 IS CODE = 7
>>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 5341.3 Ac. ***

****
FLOW PROCESS FROM NODE 6330.00 TO NODE 6330.00 IS CODE = 11
>>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<

*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 5341.3 Ac. ***

STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 1950.0 3900.0 5850.0 7800.0
14.000	436.1631	977.64	. Q V . . .
14.083	443.1287	1011.41	. Q V . . .
14.167	450.4287	1059.96	. Q V . . .
14.250	458.1863	1126.41	. Q .V . . .
14.333	466.4877	1205.36	. Q .V . . .
14.417	475.4289	1298.27	. Q .V . . .
14.500	485.2591	1427.34	. Q .V . . .
14.583	496.1832	1586.18	. Q . V . . .
14.667	508.0691	1725.83	. Q . V . . .
14.750	520.6832	1831.57	. Q. V . . .
14.833	533.9138	1921.08	. Q. V . . .
14.917	547.7231	2005.10	. Q V . . .
15.000	562.0945	2086.73	. Q V . . .
15.083	577.0278	2168.31	. .Q V . . .
15.167	592.5315	2251.14	. .Q V . . .
15.250	608.6227	2336.45	. .Q V . . .
15.333	625.3262	2425.33	. . Q V . . .
15.417	642.6027	2508.56	. . Q V . . .
15.500	660.2719	2565.57	. . Q V . . .
15.583	678.1307	2593.11	. . Q V . . .

15.667	696.1243	2612.66	. . Q V . . .
15.750	714.2440	2630.99	. . Q V . . .
15.833	732.2027	2607.60	. . Q V . . .
15.917	749.9245	2573.21	. . Q V . . .
16.000	768.3140	2670.15	. . Q V . . .
16.083	789.5765	3087.31	. . Q V. . .
16.167	816.2604	3874.50	. . Q. . .
16.250	848.8023	4725.08	. . V Q . .
16.333	885.5887	5341.38	. . .V Q . .
16.417	926.7455	5975.97	. . . V Q .
16.500	975.5790	7090.63	. . . V . Q .
16.583	1028.7042	7713.78	. . . V . Q.
16.667	1075.3481	6772.71	. . . V . Q .
16.750	1112.4542	5387.81	. . . VQ . .
16.833	1144.1587	4603.49	. . . Q V . .
16.917	1173.3995	4245.77	. . .Q V . .
17.000	1200.8412	3984.54	. . Q V. .
17.083	1226.5717	3736.07	. . Q. V. .
17.167	1250.5878	3487.13	. . Q . V .
17.250	1272.9236	3243.16	. . Q . V .
17.333	1293.6205	3005.19	. . Q . .V .
17.417	1312.8190	2787.62	. . Q . .V .
17.500	1330.4062	2553.68	. . Q . . V .
17.583	1346.2020	2293.55	. .Q . . V .
17.667	1360.3861	2059.53	. .Q . . V .
17.750	1373.2830	1872.62	. Q. . . V .
17.833	1385.0524	1708.92	. Q . . . V .
17.917	1395.8676	1570.36	. Q . . . V .
18.000	1405.9064	1457.63	. Q . . . V .
18.083	1415.0958	1334.30	. Q . . . V .
18.167	1423.4062	1206.67	. Q . . . V .
18.250	1431.0581	1111.04	. Q . . . V .
18.333	1438.2378	1042.49	. Q . . . V .
18.417	1444.9926	980.80	. Q . . . V .
18.500	1451.3136	917.81	. Q . . . V .
18.583	1457.1958	854.10	. Q . . . V .
18.667	1462.7015	799.43	. Q . . . V .
18.750	1467.8999	754.80	. Q . . . V .
18.833	1472.8462	718.21	. Q . . . V .
18.917	1477.5828	687.75	. Q . . . V .
19.000	1482.1332	660.73	. Q . . . V .
19.083	1486.5193	636.86	. Q . . . V .
19.167	1490.7637	616.29	. Q . . . V .
19.250	1494.8843	598.31	. Q . . . V .
19.333	1498.8954	582.41	. Q . . . V .
19.417	1502.8070	567.96	. Q . . . V .
19.500	1506.6246	554.32	. Q . . . V .
19.583	1510.3522	541.24	. Q . . . V .
19.667	1513.9885	528.00	. Q . . . V .
19.750	1517.5345	514.89	. Q . . . V .
19.833	1520.9893	501.63	. Q . . . V .
19.917	1524.3260	484.50	. Q . . . V .
20.000	1527.5215	463.98	. Q . . . V .
20.083	1530.6047	447.68	. Q . . . V .
20.167	1533.6147	437.06	. Q . . . V .
20.250	1536.5608	427.76	. Q . . . V .
20.333	1539.4491	419.38	. Q . . . V .
20.417	1542.2826	411.43	. Q . . . V .
20.500	1545.0641	403.87	. Q . . . V .
20.583	1547.7957	396.63	. Q . . . V .
20.667	1550.4796	389.72	.Q . . . V .
20.750	1553.1183	383.13	.Q . . . V .
20.833	1555.7135	376.83	.Q . . . V .
20.917	1558.2679	370.91	.Q . . . V .
21.000	1560.7852	365.49	.Q . . . V .
21.083	1563.2678	360.48	.Q . . . V .
21.167	1565.7175	355.70	.Q . . . V .
21.250	1568.1359	351.13	.Q . . . V .
21.333	1570.5239	346.74	.Q . . . V .
21.417	1572.8828	342.51	.Q . . . V .
21.500	1575.2136	338.43	.Q . . . V .
21.583	1577.5172	334.48	.Q . . . V .
21.667	1579.7944	330.66	.Q . . . V .
21.750	1582.0461	326.94	.Q . . . V .
21.833	1584.2729	323.33	.Q . . . V .
21.917	1586.4758	319.85	.Q . . . V .
22.000	1588.6558	316.52	.Q . . . V .
22.083	1590.8136	313.32	.Q . . . V .
22.167	1592.9501	310.21	.Q . . . V .
22.250	1595.0657	307.19	.Q . . . V .
22.333	1597.1611	304.26	.Q . . . V .
22.417	1599.2368	301.39	.Q . . . V .
22.500	1601.2933	298.60	.Q . . . V .
22.583	1603.3311	295.87	.Q . . . V .
22.667	1605.3505	293.21	.Q . . . V .
22.750	1607.3519	290.61	.Q . . . V .
22.833	1609.3359	288.07	.Q . . . V.
22.917	1611.3029	285.59	.Q . . . V.
23.000	1613.2531	283.17	.Q . . . V.
23.083	1615.1869	280.80	.Q . . . V.
23.167	1617.1047	278.48	.Q . . . V.
23.250	1619.0070	276.21	.Q . . . V.
23.333	1620.8939	273.99	.Q . . . V.
23.417	1622.7659	271.82	.Q . . . V.
23.500	1624.6232	269.69	.Q . . . V.
23.583	1626.4662	267.60	.Q . . . V.
23.667	1628.2950	265.56	.Q . . . V.
23.750	1630.1102	263.56	.Q . . . V.
23.833	1631.9119	261.59	.Q . . . V.
23.917	1633.7002	259.67	.Q . . . V.
24.000	1635.4756	257.78	.Q . . . V.
24.083	1637.2266	254.23	.Q . . . V.
24.167	1638.9188	245.72	.Q . . . V.
24.250	1640.5135	231.55	.Q . . . V.
24.333	1641.9922	214.69	.Q . . . V.
24.417	1643.3384	195.47	.Q . . . V.
24.500	1644.4883	166.96	Q . . . V.
24.583	1645.3887	130.74	Q . . . V.
24.667	1646.0848	101.09	Q . . . V.
24.750	1646.6519	82.33	Q . . . V.
24.833	1647.1292	69.30	Q . . . V.
24.917	1647.5349	58.92	Q . . . V.
25.000	1647.8820	50.40	Q . . . V.
25.083	1648.1792	43.16	Q . . . V.
25.167	1648.4338	36.97	Q . . . V.
25.250	1648.6519	31.66	Q . . . V.
25.333	1648.8389	27.15	Q . . . V.
25.417	1648.9987	23.19	Q . . . V.
25.500	1649.1342	19.67	Q . . . V.
25.583	1649.2487	16.62	Q . . . V.
25.667	1649.3452	14.02	Q . . . V.
25.750	1649.4265	11.80	Q . . . V.
25.833	1649.4954	9.99	Q . . . V.
25.917	1649.5538	8.49	Q . . . V.
26.000	1649.6028	7.10	Q . . . V.
26.083	1649.6443	6.02	Q . . . V.
26.167	1649.6815	5.40	Q . . . V.
26.250	1649.7161	5.01	Q . . . V.
26.333	1649.7482	4.66	Q . . . V.
26.417	1649.7782	4.36	Q . . . V.
26.500	1649.8063	4.07	Q . . . V.
26.583	1649.8324	3.79	Q . . . V.
26.667	1649.8566	3.51	Q . . . V.
26.750	1649.8789	3.25	Q . . . V.

26.833	1649.8997	3.01	Q	.	.	.	V.
26.917	1649.9187	2.77	Q	.	.	.	V.
27.000	1649.9362	2.53	Q	.	.	.	V.
27.083	1649.9520	2.30	Q	.	.	.	V.
27.167	1649.9663	2.07	Q	.	.	.	V.
27.250	1649.9790	1.83	Q	.	.	.	V.
27.333	1649.9901	1.60	Q	.	.	.	V.
27.417	1649.9996	1.38	Q	.	.	.	V.
27.500	1650.0076	1.15	Q	.	.	.	V.
27.583	1650.0139	0.93	Q	.	.	.	V.
27.667	1650.0188	0.71	Q	.	.	.	V.
27.750	1650.0222	0.50	Q	.	.	.	V.
27.833	1650.0240	0.27	Q	.	.	.	V
27.917	1650.0247	0.10	Q	.	.	.	V
28.000	1650.0249	0.03	Q	.	.	.	V
28.083	1650.0250	0.02	Q	.	.	.	V
28.167	1650.0250	0.00	Q	.	.	.	V

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****
FLOW PROCESS FROM NODE 6330.00 TO NODE 6355.00 IS CODE = 5.2

>>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
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*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 5341.3 Ac. ***

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
INTERVALS(Reference: the National Engineering Handbook,
Hydrology, Chapter 17, page 17-52, August,1972,
U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 30.00 CHANNEL Z = 1.00
UPSTREAM ELEVATION(FT) = 375.00
DOWNSTREAM ELEVATION(FT) = 314.00
CHANNEL LENGTH(FT) = 6086.00 MANNING'S FACTOR = 0.040
CONSTANT LOSS RATE(CFS) = 0.00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 7713.78
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 5428.70
CHANNEL NORMAL VELOCITY FOR Q = 5428.70 CFS = 13.47 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.888

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
UNIT INTERVALS IS CSTAR = 0.838

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.000	977.64	935.96	935.96
14.083	1011.41	963.01	963.01
14.167	1059.96	994.01	994.01
14.250	1126.41	1035.53	1035.53
14.333	1205.36	1092.88	1092.88
14.417	1298.27	1164.79	1164.79
14.500	1427.34	1250.35	1250.35
14.583	1586.18	1362.14	1362.14
14.667	1725.83	1504.93	1504.93
14.750	1831.57	1650.52	1650.52
14.833	1921.08	1772.31	1772.31
14.917	2005.10	1871.65	1871.65
15.000	2086.73	1959.70	1959.70
15.083	2168.31	2043.05	2043.05
15.167	2251.14	2124.93	2124.93
15.250	2336.45	2207.25	2207.25
15.333	2425.33	2291.38	2291.38
15.417	2508.56	2378.48	2378.48
15.500	2565.57	2463.93	2463.93
15.583	2593.11	2532.97	2532.97
15.667	2612.66	2575.57	2575.57
15.750	2630.99	2601.12	2601.12
15.833	2607.60	2620.96	2620.96
15.917	2573.21	2616.38	2616.38
16.000	2670.15	2589.94	2589.94
16.083	3087.31	2629.72	2629.72
16.167	3874.50	2895.12	2895.12
16.250	4725.08	3493.06	3493.06
16.333	5341.38	4284.77	4284.77
16.417	5975.97	4995.79	4995.79
16.500	7090.63	5637.58	5637.58
16.583	7713.78	6539.78	6539.78
16.667	6772.71	7347.23	7347.23
16.750	5387.81	7132.10	7132.10
16.833	4603.49	6062.32	6062.32
16.917	4245.77	5061.79	5061.79
17.000	3984.54	4479.21	4479.21
17.083	3736.07	4138.61	4138.61
17.167	3487.13	3871.60	3871.60
17.250	3243.16	3619.87	3619.87
17.333	3005.19	3373.24	3373.24
17.417	2787.62	3132.16	3132.16
17.500	2553.68	2905.01	2905.01
17.583	2293.55	2676.80	2676.80
17.667	2059.53	2429.25	2429.25
17.750	1872.62	2185.66	2185.66
17.833	1708.92	1976.23	1976.23
17.917	1570.36	1798.56	1798.56
18.000	1457.63	1646.55	1646.55
18.083	1334.30	1520.14	1520.14
18.167	1206.67	1399.31	1399.31
18.250	1111.04	1274.00	1274.00
18.333	1042.49	1164.51	1164.51
18.417	980.80	1081.66	1081.66
18.500	917.81	1014.60	1014.60
18.583	854.10	951.32	951.32
18.667	799.43	887.88	887.88
18.750	754.80	829.23	829.23
18.833	718.21	779.49	779.49
18.917	687.75	738.49	738.49
19.000	660.73	704.59	704.59
19.083	636.86	675.48	675.48
19.167	616.29	649.87	649.87
19.250	598.31	627.55	627.55
19.333	582.41	608.13	608.13
19.417	567.96	591.08	591.08
19.500	554.32	575.80	575.80
19.583	541.24	561.66	561.66
19.667	528.00	548.25	548.25
19.750	514.89	535.03	535.03
19.833	501.63	521.86	521.86
19.917	484.50	508.66	508.66
20.000	463.98	493.26	493.26

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  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   1650.024 AF
    OUTFLOW VOLUME =   1650.025 AF
    LOSS    VOLUME =      0.000 AF
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********************************************************************************
  FLOW PROCESS FROM NODE   6340.00 TO NODE   6355.00 IS CODE =   1
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        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of   697.9 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
================================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #2)

         WATERSHED AREA =     697.900 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.340 HOURS
          CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
          THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
          MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.900
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.210
         LOW LOSS FRACTION = 0.450
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.58
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.22
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.62
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.71
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  3.75
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  6.28

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.969
          30-MINUTE FACTOR = 0.969
           1-HOUR FACTOR = 0.969
           3-HOUR FACTOR = 0.995
           6-HOUR FACTOR = 0.998
          24-HOUR FACTOR = 0.999

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  24.510


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


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                      UNIT HYDROGRAPH DETERMINATION

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     INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
      NUMBER          MEAN VALUES          ORDINATES(CFS)
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1	1.545	130.419
2	7.337	488.804
3	20.261	1090.852
4	37.173	1427.448
5	57.561	1720.753
6	73.834	1373.504
7	84.155	871.070
8	90.157	506.624
9	93.846	311.340
10	95.934	176.209
11	96.823	75.053
12	97.453	53.201
13	98.047	50.140
14	98.563	43.554
15	98.877	26.445
16	99.042	13.975
17	99.137	8.025
18	99.206	5.797
19	99.261	4.649
20	99.315	4.546
21	99.365	4.228
22	99.414	4.161
23	99.461	3.902
24	99.505	3.743
25	99.548	3.674
26	99.587	3.272
27	99.625	3.204
28	99.663	3.169
29	99.695	2.719
30	99.726	2.582
31	99.756	2.583
32	99.787	2.570
33	99.813	2.195
34	99.830	1.492
35	99.848	1.489
36	99.866	1.488
37	99.883	1.487
38	99.899	1.328
39	99.905	0.518
40	99.910	0.406
41	99.915	0.406
42	99.919	0.404
43	99.924	0.406
44	99.929	0.406
45	99.934	0.405
46	99.939	0.408
47	99.944	0.405
48	99.948	0.408
49	99.953	0.404
50	99.958	0.405
51	99.963	0.405
52	99.968	0.405
53	99.972	0.405
54	99.977	0.404
55	99.982	0.405
56	99.987	0.405
57	99.992	0.405
58	99.996	0.405
59	100.000	0.311

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    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =     130.0823
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =     234.5189
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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 400.0 800.0 1200.0 1600.0
14.000	71.1105	147.86	. Q . V . . .
14.083	72.1489	150.77	. Q . V . . .
14.167	73.2102	154.10	. Q . V . . .
14.250	74.2996	158.17	. Q . V . . .
14.333	75.4201	162.70	. Q . V . . .
14.417	76.5767	167.94	. Q . V . . .
14.500	77.7714	173.47	. Q . V . . .
14.583	79.0080	179.55	. Q . V . . .
14.667	80.2912	186.32	. Q . V . . .
14.750	81.6286	194.19	. Q . V . . .
14.833	83.0251	202.78	. Q . V . . .
14.917	84.4881	212.42	. Q . V . . .
15.000	86.0229	222.86	. Q . V . . .
15.083	87.6385	234.58	. Q . V . . .
15.167	89.3417	247.30	. Q . V . . .
15.250	91.1439	261.69	. Q . V . . .
15.333	93.0551	277.50	. Q . V . . .
15.417	95.0819	294.30	. Q . V . . .
15.500	97.2126	309.37	. Q . V . . .
15.583	99.4271	321.55	. Q . V . . .
15.667	101.7259	333.78	. Q . V . . .
15.750	104.1331	349.53	. Q . V . . .
15.833	106.7326	377.44	. Q. V . . .
15.917	109.6766	427.47	. Q V . . .
16.000	113.1778	508.38	. . Q V. . .
16.083	117.8757	682.13	. . Q V . .
16.167	124.5391	967.53	. . .V Q . .
16.250	133.6750	1326.53	. . . V . Q .
16.333	144.0990	1513.58	. . . V . Q .
16.417	155.0234	1586.22	. . . V . Q.
16.500	164.1875	1330.62	. . . V . Q .
16.583	171.0479	996.13	. . . Q V. .
16.667	176.1199	736.46	. . Q . V .
16.750	180.0661	572.98	. . Q . V .
16.833	183.1875	453.22	. .Q . .V .
16.917	185.6866	362.87	. Q. . .V .
17.000	187.8660	316.44	. Q . . . V .
17.083	189.8290	285.04	. Q . . . V .
17.167	191.5923	256.02	. Q . . . V .
17.250	193.1485	225.96	. Q . . . V .
17.333	194.5403	202.09	. Q . . . . V .
17.417	195.8141	184.96	. Q . . . . V .
17.500	197.0043	172.81	. Q . . . . V .
17.583	198.1304	163.52	. Q . . . . V .
17.667	199.2067	156.28	. Q . . . . V .
17.750	200.2403	150.07	. Q . . . . V .
17.833	201.2373	144.76	. Q . . . . V .
17.917	202.2013	139.98	. Q . . . . V .
18.000	203.1359	135.70	. Q . . . . V .
18.083	204.0411	131.44	. Q . . . . V .
18.167	204.9113	126.36	. Q . . . . V .
18.250	205.7377	119.99	. Q . . . . V .
18.333	206.5154	112.92	. Q . . . . V .
18.417	207.2391	105.07	. Q . . . . V .
18.500	207.9178	98.56	. Q . . . . V .
18.583	208.5632	93.70	. Q . . . . V .
18.667	209.1830	89.99	. Q . . . . V .
18.750	209.7808	86.80	. Q . . . . V .
18.833	210.3593	84.01	. Q . . . . V .
18.917	210.9235	81.92	. Q . . . . V .
19.000	211.4746	80.01	. Q . . . . V .
19.083	212.0129	78.17	.Q . . . . V .
19.167	212.5385	76.31	.Q . . . . V .
19.250	213.0506	74.35	.Q . . . . V .
19.333	213.5522	72.83	.Q . . . . V .
19.417	214.0444	71.47	.Q . . . . V .
19.500	214.5278	70.19	.Q . . . . V .
19.583	215.0028	68.97	.Q . . . . V .
19.667	215.4698	67.81	.Q . . . . V .
19.750	215.9291	66.70	.Q . . . . V .
19.833	216.3811	65.64	.Q . . . . V .
19.917	216.8261	64.62	.Q . . . . V .
20.000	217.2644	63.64	.Q . . . . V .

FLOW PROCESS FROM NODE 6355.00 TO NODE 6355.00 IS CODE = 7

>>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 6039.2 Ac. ***

FLOW PROCESS FROM NODE 6355.00 TO NODE 6355.00 IS CODE = 11

>>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<

*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 6039.2 Ac. ***

STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 1950.0 3900.0 5850.0 7800.0
14.000	497.4364	1088.60	. Q V . . .
14.083	505.1494	1119.93	. Q V . . .
14.167	513.1381	1159.95	. Q V . . .
14.250	521.5336	1219.03	. Q .V . . .
14.333	530.4852	1299.77	. Q .V . . .
14.417	540.1303	1400.46	. Q .V . . .
14.500	550.5427	1511.88	. Q .V . . .
14.583	561.8763	1645.64	. Q .V . . .
14.667	574.3333	1808.75	. Q. V . . .
14.750	587.9247	1973.48	. Q V . . .
14.833	602.4632	2110.99	. Q V . . .
14.917	617.7724	2222.90	. .Q V . . .
15.000	633.7646	2322.07	. .Q V . . .
15.083	650.4062	2416.35	. . QV . . .
15.167	667.6856	2508.97	. . Q V . . .
15.250	685.6081	2602.35	. . QV . . .
15.333	704.1873	2697.69	. . Q V . . .
15.417	723.4247	2793.29	. . QV . . .
15.500	743.2448	2877.87	. . QV . . .
15.583	763.4275	2930.53	. . QV . . .

15.667	783.7325	2948.29	. . QV . . .
15.750	804.0083	2944.04	. . Q V . . .
15.833	824.3171	2948.84	. . Q V . . .
15.917	844.6627	2954.19	. . Q V . . .
16.000	865.0842	2965.20	. . Q V . . .
16.083	886.5428	3115.79	. . Q V . . .
16.167	911.1877	3578.45	. . QV. . . .
16.250	941.6856	4428.29	. . V Q . . .
16.333	978.4500	5338.18	. . V Q . . .
16.417	1020.3721	6087.09	. . .V .Q . .
16.500	1065.2610	6517.88	. . . V . Q . .
16.583	1114.5055	7150.30	. . . V . Q . .
16.667	1168.0330	7772.19	. . . V . Q.
16.750	1219.6559	7495.64	. . . V . Q .
16.833	1263.7520	6402.75	. . . V . Q . .
16.917	1300.7917	5378.17	. . . Q . . .
17.000	1333.7954	4792.13	. . . Q V . . .
17.083	1364.4658	4453.34	. . . Q V. . .
17.167	1393.2494	4179.38	. . .Q V. . .
17.250	1420.1484	3905.73	. . Q V . .
17.333	1445.1702	3633.16	. . Q . V . .
17.417	1468.3423	3364.59	. . Q . .V . .
17.500	1489.7966	3115.18	. . Q . .V . .
17.583	1509.5616	2869.89	. . Q . . V . .
17.667	1527.5219	2607.81	. . Q . . V . .
17.750	1543.7144	2351.15	. . Q . . V . .
17.833	1558.3977	2132.02	. . Q . . V . .
17.917	1571.8145	1948.11	. Q. . . V . .
18.000	1584.1508	1791.24	. Q. . . V . .
18.083	1595.5828	1659.93	. Q . . . V . .
18.167	1606.1470	1533.93	. Q . . . V . .
18.250	1615.8042	1402.23	. Q . . . V . .
18.333	1624.6530	1284.85	. Q . . . V . .
18.417	1632.8679	1192.81	. Q . . . V . .
18.500	1640.5681	1118.06	. Q . . . V . .
18.583	1647.7925	1048.98	. Q . . . V . .
18.667	1654.5480	980.91	. Q . . . V . .
18.750	1660.8710	918.11	. Q . . . V . .
18.833	1666.8267	864.77	. Q . . . V . .
18.917	1672.4811	821.03	. Q . . . V . .
19.000	1677.8853	784.69	. Q . . . V . .
19.083	1683.0731	753.28	. Q . . . V . .
19.167	1688.0693	725.46	. Q . . . V . .
19.250	1692.8971	700.98	. Q . . . V . .
19.333	1697.5796	679.89	. Q . . . V . .
19.417	1702.1346	661.40	. Q . . . V . .
19.500	1706.5754	644.81	. Q . . . V . .
19.583	1710.9105	629.45	. Q . . . V . .
19.667	1715.1454	614.90	. Q . . . V . .
19.750	1719.2819	600.62	. Q . . . V . .
19.833	1723.3209	586.48	. Q . . . V . .
19.917	1727.2629	572.38	. Q . . . V . .
20.000	1731.0939	556.25	. Q . . . V . .
20.083	1734.7916	536.91	. Q . . . V . .
20.167	1738.3615	518.33	. Q . . . V . .
20.250	1741.8336	504.15	. Q . . . V . .
20.333	1745.2294	493.05	. Q . . . V . .
20.417	1748.5581	483.34	. Q . . . V . .
20.500	1751.8248	474.33	. Q . . . V . .
20.583	1755.0326	465.77	. Q . . . V . .
20.667	1758.1840	457.59	. Q . . . V . .
20.750	1761.2814	449.74	. Q . . . V . .
20.833	1764.3270	442.23	. Q . . . V . .
20.917	1767.3229	435.00	. Q . . . V . .
21.000	1770.2710	428.07	. Q . . . V . .
21.083	1773.1754	421.72	. Q . . . V . .
21.167	1776.0396	415.86	. Q . . . V . .
21.250	1778.8657	410.36	. Q . . . V . .
21.333	1781.6556	405.10	. Q . . . V . .
21.417	1784.4108	400.05	. Q . . . V . .
21.500	1787.1324	395.19	. Q . . . V . .
21.583	1789.8219	390.51	. Q . . . V . .
21.667	1792.4801	385.97	.Q . . . V . .
21.750	1795.1082	381.58	.Q . . . V . .
21.833	1797.7068	377.33	.Q . . . V . .
21.917	1800.2770	373.19	.Q . . . V . .
22.000	1802.8196	369.19	.Q . . . V . .
22.083	1805.3357	365.34	.Q . . . V . .
22.167	1807.8263	361.63	.Q . . . V . .
22.250	1810.2922	358.05	.Q . . . V . .
22.333	1812.7343	354.57	.Q . . . V . .
22.417	1815.1530	351.19	.Q . . . V . .
22.500	1817.5490	347.89	.Q . . . V . .
22.583	1819.9227	344.68	.Q . . . V . .
22.667	1822.2749	341.54	.Q . . . V . .
22.750	1824.6061	338.48	.Q . . . V . .
22.833	1826.9166	335.49	.Q . . . V . .
22.917	1829.2070	332.57	.Q . . . V.
23.000	1831.4778	329.72	.Q . . . V.
23.083	1833.7294	326.93	.Q . . . V.
23.167	1835.9622	324.20	.Q . . . V.
23.250	1838.1765	321.53	.Q . . . V.
23.333	1840.3729	318.92	.Q . . . V.
23.417	1842.5518	316.36	.Q . . . V.
23.500	1844.7134	313.86	.Q . . . V.
23.583	1846.8580	311.41	.Q . . . V.
23.667	1848.9862	309.01	.Q . . . V.
23.750	1851.0981	306.66	.Q . . . V.
23.833	1853.1942	304.35	.Q . . . V.
23.917	1855.2748	302.09	.Q . . . V.
24.000	1857.3401	299.87	.Q . . . V.
24.083	1859.3864	297.12	.Q . . . V.
24.167	1861.3966	291.88	.Q . . . V.
24.250	1863.3295	280.64	.Q . . . V.
24.333	1865.1399	262.87	.Q . . . V.
24.417	1866.7920	239.89	.Q . . . V.
24.500	1868.2782	215.80	.Q . . . V.
24.583	1869.5718	187.84	Q . . . V.
24.667	1870.6295	153.59	Q . . . V.
24.750	1871.4574	120.21	Q . . . V.
24.833	1872.1135	95.27	Q . . . V.
24.917	1872.6533	78.39	Q . . . V.
25.000	1873.1077	65.97	Q . . . V.
25.083	1873.4939	56.07	Q . . . V.
25.167	1873.8235	47.86	Q . . . V.
25.250	1874.1055	40.94	Q . . . V.
25.333	1874.3469	35.06	Q . . . V.
25.417	1874.5540	30.07	Q . . . V.
25.500	1874.7313	25.75	Q . . . V.
25.583	1874.8826	21.96	Q . . . V.
25.667	1875.0109	18.62	Q . . . V.
25.750	1875.1194	15.76	Q . . . V.
25.833	1875.2109	13.30	Q . . . V.
25.917	1875.2883	11.24	Q . . . V.
26.000	1875.3541	9.55	Q . . . V.
26.083	1875.4097	8.06	Q . . . V.
26.167	1875.4565	6.81	Q . . . V.
26.250	1875.4974	5.94	Q . . . V.
26.333	1875.5345	5.39	Q . . . V.
26.417	1875.5688	4.98	Q . . . V.
26.500	1875.6008	4.64	Q . . . V.
26.583	1875.6306	4.33	Q . . . V.
26.667	1875.6583	4.03	Q . . . V.
26.750	1875.6841	3.74	Q . . . V.

26.833	1875.7079	3.46	Q	.	.	.	V.
26.917	1875.7300	3.20	Q	.	.	.	V.
27.000	1875.7504	2.95	Q	.	.	.	V.
27.083	1875.7690	2.71	Q	.	.	.	V.
27.167	1875.7860	2.47	Q	.	.	.	V.
27.250	1875.8014	2.23	Q	.	.	.	V.
27.333	1875.8152	2.00	Q	.	.	.	V.
27.417	1875.8274	1.77	Q	.	.	.	V.
27.500	1875.8380	1.53	Q	.	.	.	V.
27.583	1875.8470	1.30	Q	.	.	.	V.
27.667	1875.8545	1.08	Q	.	.	.	V.
27.750	1875.8604	0.85	Q	.	.	.	V.
27.833	1875.8647	0.64	Q	.	.	.	V.
27.917	1875.8673	0.37	Q	.	.	.	V.
28.000	1875.8685	0.17	Q	.	.	.	V.
28.083	1875.8691	0.09	Q	.	.	.	V
28.167	1875.8695	0.06	Q	.	.	.	V
28.250	1875.8698	0.03	Q	.	.	.	V
28.333	1875.8699	0.02	Q	.	.	.	V
28.417	1875.8700	0.01	Q	.	.	.	V
28.500	1875.8701	0.01	Q	.	.	.	V
28.583	1875.8701	0.01	Q	.	.	.	V
28.667	1875.8701	0.01	Q	.	.	.	V
28.750	1875.8701	0.00	Q	.	.	.	V
28.833	1875.8701	0.00	Q	.	.	.	V
28.917	1875.8701	0.00	Q	.	.	.	V
29.000	1875.8701	0.00	Q	.	.	.	V
29.083	1875.8701	0.00	Q	.	.	.	V
29.167	1875.8701	0.00	Q	.	.	.	V
29.250	1875.8701	0.00	Q	.	.	.	V
29.333	1875.8701	0.00	Q	.	.	.	V
29.417	1875.8701	0.00	Q	.	.	.	V
29.500	1875.8701	0.00	Q	.	.	.	V
29.583	1875.8701	0.00	Q	.	.	.	V
29.667	1875.8701	0.00	Q	.	.	.	V
29.750	1875.8701	0.00	Q	.	.	.	V
29.833	1875.8701	0.00	Q	.	.	.	V
29.917	1875.8701	0.00	Q	.	.	.	V
30.000	1875.8701	0.00	Q	.	.	.	V

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FLOW PROCESS FROM NODE 6355.00 TO NODE 6371.00 IS CODE = 5.2

>>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
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*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 6039.2 Ac. ***

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
INTERVALS(Reference: the National Engineering Handbook,
Hydrology, Chapter 17, page 17-52, August,1972,
U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 30.00 CHANNEL Z = 1.00
UPSTREAM ELEVATION(FT) = 314.00
DOWNSTREAM ELEVATION(FT) = 220.00
CHANNEL LENGTH(FT) = 5919.00 MANNING'S FACTOR = 0.040
CONSTANT LOSS RATE(CFS) = 0.00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 7772.19
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 5684.70
CHANNEL NORMAL VELOCITY FOR Q = 5684.70 CFS = 16.07 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.904

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
UNIT INTERVALS IS CSTAR = 0.888

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.000	1088.60	1054.32	1054.32
14.083	1119.93	1082.02	1082.02
14.167	1159.95	1112.63	1112.63
14.250	1219.03	1150.75	1150.75
14.333	1299.77	1205.62	1205.62
14.417	1400.46	1281.35	1281.35
14.500	1511.88	1377.30	1377.30
14.583	1645.64	1485.95	1485.95
14.667	1808.75	1614.71	1614.71
14.750	1973.48	1771.11	1771.11
14.833	2110.99	1934.75	1934.75
14.917	2222.90	2077.84	2077.84
15.000	2322.07	2195.74	2195.74
15.083	2416.35	2298.26	2298.26
15.167	2508.97	2393.93	2393.93
15.250	2602.35	2487.06	2487.06
15.333	2697.69	2580.33	2580.33
15.417	2793.29	2675.25	2675.25
15.500	2877.87	2770.75	2770.75
15.583	2930.53	2857.62	2857.62
15.667	2948.29	2917.23	2917.23
15.750	2944.04	2943.08	2943.08
15.833	2948.84	2944.35	2944.35
15.917	2954.19	2947.87	2947.87
16.000	2965.20	2952.96	2952.96
16.083	3115.79	2962.75	2962.75
16.167	3578.45	3083.96	3083.96
16.250	4428.29	3477.94	3477.94
16.333	5338.18	4238.96	4238.96
16.417	6087.09	5126.34	5126.34
16.500	6517.88	5906.48	5906.48
16.583	7150.30	6407.42	6407.42
16.667	7772.19	7005.43	7005.43
16.750	7495.64	7625.67	7625.67
16.833	6402.75	7537.23	7537.23
16.917	5378.17	6636.43	6636.43
17.000	4792.13	5619.00	5619.00
17.083	4453.34	4941.85	4941.85
17.167	4179.38	4541.07	4541.07
17.250	3905.73	4246.60	4246.60
17.333	3633.16	3970.59	3970.59
17.417	3364.59	3697.53	3697.53
17.500	3115.18	3428.07	3428.07
17.583	2869.89	3174.54	3174.54
17.667	2607.81	2927.92	2927.92
17.750	2351.15	2669.22	2669.22
17.833	2132.02	2411.80	2411.80
17.917	1948.11	2184.72	2184.72
18.000	1791.24	1992.54	1992.54
18.083	1659.93	1829.08	1829.08
18.167	1533.93	1691.67	1691.67
18.250	1402.23	1563.88	1563.88

18.333	1284.85	1433.18	1433.18
18.417	1192.81	1312.90	1312.90
18.500	1118.06	1215.23	1215.23
18.583	1048.98	1136.23	1136.23
18.667	980.91	1065.49	1065.49
18.750	918.11	997.02	997.02
18.833	864.77	933.07	933.07
18.917	821.03	877.62	877.62
19.000	784.69	831.63	831.63
19.083	753.28	793.49	793.49
19.167	725.46	760.85	760.85
19.250	700.98	732.14	732.14
19.333	679.89	706.86	706.86
19.417	661.40	684.97	684.97
19.500	644.81	665.84	665.84
19.583	629.45	648.78	648.78
19.667	614.90	633.12	633.12
19.750	600.62	618.36	618.36
19.833	586.48	604.00	604.00
19.917	572.38	589.82	589.82
20.000	556.25	575.71	575.71

PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 1875.869 AF
OUTFLOW VOLUME = 1875.869 AF
LOSS VOLUME = 0.000 AF

FLOW PROCESS FROM NODE 6360.00 TO NODE 6371.00 IS CODE = 1

*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 922.3 Ac. ***
>>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<

(UNIT-HYDROGRAPH ADDED TO STREAM #2)

WATERSHED AREA = 922.300 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.250 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY(DEVELOPED):
"S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.900
FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.050
MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.050
VALLEY(UNDEVELOPED)/DESERT:
"S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.000
DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.000
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.120
LOW LOSS FRACTION = 0.510
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL(INCH)= 0.58
SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)= 1.22
SPECIFIED PEAK 1-HOUR RAINFALL(INCH) = 1.62
SPECIFIED PEAK 3-HOUR RAINFALL(INCH) = 2.71
SPECIFIED PEAK 6-HOUR RAINFALL(INCH) = 3.75
SPECIFIED PEAK 24-HOUR RAINFALL(INCH) = 6.28

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.959
30-MINUTE FACTOR = 0.959
1-HOUR FACTOR = 0.959
3-HOUR FACTOR = 0.994
6-HOUR FACTOR = 0.997
24-HOUR FACTOR = 0.998

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 33.333

RUNOFF HYDROGRAPH LISTING LIMITS:
MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 14.00
MODEL TIME(HOURS) FOR END OF RESULTS = 20.00

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	2.292	255.704
2	13.821	1285.900
3	35.522	2420.567
4	62.164	2971.648
5	80.648	2061.668
6	89.997	1042.866
7	94.646	518.513
8	96.625	220.790
9	97.489	96.296
10	98.211	80.598
11	98.708	55.360
12	99.005	33.223
13	99.174	18.845
14	99.253	8.821
15	99.326	8.100
16	99.394	7.535
17	99.458	7.164
18	99.518	6.727
19	99.574	6.257
20	99.626	5.759
21	99.675	5.514
22	99.718	4.708
23	99.759	4.643
24	99.799	4.443
25	99.827	3.130
26	99.851	2.675
27	99.875	2.675
28	99.897	2.469
29	99.906	1.014
30	99.913	0.730
31	99.919	0.731
32	99.926	0.729
33	99.932	0.731
34	99.939	0.729
35	99.946	0.730
36	99.952	0.729
37	99.959	0.729
38	99.965	0.729
39	99.972	0.730
40	99.978	0.729
41	99.985	0.729
42	99.991	0.729
43	99.998	0.729
44	100.000	0.237

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    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =     154.5061
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =     327.1010
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                    2 4 - H O U R    S T O R M
                  R U N O F F    H Y D R O G R A P H

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          HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
       (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      650.0    1300.0    1950.0    2600.0
--------------------------------------------------------------------------------
  14.000     92.0759    251.80  .  Q      .V        .         .         .
  14.083     93.8620    259.34  .  Q      .V        .         .         .
  14.167     95.7183    269.54  .   Q     .V        .         .         .
  14.250     97.6636    282.46  .   Q     .V        .         .         .
  14.333     99.7101    297.14  .   Q     . V       .         .         .
  14.417    101.8475    310.36  .   Q     . V       .         .         .
  14.500    104.0665    322.20  .   Q     . V       .         .         .
  14.583    106.3633    333.49  .    Q    .  V      .         .         .
  14.667    108.7398    345.08  .    Q    .  V      .         .         .
  14.750    111.1993    357.12  .    Q    .  V      .         .         .
  14.833    113.7496    370.30  .    Q    .  V      .         .         .
  14.917    116.3968    384.38  .    Q    .   V     .         .         .
  15.000    119.1512    399.94  .     Q   .   V     .         .         .
  15.083    122.0217    416.80  .     Q   .   V     .         .         .
  15.167    125.0226    435.72  .     Q   .    V    .         .         .
  15.250    128.1668    456.54  .      Q  .    V    .         .         .
  15.333    131.4750    480.36  .      Q  .     V   .         .         .
  15.417    134.9463    504.03  .      Q  .     V   .         .         .
  15.500    138.5274    519.98  .      Q  .     V   .         .         .
  15.583    142.1582    527.19  .       Q .      V  .         .         .
  15.667    145.8463    535.52  .       Q .      V  .         .         .
  15.750    149.7333    564.39  .       Q .       V .         .         .
  15.833    154.0253    623.20  .        Q.       V .         .         .
  15.917    158.9539    715.63  .         .Q      V.         .         .
  16.000    164.9456    869.99  .          . Q     V         .         .
  16.083    173.1975   1198.18  .          .       Q .V      .         .
  16.167    185.8843   1842.12  .          .         . V     Q .       .
  16.250    202.4754   2409.04  .          .          .  V     .      Q  .
  16.333    219.9588   2538.58  .          .           .    V   .       Q.
  16.417    233.4155   1953.91  .          .           .      V Q        .
  16.500    242.5146   1321.20  .          .           Q       V.        .
  16.583    249.0268    945.57  .          .   Q       .       V         .
  16.667    254.0078    723.23  .          .Q          .        .V       .
  16.750    258.1585    602.69  .        Q.            .        .V       .
  16.833    261.8781    540.07  .       Q .            .        . V      .
  16.917    265.2047    483.02  .      Q  .            .        . V      .
  17.000    268.1934    433.96  .     Q   .            .        . V      .
  17.083    270.9070    394.02  .     Q    .           .        .  V     .
  17.167    273.3862    359.97  .    Q     .           .        .  V     .
  17.250    275.6710    331.75  .    Q     .           .        .  V     .
  17.333    277.7761    305.67  .   Q      .           .        .  V     .
  17.417    279.7319    283.98  .   Q      .           .        .   V    .
  17.500    281.5658    266.28  .   Q      .           .        .   V    .
  17.583    283.2964    251.30  .  Q       .           .        .   V    .
  17.667    284.9374    238.27  .  Q       .           .        .   V    .
  17.750    286.4989    226.73  .  Q       .           .        .    V   .
  17.833    287.9863    215.98  .  Q       .           .        .    V   .
  17.917    289.4077    206.38  .  Q       .           .        .    V   .
  18.000    290.7675    197.44  .  Q       .           .        .    V   .
  18.083    292.0585    187.45  . Q        .           .        .    V   .
  18.167    293.2521    173.31  . Q        .           .        .    V   .
  18.250    294.3161    154.50  . Q        .           .        .    V   .
  18.333    295.2383    133.89  . Q        .           .        .     V  .
  18.417    296.0549    118.57  .Q         .           .        .     V  .
  18.500    296.8109    109.76  .Q         .           .        .     V  .
  18.583    297.5290    104.27  .Q         .           .        .     V  .
  18.667    298.2219    100.61  .Q         .           .        .     V  .
  18.750    298.8954     97.79  .Q         .           .        .     V  .
  18.833    299.5511     95.21  .Q         .           .        .     V  .
  18.917    300.1909     92.90  .Q         .           .        .     V  .
  19.000    300.8163     90.82  .Q         .           .        .     V  .
  19.083    301.4288     88.93  .Q         .           .        .     V  .
  19.167    302.0292     87.18  .Q         .           .        .     V  .
  19.250    302.6182     85.52  .Q         .           .        .      V .
  19.333    303.1962     83.92  .Q         .           .        .      V .
  19.417    303.7636     82.39  .Q         .           .        .      V .
  19.500    304.3209     80.91  .Q         .           .        .      V .
  19.583    304.8681     79.46  .Q         .           .        .      V .
  19.667    305.4044     77.87  .Q         .           .        .      V .
  19.750    305.9311     76.47  .Q         .           .        .      V .
  19.833    306.4493     75.24  .Q         .           .        .      V .
  19.917    306.9595     74.08  .Q         .           .        .      V .
  20.000    307.4620     72.96  .Q         .           .        .      V .
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6371.00 TO NODE   6371.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  6961.5 Ac. ***
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6371.00 TO NODE   6371.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  6961.5 Ac. ***

           STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
         (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.     2000.0    4000.0    6000.0    8000.0
--------------------------------------------------------------------------------
  14.000    581.1647   1315.27  .     Q   V         .         .         .
  14.083    590.4868   1353.55  .     Q   V         .         .         .
  14.167    600.2031   1410.82  .      Q  V         .         .         .
  14.250    610.4882   1493.40  .      Q  .V        .         .         .
  14.333    621.5263   1602.73  .       Q .V        .         .         .
  14.417    633.3804   1721.21  .       Q .V        .         .         .
  14.500    646.0998   1846.86  .        Q.V        .         .         .
  14.583    659.7250   1978.38  .        Q. V       .         .         .
  14.667    674.3729   2126.87  .         Q V       .         .         .
  14.750    690.2389   2303.75  .         .QV       .         .         .
  14.833    707.3878   2490.02  .         . Q       .         .         .
  14.917    725.6682   2654.31  .         .  Q      .         .         .
  15.000    744.8865   2790.50  .         .  Q      .         .         .
  15.083    764.9208   2908.99  .         .  VQ     .         .         .
  15.167    785.7191   3019.91  .         .   VQ    .         .         .
  15.250    807.2625   3128.10  .         .   VQ    .         .         .
  15.333    829.5572   3237.18  .         .    VQ   .         .         .
  15.417    852.5674   3341.09  .         .    VQ   .         .         .
  15.500    876.0992   3416.82  .         .    V Q  .         .         .
  15.583    899.8770   3452.53  .         .     VQ  .         .         .
```

15.667	923.6304	3449.00	. . VQ . . .
15.750	947.3521	3444.39	. . Q . . .
15.833	971.1559	3456.31	. . Q . . .
15.917	995.2927	3504.66	. . QV . . .
16.000	1020.1286	3606.17	. . Q . . .
16.083	1046.5994	3843.56	. . Q. . .
16.167	1077.0850	4426.50	. . V. Q . .
16.250	1112.9871	5212.99	. . V Q . .
16.333	1154.4578	6021.55	. . .V Q . .
16.417	1198.6753	6420.39	. . .V . Q . .
16.500	1244.8997	6711.78	. . . V . Q . .
16.583	1292.8148	6957.29	. . . V . Q . .
16.667	1343.9041	7418.16	. . . V . . Q .
16.750	1398.8912	7984.14	. . . V . . Q.
16.833	1453.4918	7928.00	. . . V . . Q.
16.917	1502.1854	7070.31	. . . V . Q .
17.000	1543.9683	6066.87	. . . V Q .
17.083	1581.0564	5385.19	. . . Q V . .
17.167	1615.2737	4968.35	. . . Q V. .
17.250	1647.2622	4644.74	. . . Q V .
17.333	1677.0668	4327.62	. . .Q V .
17.417	1704.7675	4022.15	. . Q .V .
17.500	1730.4656	3731.37	. . Q . .V .
17.583	1754.3065	3461.70	. . Q . . V .
17.667	1776.3566	3201.66	. . Q . . V .
17.750	1796.5292	2929.06	. . Q . . V .
17.833	1814.8185	2655.61	. . Q . . V .
17.917	1831.4424	2413.78	. . Q . . V .
18.000	1846.6630	2210.02	. .Q . . V .
18.083	1860.6805	2035.35	. .Q . . V .
18.167	1873.6422	1882.03	. Q. . . V .
18.250	1885.5823	1733.69	. Q . . . V .
18.333	1896.4688	1580.72	. Q . . . V .
18.417	1906.4084	1443.25	. Q . . . V .
18.500	1915.6008	1334.74	. Q . . . V .
18.583	1924.2004	1248.67	. Q . . . V .
18.667	1932.2800	1173.16	. Q . . . V .
18.750	1939.8612	1100.78	. Q . . . V .
18.833	1946.9747	1032.89	. Q . . . V .
18.917	1953.6809	973.73	. Q . . . V .
19.000	1960.0479	924.48	. Q . . . V .
19.083	1966.1326	883.49	. Q . . . V .
19.167	1971.9751	848.34	. Q . . . V .
19.250	1977.6040	817.32	. Q . . . V .
19.333	1983.0446	789.96	. Q . . . V .
19.417	1988.3217	766.23	. Q . . . V .
19.500	1993.4556	745.45	. Q . . . V .
19.583	1998.4615	726.87	. Q . . . V .
19.667	2003.3491	709.67	. Q . . . V .
19.750	2008.1259	693.58	. Q . . . V .
19.833	2012.7959	678.09	. Q . . . V .
19.917	2017.3612	662.88	. Q . . . V .
20.000	2021.8228	647.81	. Q . . . V .
20.083	2026.1711	631.38	. Q . . . V .
20.167	2030.3875	612.21	. Q . . . V .
20.250	2034.4707	592.89	. Q . . . V .
20.333	2038.4440	576.91	. Q . . . V .
20.417	2042.3297	564.20	. Q . . . V .
20.500	2046.1401	553.27	. Q . . . V .
20.583	2049.8813	543.23	. Q . . . V .
20.667	2053.5571	533.72	. Q . . . V .
20.750	2057.1702	524.61	. Q . . . V .
20.833	2060.7229	515.86	. Q . . . V .
20.917	2064.2178	507.47	. Q . . . V .
21.000	2067.6570	499.38	. Q . . . V .
21.083	2071.0427	491.61	. Q . . . V .
21.167	2074.3789	484.40	. Q . . . V .
21.250	2077.6689	477.73	. Q . . . V .
21.333	2080.9160	471.47	. Q . . . V .
21.417	2084.1221	465.52	. Q . . . V .
21.500	2087.2888	459.81	. Q . . . V .
21.583	2090.4177	454.31	. Q . . . V .
21.667	2093.5100	449.01	. Q . . . V .
21.750	2096.5671	443.88	. Q . . . V .
21.833	2099.5901	438.92	. Q . . . V .
21.917	2102.5798	434.10	. Q . . . V .
22.000	2105.5374	429.42	. Q . . . V .
22.083	2108.4636	424.88	. Q . . . V .
22.167	2111.3596	420.50	. Q . . . V .
22.250	2114.2266	416.28	. Q . . . V .
22.333	2117.0654	412.21	. Q . . . V .
22.417	2119.8770	408.25	. Q . . . V .
22.500	2122.6621	404.40	. Q . . . V .
22.583	2125.4214	400.64	. Q . . . V .
22.667	2128.1555	396.98	.Q . . . V .
22.750	2130.8650	393.41	.Q . . . V .
22.833	2133.5503	389.92	.Q . . . V .
22.917	2136.2122	386.51	.Q . . . V .
23.000	2138.8511	383.18	.Q . . . V.
23.083	2141.4675	379.92	.Q . . . V.
23.167	2144.0623	376.74	.Q . . . V.
23.250	2146.6355	373.63	.Q . . . V.
23.333	2149.1877	370.59	.Q . . . V.
23.417	2151.7195	367.61	.Q . . . V.
23.500	2154.2312	364.69	.Q . . . V.
23.583	2156.7231	361.83	.Q . . . V.
23.667	2159.1958	359.04	.Q . . . V.
23.750	2161.6497	356.29	.Q . . . V.
23.833	2164.0850	353.61	.Q . . . V.
23.917	2166.5022	350.97	.Q . . . V.
24.000	2168.9016	348.39	.Q . . . V.
24.083	2171.2766	344.84	.Q . . . V.
24.167	2173.5962	336.79	.Q . . . V.
24.250	2175.8154	322.24	.Q . . . V.
24.333	2177.8848	300.47	.Q . . . V.
24.417	2179.7864	276.11	.Q . . . V.
24.500	2181.5107	250.37	.Q . . . V.
24.583	2183.0583	224.71	.Q . . . V.
24.667	2184.4150	197.00	Q . . . V.
24.750	2185.5454	164.12	Q . . . V.
24.833	2186.4431	130.36	Q . . . V.
24.917	2187.1531	103.09	Q . . . V.
25.000	2187.7305	83.85	Q . . . V.
25.083	2188.2126	70.01	Q . . . V.
25.167	2188.6211	59.29	Q . . . V.
25.250	2188.9692	50.54	Q . . . V.
25.333	2189.2668	43.21	Q . . . V.
25.417	2189.5217	37.00	Q . . . V.
25.500	2189.7402	31.72	Q . . . V.
25.583	2189.9275	27.19	Q . . . V.
25.667	2190.0874	23.21	Q . . . V.
25.750	2190.2231	19.73	Q . . . V.
25.833	2190.3381	16.71	Q . . . V.
25.917	2190.4353	14.11	Q . . . V.
26.000	2190.5173	11.93	Q . . . V.
26.083	2190.5869	10.11	Q . . . V.
26.167	2190.6458	8.55	Q . . . V.
26.250	2190.6956	7.22	Q . . . V.
26.333	2190.7385	6.24	Q . . . V.
26.417	2190.7771	5.60	Q . . . V.
26.500	2190.8125	5.14	Q . . . V.
26.583	2190.8455	4.78	Q . . . V.
26.667	2190.8762	4.45	Q . . . V.
26.750	2190.9048	4.14	Q . . . V.

26.833	2190.9312	3.85	Q	.	.	.	V.
26.917	2190.9556	3.56	Q	.	.	.	V.
27.000	2190.9783	3.30	Q	.	.	.	V.
27.083	2190.9993	3.04	Q	.	.	.	V.
27.167	2191.0186	2.79	Q	.	.	.	V.
27.250	2191.0361	2.55	Q	.	.	.	V.
27.333	2191.0520	2.31	Q	.	.	.	V.
27.417	2191.0662	2.07	Q	.	.	.	V.
27.500	2191.0789	1.83	Q	.	.	.	V.
27.583	2191.0898	1.60	Q	.	.	.	V.
27.667	2191.0994	1.37	Q	.	.	.	V.
27.750	2191.1072	1.14	Q	.	.	.	V.
27.833	2191.1135	0.92	Q	.	.	.	V.
27.917	2191.1184	0.70	Q	.	.	.	V.
28.000	2191.1218	0.48	Q	.	.	.	V.
28.083	2191.1238	0.28	Q	.	.	.	V.
28.167	2191.1248	0.14	Q	.	.	.	V
28.250	2191.1252	0.07	Q	.	.	.	V
28.333	2191.1255	0.03	Q	.	.	.	V
28.417	2191.1257	0.02	Q	.	.	.	V
28.500	2191.1257	0.01	Q	.	.	.	V
28.583	2191.1257	0.01	Q	.	.	.	V
28.667	2191.1257	0.01	Q	.	.	.	V
28.750	2191.1257	0.01	Q	.	.	.	V
28.833	2191.1257	0.00	Q	.	.	.	V
28.917	2191.1257	0.00	Q	.	.	.	V
29.000	2191.1257	0.00	Q	.	.	.	V
29.083	2191.1257	0.00	Q	.	.	.	V
29.167	2191.1257	0.00	Q	.	.	.	V
29.250	2191.1257	0.00	Q	.	.	.	V
29.333	2191.1257	0.00	Q	.	.	.	V
29.417	2191.1257	0.00	Q	.	.	.	V
29.500	2191.1257	0.00	Q	.	.	.	V
29.583	2191.1257	0.00	Q	.	.	.	V
29.667	2191.1257	0.00	Q	.	.	.	V
29.750	2191.1257	0.00	Q	.	.	.	V
29.833	2191.1257	0.00	Q	.	.	.	V
29.917	2191.1257	0.00	Q	.	.	.	V
30.000	2191.1257	0.00	Q	.	.	.	V

****
FLOW PROCESS FROM NODE 6371.00 TO NODE 6395.00 IS CODE = 5.2

>>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
==========

*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 6961.5 Ac. ***

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
INTERVALS(Reference: the National Engineering Handbook,
Hydrology, Chapter 17, page 17-52, August,1972,
U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 35.00 CHANNEL Z = 1.00
UPSTREAM ELEVATION(FT) = 220.00
DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 959.00 MANNING'S FACTOR = 0.040
CONSTANT LOSS RATE(CFS) = 0.00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 7984.14
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 5972.88
CHANNEL NORMAL VELOCITY FOR Q = 5972.88 CFS = 12.17 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.877

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
UNIT INTERVALS IS CSTAR = 0.999

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.000	1315.27	1307.70	1307.70
14.083	1353.55	1344.69	1344.69
14.167	1410.82	1397.55	1397.55
14.250	1493.40	1474.27	1474.27
14.333	1602.73	1577.40	1577.40
14.417	1721.21	1693.76	1693.76
14.500	1846.86	1817.75	1817.75
14.583	1978.38	1947.91	1947.91
14.667	2126.87	2092.47	2092.47
14.750	2303.75	2262.77	2262.77
14.833	2490.02	2446.87	2446.87
14.917	2654.31	2616.24	2616.24
15.000	2790.50	2758.94	2758.94
15.083	2908.99	2881.53	2881.53
15.167	3019.91	2994.21	2994.21
15.250	3128.10	3103.03	3103.03
15.333	3237.18	3211.91	3211.91
15.417	3341.09	3317.01	3317.01
15.500	3416.82	3399.26	3399.26
15.583	3452.53	3444.24	3444.24
15.667	3449.00	3449.81	3449.81
15.750	3444.39	3445.46	3445.46
15.833	3456.31	3453.55	3453.55
15.917	3504.66	3493.47	3493.47
16.000	3606.17	3582.66	3582.66
16.083	3843.56	3788.60	3788.60
16.167	4426.50	4291.53	4291.53
16.250	5212.99	5030.83	5030.83
16.333	6021.55	5834.22	5834.22
16.417	6420.39	6327.88	6327.88
16.500	6711.78	6644.24	6644.24
16.583	6957.29	6900.40	6900.40
16.667	7418.16	7311.44	7311.44
16.750	7984.14	7853.04	7853.04
16.833	7928.00	7940.84	7940.84
16.917	7070.31	7268.81	7268.81
17.000	6066.87	6299.31	6299.31
17.083	5385.19	5543.21	5543.21
17.167	4968.35	5064.99	5064.99
17.250	4644.74	4719.74	4719.74
17.333	4327.62	4401.09	4401.09
17.417	4022.15	4092.92	4092.92
17.500	3731.37	3798.74	3798.74
17.583	3461.70	3524.19	3524.19
17.667	3201.66	3261.91	3261.91
17.750	2929.06	2992.22	2992.22
17.833	2655.61	2718.97	2718.97
17.917	2413.78	2469.82	2469.82
18.000	2210.02	2257.24	2257.24
18.083	2035.35	2075.83	2075.83
18.167	1882.03	1917.56	1917.56
18.250	1733.69	1768.06	1768.06

18.333	1580.72	1616.16	1616.16
18.417	1443.25	1475.10	1475.10
18.500	1334.74	1359.88	1359.88
18.583	1248.67	1268.61	1268.61
18.667	1173.16	1190.66	1190.66
18.750	1100.78	1117.55	1117.55
18.833	1032.89	1048.62	1048.62
18.917	973.73	987.44	987.44
19.000	924.48	935.89	935.89
19.083	883.49	892.99	892.99
19.167	848.34	856.49	856.49
19.250	817.32	824.51	824.51
19.333	789.96	796.30	796.30
19.417	766.23	771.73	771.73
19.500	745.45	750.26	750.26
19.583	726.87	731.18	731.18
19.667	709.67	713.66	713.66
19.750	693.58	697.31	697.31
19.833	678.09	681.68	681.68
19.917	662.88	666.40	666.40
20.000	647.81	651.30	651.30

PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 2191.124 AF
OUTFLOW VOLUME = 2191.125 AF
LOSS VOLUME = 0.000 AF

FLOW PROCESS FROM NODE 6380.00 TO NODE 6395.00 IS CODE = 1

*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 329.6 Ac. ***
>>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<

(UNIT-HYDROGRAPH ADDED TO STREAM #2)

WATERSHED AREA = 329.600 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.330 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY(DEVELOPED):
"S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.900
FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.050
MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.050
VALLEY(UNDEVELOPED)/DESERT:
"S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.000
DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.000
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.150
LOW LOSS FRACTION = 0.500
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL(INCH)= 0.58
SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)= 1.22
SPECIFIED PEAK 1-HOUR RAINFALL(INCH) = 1.62
SPECIFIED PEAK 3-HOUR RAINFALL(INCH) = 2.71
SPECIFIED PEAK 6-HOUR RAINFALL(INCH) = 3.75
SPECIFIED PEAK 24-HOUR RAINFALL(INCH) = 6.28

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.985
30-MINUTE FACTOR = 0.985
1-HOUR FACTOR = 0.985
3-HOUR FACTOR = 0.998
6-HOUR FACTOR = 0.999
24-HOUR FACTOR = 0.999

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 25.253

RUNOFF HYDROGRAPH LISTING LIMITS:
MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 14.00
MODEL TIME(HOURS) FOR END OF RESULTS = 20.00

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.602	63.859
2	7.797	246.932
3	21.404	542.405
4	39.370	716.138
5	60.064	824.885
6	75.891	630.876
7	85.613	387.515
8	91.167	221.417
9	94.489	132.407
10	96.293	71.884
11	97.026	29.243
12	97.665	25.478
13	98.270	24.118
14	98.850	23.087
15	98.984	5.349
16	99.089	4.176
17	99.176	3.468
18	99.236	2.391
19	99.292	2.234
20	99.345	2.124
21	99.396	2.026
22	99.445	1.965
23	99.491	1.826
24	99.536	1.815
25	99.577	1.639
26	99.617	1.559
27	99.656	1.556
28	99.690	1.365
29	99.721	1.257
30	99.753	1.257
31	99.784	1.254
32	99.812	1.082
33	99.830	0.737
34	99.848	0.724
35	99.866	0.724
36	99.885	0.724
37	99.900	0.614
38	99.906	0.230
39	99.911	0.198
40	99.916	0.197
41	99.921	0.199
42	99.926	0.197
43	99.930	0.197
44	99.935	0.198
45	99.940	0.198

46	99.945	0.197
47	99.950	0.199
48	99.955	0.197
49	99.960	0.197
50	99.965	0.196
51	99.970	0.197
52	99.975	0.197
53	99.980	0.197
54	99.985	0.196
55	99.990	0.197
56	99.995	0.197
57	100.000	0.197
58	100.000	0.013

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 59.4543

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 112.8638

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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 200.0 400.0 600.0 800.0
14.000	31.3450	77.30	. Q .V . . .
14.083	31.8943	79.76	. Q .V . . .
14.167	32.4621	82.45	. Q .V . . .
14.250	33.0512	85.54	. Q .V . . .
14.333	33.6634	88.89	. Q .V . . .
14.417	34.3007	92.53	. Q . V . . .
14.500	34.9632	96.20	. Q . V . . .
14.583	35.6517	99.96	. Q . V . . .
14.667	36.3666	103.81	. Q . V . . .
14.750	37.1099	107.93	. Q . V . . .
14.833	37.8831	112.27	. Q . V . . .
14.917	38.6890	117.01	. Q . V . . .
15.000	39.5300	122.11	. Q . V . . .
15.083	40.4100	127.78	. Q . V . . .
15.167	41.3325	133.95	. Q . V . . .
15.250	42.3028	140.89	. Q . V . . .
15.333	43.3260	148.56	. Q . V . . .
15.417	44.4057	156.77	. Q . V . . .
15.500	45.5378	164.38	. Q . V . . .
15.583	46.7154	170.99	. Q . V . . .
15.667	47.9404	177.87	. Q . V . . .
15.750	49.2283	187.00	. Q. V . . .
15.833	50.6208	202.19	. Q V . . .
15.917	52.1899	227.84	. .Q V . . .
16.000	54.0403	268.68	. . Q V. . .
16.083	56.4886	355.50	. . Q V . .
16.167	59.9356	500.50	. . .V Q . .
16.250	64.6034	677.76	. . . V . Q .
16.333	69.9046	769.73	. . . V . . Q .
16.417	75.3201	786.33	. . . V . . Q.
16.500	79.7728	646.54	. . . V . Q .
16.583	83.0865	481.15	. . . Q V. .
16.667	85.5544	358.33	. . Q . V .
16.750	87.4884	280.83	. . Q . .V .
16.833	89.0372	224.88	. .Q . .V .
16.917	90.3057	184.19	. Q. . . V .
17.000	91.4430	165.13	. Q . . . V .
17.083	92.4766	150.08	. Q . . . V .
17.167	93.4151	136.28	. Q . . . V .
17.250	94.2231	117.32	. Q . . . V .
17.333	94.9609	107.13	. Q . . . V .
17.417	95.6407	98.70	. Q . . . V .
17.500	96.2702	91.40	. Q . . . V .
17.583	96.8581	85.36	. Q . . . V .
17.667	97.4099	80.13	. Q . . . V .
17.750	97.9299	75.50	. Q . . . V .
17.833	98.4213	71.35	. Q . . . V .
17.917	98.8866	67.57	. Q . . . V .
18.000	99.3284	64.15	. Q . . . V .
18.083	99.7471	60.80	. Q . . . V .
18.167	100.1419	57.33	. Q . . . V .
18.250	100.5105	53.51	. Q . . . V .
18.333	100.8517	49.55	. Q . . . V .
18.417	101.1666	45.72	. Q . . . V .
18.500	101.4608	42.72	. Q . . . V .
18.583	101.7398	40.51	. Q . . . V .
18.667	102.0068	38.78	. Q . . . V .
18.750	102.2638	37.31	. Q . . . V .
18.833	102.5133	36.23	. Q . . . V .
18.917	102.7565	35.31	. Q . . . V .
19.000	102.9937	34.45	. Q . . . V .
19.083	103.2249	33.56	. Q . . . V .
19.167	103.4496	32.63	. Q . . . V .
19.250	103.6696	31.94	. Q . . . V .
19.333	103.8853	31.32	. Q . . . V .
19.417	104.0970	30.74	. Q . . . V .
19.500	104.3048	30.18	. Q . . . V .
19.583	104.5090	29.65	. Q . . . V .
19.667	104.7098	29.15	. Q . . . V .
19.750	104.9072	28.67	. Q . . . V .
19.833	105.1015	28.20	. Q . . . V .
19.917	105.2927	27.76	. Q . . . V .
20.000	105.4809	27.34	. Q . . . V .

****
FLOW PROCESS FROM NODE 6395.00 TO NODE 6395.00 IS CODE = 7
>>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 7291.1 Ac. ***

****
FLOW PROCESS FROM NODE 6395.00 TO NODE 6395.00 IS CODE = 11
>>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<

*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 7291.1 Ac. ***

STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 2025.0 4050.0 6075.0 8100.0
0.083	0.0072	1.04	Q . . . .
0.167	0.0525	6.58	Q . . . .
0.250	0.1863	19.43	Q . . . .
0.333	0.4632	40.20	Q . . . .
0.417	0.9128	65.28	Q . . . .
0.500	1.5430	91.50	Q . . . .
0.583	2.3507	117.28	Q . . . .
0.667	3.3437	144.19	Q . . . .
0.750	4.5521	175.46	Q . . . .
0.833	5.9897	208.73	VQ . . . .
0.917	7.6251	237.46	VQ . . . .
1.000	9.4075	258.80	VQ . . . .
1.083	11.2967	274.31	VQ . . . .
1.167	13.2685	286.30	VQ . . . .
1.250	15.3077	296.10	VQ . . . .
1.333	17.4043	304.43	VQ . . . .
1.417	19.5507	311.65	VQ . . . .
1.500	21.7405	317.96	VQ . . . .
1.583	23.9687	323.54	VQ . . . .
1.667	26.2317	328.58	VQ . . . .

1.750	28.5262	333.16	VQ	.	.	.	.
1.833	30.8493	337.32	VQ	.	.	.	.
1.917	33.1984	341.08	VQ	.	.	.	.
2.000	35.5707	344.47	VQ	.	.	.	.
2.083	37.9640	347.50	VQ	.	.	.	.
2.167	40.3765	350.29	VQ	.	.	.	.
2.250	42.8067	352.87	VQ	.	.	.	.
2.333	45.2526	355.15	VQ	.	.	.	.
2.417	47.7121	357.11	VQ	.	.	.	.
2.500	50.1836	358.87	VQ	.	.	.	.
2.583	52.6666	360.53	VQ	.	.	.	.
2.667	55.1608	362.16	VQ	.	.	.	.
2.750	57.6662	363.77	.Q	.	.	.	.
2.833	60.1827	365.39	.Q	.	.	.	.
2.917	62.7103	367.02	.Q	.	.	.	.
3.000	65.2492	368.64	.Q	.	.	.	.
3.083	67.7992	370.27	.Q	.	.	.	.
3.167	70.3605	371.90	.Q	.	.	.	.
3.250	72.9332	373.55	.Q	.	.	.	.
3.333	75.5172	375.21	.Q	.	.	.	.
3.417	78.1128	376.88	.Q	.	.	.	.
3.500	80.7200	378.56	.Q	.	.	.	.
3.583	83.3389	380.27	.Q	.	.	.	.
3.667	85.9696	381.98	.Q	.	.	.	.
3.750	88.6123	383.72	.Q	.	.	.	.
3.833	91.2670	385.46	.Q	.	.	.	.
3.917	93.9338	387.22	.Q	.	.	.	.
4.000	96.6128	388.99	.Q	.	.	.	.
4.083	99.3040	390.77	.Q	.	.	.	.
4.167	102.0073	392.52	.Q	.	.	.	.
4.250	104.7224	394.23	.Q	.	.	.	.
4.333	107.4490	395.91	.Q	.	.	.	.
4.417	110.1872	397.58	.Q	.	.	.	.
4.500	112.9369	399.26	.Q	.	.	.	.
4.583	115.6983	400.95	.QV	.	.	.	.
4.667	118.4714	402.66	.QV	.	.	.	.
4.750	121.2565	404.39	.QV	.	.	.	.
4.833	124.0535	406.13	. Q	.	.	.	.
4.917	126.8628	407.90	. Q	.	.	.	.
5.000	129.6843	409.69	. Q	.	.	.	.
5.083	132.5183	411.49	. Q	.	.	.	.
5.167	135.3648	413.32	. Q	.	.	.	.
5.250	138.2241	415.17	. Q	.	.	.	.
5.333	141.0963	417.04	. Q	.	.	.	.
5.417	143.9814	418.93	. Q	.	.	.	.
5.500	146.8798	420.84	. Q	.	.	.	.
5.583	149.7915	422.78	. Q	.	.	.	.
5.667	152.7167	424.74	. Q	.	.	.	.
5.750	155.6555	426.72	. Q	.	.	.	.
5.833	158.6082	428.73	. Q	.	.	.	.
5.917	161.5749	430.76	. Q	.	.	.	.
6.000	164.5557	432.82	. Q	.	.	.	.
6.083	167.5510	434.91	. Q	.	.	.	.
6.167	170.5607	437.02	. Q	.	.	.	.
6.250	173.5852	439.16	. QV	.	.	.	.
6.333	176.6246	441.32	. QV	.	.	.	.
6.417	179.6791	443.51	. QV	.	.	.	.
6.500	182.7490	445.74	. QV	.	.	.	.
6.583	185.8343	447.99	. QV	.	.	.	.
6.667	188.9353	450.27	. QV	.	.	.	.
6.750	192.0523	452.58	. QV	.	.	.	.
6.833	195.1854	454.93	. QV	.	.	.	.
6.917	198.3349	457.30	. QV	.	.	.	.
7.000	201.5009	459.71	. QV	.	.	.	.
7.083	204.6838	462.15	. QV	.	.	.	.
7.167	207.8837	464.63	. QV	.	.	.	.
7.250	211.1010	467.14	. QV	.	.	.	.
7.333	214.3357	469.69	. QV	.	.	.	.
7.417	217.5883	472.27	. QV	.	.	.	.
7.500	220.8589	474.89	. QV	.	.	.	.
7.583	224.1478	477.55	. QV	.	.	.	.
7.667	227.4553	480.25	. QV	.	.	.	.
7.750	230.7817	482.99	. Q V	.	.	.	.
7.833	234.1272	485.77	. Q V	.	.	.	.
7.917	237.4922	488.59	. Q V	.	.	.	.
8.000	240.8769	491.46	. Q V	.	.	.	.
8.083	244.2816	494.37	. Q V	.	.	.	.
8.167	247.7067	497.32	. Q V	.	.	.	.
8.250	251.1525	500.33	. Q V	.	.	.	.
8.333	254.6193	503.38	. Q V	.	.	.	.
8.417	258.1074	506.48	. Q V	.	.	.	.
8.500	261.6172	509.63	. Q V	.	.	.	.
8.583	265.1491	512.83	. Q V	.	.	.	.
8.667	268.7034	516.09	. Q V	.	.	.	.
8.750	272.2805	519.40	. Q V	.	.	.	.
8.833	275.8808	522.76	. Q V	.	.	.	.
8.917	279.5047	526.19	. Q V	.	.	.	.
9.000	283.1526	529.67	. Q V	.	.	.	.
9.083	286.8248	533.21	. Q V	.	.	.	.
9.167	290.5219	536.82	. Q V	.	.	.	.
9.250	294.2443	540.49	. Q V	.	.	.	.
9.333	297.9925	544.23	. Q V	.	.	.	.
9.417	301.7668	548.04	. Q V	.	.	.	.
9.500	305.5679	551.91	. Q V	.	.	.	.
9.583	309.3961	555.86	. Q V	.	.	.	.
9.667	313.2521	559.89	. Q V	.	.	.	.
9.750	317.1363	563.99	. Q V	.	.	.	.
9.833	321.0494	568.17	. Q V	.	.	.	.
9.917	324.9918	572.44	. Q V	.	.	.	.
10.000	328.9641	576.79	. Q V	.	.	.	.
10.083	332.9670	581.22	. Q V	.	.	.	.
10.167	337.0011	585.75	. Q V	.	.	.	.
10.250	341.0670	590.37	. Q V	.	.	.	.
10.333	345.1654	595.09	. Q V	.	.	.	.
10.417	349.2970	599.91	. Q V	.	.	.	.
10.500	353.4625	604.83	. Q V	.	.	.	.
10.583	357.6626	609.86	. Q V	.	.	.	.
10.667	361.8982	615.00	. Q V	.	.	.	.
10.750	366.1699	620.25	. Q V	.	.	.	.
10.833	370.4786	625.63	. Q V	.	.	.	.
10.917	374.8252	631.12	. Q V	.	.	.	.
11.000	379.2105	636.75	. Q V	.	.	.	.
11.083	383.6355	642.51	. Q V	.	.	.	.
11.167	388.1012	648.41	. Q V	.	.	.	.
11.250	392.6084	654.45	. Q V	.	.	.	.
11.333	397.1583	660.65	. Q V	.	.	.	.
11.417	401.7520	666.99	. Q V	.	.	.	.
11.500	406.3905	673.51	. Q V	.	.	.	.
11.583	411.0750	680.19	. Q V	.	.	.	.
11.667	415.8068	687.05	. Q V	.	.	.	.
11.750	420.5870	694.09	. Q V	.	.	.	.
11.833	425.4172	701.33	. Q V	.	.	.	.
11.917	430.2985	708.77	. Q V	.	.	.	.
12.000	435.2326	716.42	. Q V	.	.	.	.
12.083	440.2304	725.69	. Q V	.	.	.	.
12.167	445.3353	741.22	. Q V	.	.	.	.
12.250	450.6114	766.09	. Q V	.	.	.	.
12.333	456.1188	799.67	. Q V	.	.	.	.
12.417	461.8734	835.58	. Q V	.	.	.	.
12.500	467.8658	870.08	. Q V	.	.	.	.
12.583	474.0839	902.88	. Q V	.	.	.	.
12.667	480.5299	935.96	. Q V	.	.	.	.
12.750	487.2260	972.28	. Q V	.	.	.	.
12.833	494.1850	1010.44	. Q V	.	.	.	.

12.917	501.3854	1045.50	. Q V . . . .
13.000	508.7915	1075.37	. Q V . . . .
13.083	516.3760	1101.26	. Q V . . . .
13.167	524.1238	1124.99	. Q V. . . .
13.250	532.0275	1147.62	. Q V. . . .
13.333	540.0847	1169.90	. Q V. . . .
13.417	548.2957	1192.24	. Q V. . . .
13.500	556.6642	1215.11	. Q V. . . .
13.583	565.1969	1238.94	. Q V. . . .
13.667	573.9053	1264.45	. Q V. . . .
13.750	582.8046	1292.18	. Q V . . .
13.833	591.9114	1322.31	. Q V . . .
13.917	601.2409	1354.65	. Q V . . .
14.000	610.8074	1389.06	. Q V . . .
14.083	620.6521	1429.45	. Q V . . .
14.167	630.9080	1489.16	. Q V . . .
14.250	641.7773	1578.22	. Q .V . . .
14.333	653.4666	1697.28	. Q .V . . .
14.417	666.0818	1831.73	. Q.V . . .
14.500	679.6559	1970.95	. Q.V . . .
14.583	694.2061	2112.70	. Q V . . .
14.667	709.8152	2266.45	. .QV . . .
14.750	726.6564	2445.33	. . Q . . .
14.833	744.8221	2637.67	. . VQ . . .
14.917	764.2051	2814.41	. . Q . . .
15.000	784.6144	2963.43	. . VQ . . .
15.083	805.9061	3091.55	. . VQ . . .
15.167	828.0082	3209.23	. . VQ . . .
15.250	850.8918	3322.69	. . V Q . . .
15.333	874.5566	3436.12	. . VQ . . .
15.417	898.9642	3543.99	. . V Q . . .
15.500	923.9176	3623.23	. . VQ . . .
15.583	949.0990	3656.34	. . V Q . . .
15.667	974.2032	3645.14	. . V Q . . .
15.750	999.1525	3622.64	. . Q . . .
15.833	1024.0914	3621.14	. . Q . . .
15.917	1049.3269	3664.20	. . Q . . .
16.000	1075.2950	3770.58	. . Q . . .
16.083	1103.0299	4027.11	. . Q. . . .
16.167	1134.8494	4620.19	. . V. Q . . .
16.250	1172.5322	5471.55	. . V Q . . .
16.333	1216.0887	6324.40	. . .V .Q . .
16.417	1263.0579	6819.92	. . .V . Q . .
16.500	1311.4933	7032.82	. . . V . Q . .
16.583	1360.9264	7177.68	. . . V . Q . .
16.667	1412.6570	7511.28	. . . V . Q . .
16.750	1467.8464	8013.51	. . . V . Q.
16.833	1523.5411	8086.88	. . . V . Q.
16.917	1574.6166	7416.16	. . . V . Q . .
17.000	1619.0906	6457.62	. . . V .Q . .
17.083	1658.3915	5706.49	. . . Q . . .
17.167	1694.3896	5226.93	. . . Q V. . .
17.250	1727.9224	4868.96	. . . Q V . .
17.333	1759.1812	4538.78	. . Q V . .
17.417	1788.2201	4216.45	. . Q .V . .
17.500	1815.1495	3910.16	. . Q. .V . .
17.583	1840.1245	3626.38	. . Q . V . .
17.667	1863.2435	3356.88	. . Q . V . .
17.750	1884.4592	3080.53	. . Q . V . .
17.833	1903.7488	2800.84	. . Q . V . .
17.917	1921.2837	2546.06	. . Q . V . .
18.000	1937.3226	2328.86	. .Q . V . .
18.083	1952.0845	2143.41	. . Q . V . .
18.167	1965.7275	1980.98	. . Q. . V .
18.250	1978.3109	1827.11	. . Q. . V .
18.333	1989.8173	1670.72	. . Q . V .
18.417	2000.3203	1525.04	. . Q . . V .
18.500	2010.0034	1405.99	. . Q . . V .
18.583	2019.0381	1311.84	. . Q . . V .
18.667	2027.5206	1231.67	. . Q . . V .
18.750	2035.4868	1156.69	. . Q . . V .
18.833	2042.9678	1086.23	. . Q . . V .
18.917	2050.0181	1023.71	. . Q . . V .
19.000	2056.7048	970.91	. Q . . V .
19.083	2063.0879	926.82	. Q . . V .
19.167	2069.2117	889.16	. Q . . V .
19.250	2075.1089	856.29	. Q . . V .
19.333	2080.8064	827.29	. Q . . V .
19.417	2086.3298	802.02	. Q . . V .
19.500	2091.7012	779.92	. Q . . V .
19.583	2096.9370	760.26	. Q . . V .
19.667	2102.0488	742.22	. Q . . V .
19.750	2107.0447	725.39	. Q . . V .
19.833	2111.9297	709.32	. Q . . V .
19.917	2116.7068	693.63	. Q . . V .
20.000	2121.3772	678.16	. Q . . V .
20.083	2125.9346	661.72	. Q . . V .
20.167	2130.3625	642.94	. Q . . V .
20.250	2134.6560	623.41	. Q . . V .
20.333	2138.8320	606.38	. Q . . V .
20.417	2142.9133	592.60	. Q . . V .
20.500	2146.9143	580.94	. Q . . V .
20.583	2150.8425	570.38	. Q . . V .
20.667	2154.7021	560.42	. Q . . V .
20.750	2158.4961	550.89	. Q . . V .
20.833	2162.2266	541.68	. Q . . V .
20.917	2165.8965	532.88	. Q . . V .
21.000	2169.5083	524.43	. Q . . V .
21.083	2173.0640	516.30	. Q . . V .
21.167	2176.5671	508.67	. Q . . V .
21.250	2180.0217	501.61	. Q . . V .
21.333	2183.4309	495.00	. Q . . V .
21.417	2186.7969	488.74	. Q . . V .
21.500	2190.1216	482.74	. Q . . V .
21.583	2193.4065	476.97	. Q . . V .
21.667	2196.6531	471.40	. Q . . V .
21.750	2199.8625	466.02	. Q . . V .
21.833	2203.0361	460.81	. Q . . V .
21.917	2206.1750	455.75	. Q . . V .
22.000	2209.2800	450.85	. Q . . V .
22.083	2212.3523	446.09	. Q . . V .
22.167	2215.3928	441.49	. Q . . V .
22.250	2218.4028	437.05	. Q . . V .
22.333	2221.3833	432.76	. Q . . V .
22.417	2224.3352	428.61	. Q . . V .
22.500	2227.2593	424.56	. Q . . V .
22.583	2230.1562	420.62	. Q . . V .
22.667	2233.0266	416.78	. Q . . V .
22.750	2235.8711	413.03	. Q . . V .
22.833	2238.6904	409.37	. Q . . V .
22.917	2241.4851	405.79	. Q . . V .
23.000	2244.2559	402.30	.Q . . . V.
23.083	2247.0029	398.88	.Q . . . V.
23.167	2249.7271	395.55	.Q . . . V.
23.250	2252.4287	392.28	.Q . . . V.
23.333	2255.1084	389.08	.Q . . . V.
23.417	2257.7666	385.96	.Q . . . V.
23.500	2260.4036	382.90	.Q . . . V.
23.583	2263.0200	379.90	.Q . . . V.
23.667	2265.6162	376.96	.Q . . . V.
23.750	2268.1926	374.09	.Q . . . V.
23.833	2270.7495	371.27	.Q . . . V.
23.917	2273.2874	368.50	.Q . . . V.
24.000	2275.8066	365.79	.Q . . . V.

24.083	2278.3003	362.09	.Q	.	.	.	V.
24.167	2280.7380	353.97	.Q	.	.	.	V.
24.250	2283.0703	338.64	.Q	.	.	.	V.
24.333	2285.2437	315.58	.Q	.	.	.	V.
24.417	2287.2302	288.46	.Q	.	.	.	V.
24.500	2289.0242	260.48	.Q	.	.	.	V.
24.583	2290.6304	233.24	.Q	.	.	.	V.
24.667	2292.0432	205.15	.Q	.	.	.	V.
24.750	2293.2346	172.99	Q	.	.	.	V.
24.833	2294.1929	139.15	Q	.	.	.	V.
24.917	2294.9517	110.19	Q	.	.	.	V.
25.000	2295.5640	88.91	Q	.	.	.	V.
25.083	2296.0713	73.66	Q	.	.	.	V.
25.167	2296.4988	62.09	Q	.	.	.	V.
25.250	2296.8625	52.83	Q	.	.	.	V.
25.333	2297.1733	45.14	Q	.	.	.	V.
25.417	2297.4395	38.65	Q	.	.	.	V.
25.500	2297.6677	33.13	Q	.	.	.	V.
25.583	2297.8633	28.41	Q	.	.	.	V.
25.667	2298.0305	24.29	Q	.	.	.	V.
25.750	2298.1729	20.68	Q	.	.	.	V.
25.833	2298.2937	17.53	Q	.	.	.	V.
25.917	2298.3958	14.83	Q	.	.	.	V.
26.000	2298.4822	12.54	Q	.	.	.	V.
26.083	2298.5554	10.63	Q	.	.	.	V.
26.167	2298.6174	9.00	Q	.	.	.	V.
26.250	2298.6699	7.61	Q	.	.	.	V.
26.333	2298.7148	6.53	Q	.	.	.	V.
26.417	2298.7549	5.80	Q	.	.	.	V.
26.500	2298.7913	5.29	Q	.	.	.	V.
26.583	2298.8250	4.90	Q	.	.	.	V.
26.667	2298.8564	4.56	Q	.	.	.	V.
26.750	2298.8857	4.25	Q	.	.	.	V.
26.833	2298.9128	3.94	Q	.	.	.	V.
26.917	2298.9380	3.65	Q	.	.	.	V.
27.000	2298.9612	3.38	Q	.	.	.	V.
27.083	2298.9827	3.12	Q	.	.	.	V.
27.167	2299.0024	2.87	Q	.	.	.	V.
27.250	2299.0205	2.62	Q	.	.	.	V.
27.333	2299.0369	2.38	Q	.	.	.	V.
27.417	2299.0515	2.14	Q	.	.	.	V.
27.500	2299.0647	1.90	Q	.	.	.	V.
27.583	2299.0762	1.67	Q	.	.	.	V.
27.667	2299.0862	1.44	Q	.	.	.	V.
27.750	2299.0945	1.21	Q	.	.	.	V.
27.833	2299.1013	0.98	Q	.	.	.	V.
27.917	2299.1064	0.76	Q	.	.	.	V.
28.000	2299.1101	0.54	Q	.	.	.	V.
28.083	2299.1123	0.34	Q	.	.	.	V.
28.167	2299.1130	0.10	Q	.	.	.	V.
28.250	2299.1135	0.06	Q	.	.	.	V.
28.333	2299.1138	0.04	Q	.	.	.	V.
28.417	2299.1140	0.03	Q	.	.	.	V.
28.500	2299.1143	0.02	Q	.	.	.	V.
28.583	2299.1143	0.01	Q	.	.	.	V.
28.667	2299.1143	0.01	Q	.	.	.	V.
28.750	2299.1143	0.01	Q	.	.	.	V.
28.833	2299.1143	0.00	Q	.	.	.	V.
28.917	2299.1143	0.00	Q	.	.	.	V.
29.000	2299.1143	0.00	Q	.	.	.	V.
29.083	2299.1143	0.00	Q	.	.	.	V.
29.167	2299.1143	0.00	Q	.	.	.	V.
29.250	2299.1143	0.00	Q	.	.	.	V.
29.333	2299.1143	0.00	Q	.	.	.	V.
29.417	2299.1143	0.00	Q	.	.	.	V.
29.500	2299.1143	0.00	Q	.	.	.	V.
29.583	2299.1143	0.00	Q	.	.	.	V.
29.667	2299.1143	0.00	Q	.	.	.	V.
29.750	2299.1143	0.00	Q	.	.	.	V.
29.833	2299.1143	0.00	Q	.	.	.	V.
29.917	2299.1143	0.00	Q	.	.	.	V.
30.000	2299.1143	0.00	Q	.	.	.	V.

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

HYDROLOGY ANALYSIS FOR CANADA GOBERNADORA PROPOSED CONDITION 100-YEAR HIGH CONFIDENCE STORM EVENT (BASIN-SINGLE DAY)

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**************************************************************************

             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
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                          Analysis prepared by:

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                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: CP63CH-B.FLD
  TIME/DATE OF STUDY: 11:25 04/02/2004


**************************************************************************
  FLOW PROCESS FROM NODE    100.00 TO NODE    780.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    4741.300 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.480 HOURS
          CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
          THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
          MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  1.000
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.190
         LOW LOSS FRACTION = 0.550
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.58
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.22
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.62
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.71
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  3.75
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  6.28

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.727
          30-MINUTE FACTOR = 0.727
           1-HOUR FACTOR = 0.727
           3-HOUR FACTOR = 0.955
           6-HOUR FACTOR = 0.976
          24-HOUR FACTOR = 0.985

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  17.361


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


==========================================================================
                      UNIT HYDROGRAPH DETERMINATION

--------------------------------------------------------------------------
     INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
      NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------
         1                1.137               652.130
         2                4.082              1688.625
         3                8.525              2547.514
         4               14.577              3470.279
         5               24.203              5519.575
         6               43.203             10894.611
         7               57.937              8448.228
         8               65.484              4327.674
         9               70.911              3111.621
        10               75.443              2599.076
        11               78.982              2029.171
        12               82.133              1806.516
        13               84.749              1499.854
        14               87.075              1334.078
        15               88.974              1088.566
        16               90.645               958.165
        17               92.163               870.854
        18               93.467               747.418
        19               94.550               621.273
        20               95.489               538.119
        21               96.255               439.106
        22               96.815               321.374
        23               97.375               321.055
        24               97.900               301.316
        25               98.079               102.631
        26               98.169                51.477
        27               98.259                51.411
        28               98.349                51.608
        29               98.439                51.604
        30               98.528                51.219
        31               98.618                51.477
        32               98.708                51.477
        33               98.798                51.608
        34               98.887                51.346
        35               98.977                51.608
        36               99.067                51.604
        37               99.157                51.604
        38               99.247                51.604
        39               99.337                51.604
        40               99.427                51.604
        41               99.517                51.604
        42               99.607                51.604
        43               99.697                51.604
        44               99.787                51.604
        45               99.877                51.604
        46               99.967                51.604
        47              100.000                18.785


--------------------------------------------------------------------------
    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =     993.1261
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =    1450.5415
--------------------------------------------------------------------------
```
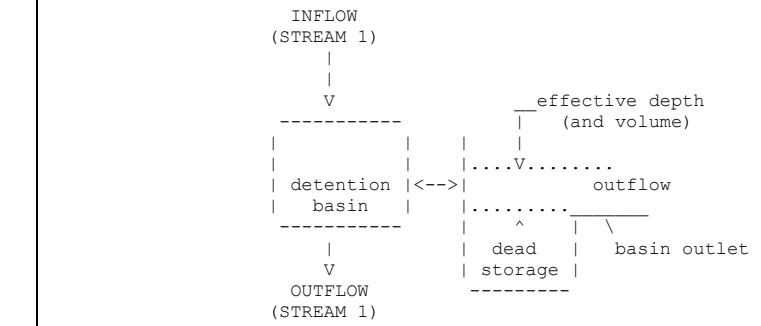

2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 1875.0 3750.0 5625.0 7500.0
14.000	382.9067	883.53	. Q V . . .
14.083	389.2522	921.36	. Q V . . .
14.167	395.9843	977.51	. Q V . . .
14.250	403.2013	1047.91	. Q .V . . .
14.333	411.0180	1134.98	. Q .V . . .
14.417	419.6594	1254.73	. Q .V . . .
14.500	429.7179	1460.50	. Q .V . . .
14.583	440.9299	1627.98	. Q . V . . .
14.667	452.8639	1732.81	. Q. V . . .
14.750	465.3948	1819.49	. Q. V . . .
14.833	478.4874	1901.04	. Q V . . .
14.917	492.0902	1975.13	. Q V . . .
15.000	506.2045	2049.41	. Q V . . .
15.083	520.8114	2120.91	. .Q V . . .
15.167	535.9250	2194.50	. .Q V . . .
15.250	551.5391	2267.16	. . Q V . . .
15.333	567.6818	2343.93	. . Q V . . .
15.417	584.2386	2404.04	. . Q V . . .
15.500	601.0416	2439.80	. . Q V . . .
15.583	617.9546	2455.76	. . Q V . . .
15.667	634.8795	2457.49	. . Q V . . .
15.750	651.4971	2412.89	. . Q V . . .
15.833	666.8879	2234.74	. .Q V . . .
15.917	681.8751	2176.14	. .Q V . . .
16.000	697.9160	2329.15	. . Q V. . .
16.083	717.0890	2783.92	. . Q V. . .
16.167	740.6621	3422.82	. . Q V . .
16.250	768.4648	4036.94	. . .Q . . .
16.333	801.1960	4752.57	. . . V Q . .
16.417	841.1049	5794.77	. . . V Q .
16.500	892.1329	7409.28	. . . V . Q.
16.583	935.3282	6271.96	. . . V . Q .
16.667	966.8684	4579.64	. . . Q V . .
16.750	993.9514	3932.45	. . . Q V . .
16.833	1019.8909	3766.42	. . . Q V . .
16.917	1044.5428	3579.45	. . Q. V . .
17.000	1068.0594	3414.60	. . Q . V. .
17.083	1090.1458	3206.93	. . Q . V .
17.167	1111.0190	3030.80	. . Q . V .
17.250	1130.4258	2817.85	. . Q . .V .
17.333	1148.5668	2634.07	. . Q . .V .
17.417	1165.3521	2437.22	. . Q . . V .
17.500	1180.1464	2148.13	. .Q . . V .
17.583	1193.1985	1895.18	. Q . . V .
17.667	1205.0565	1721.79	. Q. . . V .
17.750	1215.8529	1567.64	. Q . . . V .
17.833	1225.6625	1424.34	. Q . . . V .
17.917	1234.8037	1327.30	. Q . . . V .
18.000	1243.2512	1226.59	. Q . . . V .
18.083	1250.7114	1083.22	. Q . . . V .
18.167	1257.5763	996.78	. Q . . . V .
18.250	1264.0485	939.76	. Q . . . V .
18.333	1270.1714	889.06	. Q . . . V .
18.417	1275.9067	832.77	. Q . . . V .
18.500	1281.1781	765.39	. Q . . . V .
18.583	1286.0669	709.86	. Q . . . V .
18.667	1290.6768	669.36	. Q . . . V .
18.750	1295.0553	635.77	. Q . . . V .
18.833	1299.2356	606.98	. Q . . . V .
18.917	1303.2393	581.33	. Q . . . V .
19.000	1307.0803	557.72	. Q . . . V .
19.083	1310.7930	539.07	. Q . . . V .
19.167	1314.3920	522.58	. Q . . . V .
19.250	1317.8940	508.50	. Q . . . V .
19.333	1321.3097	495.96	. Q . . . V .
19.417	1324.6434	484.05	. Q . . . V .
19.500	1327.8998	472.81	. Q . . . V .
19.583	1331.0814	461.98	. Q . . . V .
19.667	1334.1896	451.30	. Q . . . V .
19.750	1337.2205	440.09	. Q . . . V .
19.833	1340.1660	427.70	. Q . . . V .
19.917	1342.9597	405.64	. Q . . . V .
20.000	1345.6436	389.69	. Q . . . V .

****
FLOW PROCESS FROM NODE 780.00 TO NODE 780.00 IS CODE = 3.1
>>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #1<<<<<



ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 1
THROUGH A FLOW-THROUGH DETENTION BASIN
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	4.00	600.00	0.400
3	5.00	838.50	1.200
4	6.00	1251.00	3.000
5	7.00	1594.50	6.100
6	9.00	2548.60	17.100
7	11.00	3719.90	32.300
8	13.00	5062.00	48.600

9	15.00	6551.90	78.000
10	17.00	8174.80	112.300
11	19.00	9919.80	147.600
12	21.00	11778.40	184.000
13	23.00	13743.90	221.500
14	25.00	15810.50	260.100
15	27.00	17973.40	300.000
16	29.00	20228.40	341.000
17	31.00	22571.80	383.100

MODIFIED-PULS BASIN ROUTING MODEL RESULTS(5-MINUTE COMPUTATION INTERVALS):
(Note: Computed EFFECTIVE DEPTH and VOLUME are estimated at the clock time;
MEAN OUTFLOW is the average value during the unit interval.)

CLOCK TIME (HRS)	DEAD-STORAGE FILLED(AF)	INFLOW (CFS)	LOSS (CFS)	EFFECTIVE DEPTH(FT)	MEAN OUTFLOW (CFS)	EFFECTIVE VOLUME(AF)
14.083	0.000	921.36	0.00	5.19	898.3	1.540
14.167	0.000	977.51	0.00	5.32	943.4	1.775
14.250	0.000	1047.91	0.00	5.49	1004.5	2.074
14.333	0.000	1134.98	0.00	5.69	1081.2	2.444
14.417	0.000	1254.73	0.00	5.97	1181.5	2.949
14.500	0.000	1460.50	0.00	6.33	1302.6	4.037
14.583	0.000	1627.98	0.00	6.76	1438.3	5.343
14.667	0.000	1732.81	0.00	7.07	1568.8	6.473
14.750	0.000	1819.49	0.00	7.25	1671.2	7.495
14.833	0.000	1901.04	0.00	7.43	1758.1	8.479
14.917	0.000	1975.13	0.00	7.60	1840.9	9.403
15.000	0.000	2049.41	0.00	7.76	1919.7	10.296
15.083	0.000	2120.91	0.00	7.92	1995.8	11.158
15.167	0.000	2194.50	0.00	8.08	2070.3	12.013
15.250	0.000	2267.16	0.00	8.23	2144.1	12.860
15.333	0.000	2343.93	0.00	8.39	2218.4	13.725
15.417	0.000	2404.04	0.00	8.53	2290.0	14.511
15.500	0.000	2439.80	0.00	8.64	2350.7	15.125
15.583	0.000	2455.76	0.00	8.72	2395.3	15.541
15.667	0.000	2457.49	0.00	8.76	2423.5	15.775
15.750	0.000	2412.89	0.00	8.74	2428.9	15.665
15.833	0.000	2234.74	0.00	8.56	2380.6	14.660
15.917	0.000	2176.14	0.00	8.40	2300.0	13.807
16.000	0.000	2329.15	0.00	8.47	2278.2	14.158
16.083	0.000	2783.92	0.00	8.94	2406.2	16.759
16.167	0.000	3422.82	0.00	9.60	2709.9	21.669
16.250	0.000	4036.94	0.00	10.41	3139.0	27.854
16.333	0.000	4752.57	0.00	11.37	3671.9	35.296
16.417	0.000	5794.77	0.00	12.57	4370.4	45.106
16.500	0.000	7409.28	0.00	13.79	5212.9	60.232
16.583	0.000	6271.96	0.00	14.04	5743.7	63.871
16.667	0.000	4579.64	0.00	13.54	5649.2	56.504
16.750	0.000	3932.45	0.00	12.88	5222.1	47.623
16.833	0.000	3766.42	0.00	12.08	4713.1	41.103
16.917	0.000	3579.45	0.00	11.51	4253.6	36.460
17.000	0.000	3414.60	0.00	11.08	3919.3	32.984
17.083	0.000	3206.93	0.00	10.68	3655.4	29.895
17.167	0.000	3030.80	0.00	10.32	3428.9	27.153
17.250	0.000	2817.85	0.00	9.96	3217.3	24.402
17.333	0.000	2634.07	0.00	9.62	3011.2	21.805
17.417	0.000	2437.22	0.00	9.28	2811.8	19.225
17.500	0.000	2148.13	0.00	8.83	2590.5	16.179
17.583	0.000	1895.18	0.00	8.28	2336.8	13.137
17.667	0.000	1721.79	0.00	7.81	2093.8	10.575
17.750	0.000	1567.64	0.00	7.41	1887.2	8.374
17.833	0.000	1424.34	0.00	7.06	1707.3	6.426
17.917	0.000	1327.30	0.00	6.62	1544.0	4.933
18.000	0.000	1226.59	0.00	6.24	1399.3	3.744
18.083	0.000	1083.22	0.00	5.78	1247.7	2.611
18.167	0.000	996.78	0.00	5.43	1089.1	1.976
18.250	0.000	939.76	0.00	5.27	982.5	1.681
18.333	0.000	889.06	0.00	5.14	922.4	1.451
18.417	0.000	832.77	0.00	5.00	868.2	1.208
18.500	0.000	765.39	0.00	4.69	802.5	0.952
18.583	0.000	709.86	0.00	4.46	736.9	0.766
18.667	0.000	669.36	0.00	4.29	689.0	0.631
18.750	0.000	635.77	0.00	4.15	652.1	0.519
18.833	0.000	606.98	0.00	4.03	621.0	0.422
18.917	0.000	581.33	0.00	3.79	587.6	0.379
19.000	0.000	557.72	0.00	3.67	559.5	0.367
19.083	0.000	539.07	0.00	3.54	540.9	0.354
19.167	0.000	522.58	0.00	3.44	524.0	0.344
19.250	0.000	508.50	0.00	3.35	509.8	0.335
19.333	0.000	495.96	0.00	3.27	497.1	0.327
19.417	0.000	484.05	0.00	3.19	485.2	0.319
19.500	0.000	472.81	0.00	3.12	473.9	0.312
19.583	0.000	461.98	0.00	3.05	463.0	0.305
19.667	0.000	451.30	0.00	2.98	452.3	0.298
19.750	0.000	440.09	0.00	2.90	441.2	0.290
19.833	0.000	427.70	0.00	2.82	428.9	0.282
19.917	0.000	405.64	0.00	2.63	408.4	0.263

PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 1450.542 AF
BASIN STORAGE = 0.000 AF (WITH 0.000 AF INITIALLY FILLED)
OUTFLOW VOLUME = 1450.542 AF
LOSS VOLUME = 0.000 AF

FLOW PROCESS FROM NODE 780.00 TO NODE 780.00 IS CODE = 11

>>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<

STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 1450.0 2900.0 4350.0 5800.0
14.000	381.5252	867.19	. Q V . . .
14.083	387.7118	898.29	. Q V . . .
14.167	394.2091	943.41	. Q V . . .
14.250	401.1274	1004.54	. Q .V . . .
14.333	408.5737	1081.20	. Q .V . . .
14.417	416.7105	1181.46	. Q .V . . .
14.500	425.6813	1302.57	. Q .V . . .
14.583	435.5866	1438.25	. Q. V . . .
14.667	446.3907	1568.75	. Q V . . .
14.750	457.9001	1671.16	. .QV . . .
14.833	470.0085	1758.14	. . Q . . .
14.917	482.6870	1840.91	. . QV . . .
15.000	495.9083	1919.73	. . Q . . .
15.083	509.6536	1995.82	. . QV . . .
15.167	523.9117	2070.28	. . Q . . .
15.250	538.6785	2144.13	. . Q . . .
15.333	553.9565	2218.38	. . Q . . .
15.417	569.7275	2289.95	. . Q . . .
15.500	585.9166	2350.65	. . Q . . .
15.583	602.4134	2395.33	. . Q . . .
15.667	619.1044	2423.53	. . QV . . .
15.750	635.8323	2428.89	. . QV . . .

15.833	652.2273	2380.56	. . QV . . .
15.917	668.0676	2300.01	. . Q V . . .
16.000	683.7578	2278.22	. . Q V . . .
16.083	700.3297	2406.24	. . Q V. . .
16.167	718.9927	2709.87	. . QV. . .
16.250	740.6111	3138.98	. . VQ . .
16.333	765.8998	3671.92	. . .V Q . .
16.417	795.9992	4370.43	. . .V Q .
16.500	831.9006	5212.88	. . . V . Q .
16.583	871.4576	5743.68	. . . V . Q.
16.667	910.3640	5649.22	. . . V . Q .
16.750	946.3286	5222.05	. . . V . Q .
16.833	978.7880	4713.12	. . . V . Q .
16.917	1008.0826	4253.57	. . . V Q. .
17.000	1035.0752	3919.33	. . . QV . .
17.083	1060.2502	3655.41	. . . Q V. .
17.167	1083.8656	3428.95	. . . Q V. .
17.250	1106.0233	3217.30	. . . Q V .
17.333	1126.7618	3011.23	. . Q .V .
17.417	1146.1266	2811.76	. . Q. .V .
17.500	1163.9677	2590.52	. . Q . . V .
17.583	1180.0612	2336.78	. . Q . . V .
17.667	1194.4811	2093.78	. . Q . . V .
17.750	1207.4785	1887.22	. . Q . . V .
17.833	1219.2366	1707.27	. .Q . . V .
17.917	1229.8702	1544.00	. Q . . V .
18.000	1239.5074	1399.33	. Q. . V .
18.083	1248.1002	1247.66	. Q . . V .
18.167	1255.6007	1089.08	. Q . . V .
18.250	1262.3673	982.51	. Q . . V .
18.333	1268.7202	922.44	. Q . . V .
18.417	1274.6993	868.16	. Q . . V .
18.500	1280.2258	802.45	. Q . . V .
18.583	1285.3009	736.90	. Q . . V .
18.667	1290.0460	688.99	. Q . . V .
18.750	1294.5370	652.09	. Q . . V .
18.833	1298.8136	620.97	. Q . . V .
18.917	1302.8604	587.59	. Q . . V .
19.000	1306.7135	559.48	. Q . . V .
19.083	1310.4387	540.91	. Q . . V .
19.167	1314.0476	524.02	. Q . . V .
19.250	1317.5587	509.82	. Q . . V .
19.333	1320.9823	497.10	. Q . . V .
19.417	1324.3240	485.21	. Q . . V .
19.500	1327.5874	473.86	. Q . . V .
19.583	1330.7764	463.03	. Q . . V .
19.667	1333.8915	452.32	. Q . . V .
19.750	1336.9302	441.22	. Q . . V .
19.833	1339.8843	428.94	. Q . . V .
19.917	1342.6968	408.38	. Q . . V .
20.000	1345.3857	390.43	. Q . . V .
20.083	1348.0203	382.53	. Q . . V .
20.167	1350.6068	375.57	. Q . . V .
20.250	1353.1462	368.72	. Q . . V .
20.333	1355.6353	361.41	. Q . . V .
20.417	1358.0775	354.61	. Q . . V .
20.500	1360.4744	348.03	. Q . . V .
20.583	1362.8284	341.80	. Q . . V .
20.667	1365.1409	335.77	. Q . . V .
20.750	1367.4136	330.00	. Q . . V .
20.833	1369.6478	324.42	. Q . . V .
20.917	1371.8481	319.48	. Q . . V .
21.000	1374.0183	315.10	. Q . . V .
21.083	1376.1594	310.90	. Q . . V .
21.167	1378.2728	306.86	. Q . . V .
21.250	1380.3595	302.98	. Q . . V .

21.333	1382.4204	299.25	. Q . . . V .
21.417	1384.4565	295.65	. Q . . . V .
21.500	1386.4688	292.18	. Q . . . V .
21.583	1388.4578	288.81	.Q . . . V .
21.667	1390.4243	285.53	.Q . . . V .
21.750	1392.3689	282.35	.Q . . . V .
21.833	1394.2921	279.26	.Q . . . V .
21.917	1396.1952	276.32	.Q . . . V .
22.000	1398.0790	273.53	.Q . . . V .
22.083	1399.9441	270.81	.Q . . . V .
22.167	1401.7910	268.17	.Q . . . V .
22.250	1403.6201	265.59	.Q . . . V .
22.333	1405.4320	263.08	.Q . . . V .
22.417	1407.2269	260.63	.Q . . . V .
22.500	1409.0054	258.24	.Q . . . V .
22.583	1410.7678	255.91	.Q . . . V .
22.667	1412.5145	253.63	.Q . . . V .
22.750	1414.2460	251.40	.Q . . . V .
22.833	1415.9624	249.23	.Q . . . V.
22.917	1417.6642	247.11	.Q . . . V.
23.000	1419.3517	245.03	.Q . . . V.
23.083	1421.0251	242.99	.Q . . . V.
23.167	1422.6849	241.01	.Q . . . V.
23.250	1424.3314	239.06	.Q . . . V.
23.333	1425.9647	237.16	.Q . . . V.
23.417	1427.5852	235.29	.Q . . . V.
23.500	1429.1931	233.47	.Q . . . V.
23.583	1430.7887	231.68	.Q . . . V.
23.667	1432.3722	229.92	.Q . . . V.
23.750	1433.9438	228.20	.Q . . . V.
23.833	1435.5039	226.52	.Q . . . V.
23.917	1437.0526	224.87	.Q . . . V.
24.000	1438.5901	223.25	.Q . . . V.
24.083	1440.1029	219.66	.Q . . . V.
24.167	1441.5649	212.29	.Q . . . V.
24.250	1442.9545	201.77	.Q . . . V.
24.333	1444.2496	188.05	.Q . . . V.
24.417	1445.4036	167.55	.Q . . . V.
24.500	1446.2927	129.11	Q . . . V.
24.583	1446.9414	94.19	Q . . . V.
24.667	1447.4745	77.41	Q . . . V.
24.750	1447.9220	64.98	Q . . . V.
24.833	1448.3013	55.07	Q . . . V.
24.917	1448.6243	46.90	Q . . . V.
25.000	1448.9004	40.09	Q . . . V.
25.083	1449.1350	34.07	Q . . . V.
25.167	1449.3350	29.03	Q . . . V.
25.250	1449.5048	24.65	Q . . . V.
25.333	1449.6497	21.03	Q . . . V.
25.417	1449.7710	17.61	Q . . . V.
25.500	1449.8726	14.74	Q . . . V.
25.583	1449.9573	12.30	Q . . . V.
25.667	1450.0278	10.24	Q . . . V.
25.750	1450.0864	8.51	Q . . . V.
25.833	1450.1364	7.24	Q . . . V.
25.917	1450.1780	6.04	Q . . . V.
26.000	1450.2115	4.87	Q . . . V.
26.083	1450.2416	4.36	Q . . . V.
26.167	1450.2704	4.17	Q . . . V.
26.250	1450.2975	3.93	Q . . . V.
26.333	1450.3232	3.73	Q . . . V.
26.417	1450.3474	3.50	Q . . . V.
26.500	1450.3701	3.30	Q . . . V.
26.583	1450.3914	3.08	Q . . . V.
26.667	1450.4111	2.88	Q . . . V.
26.750	1450.4294	2.67	Q . . . V.

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  26.833   1450.4464      2.46  Q         .         .         .        V.
  26.917   1450.4619      2.25  Q         .         .         .        V.
  27.000   1450.4761      2.05  Q         .         .         .        V.
  27.083   1450.4888      1.85  Q         .         .         .        V.
  27.167   1450.5001      1.65  Q         .         .         .        V.
  27.250   1450.5101      1.45  Q         .         .         .        V.
  27.333   1450.5187      1.25  Q         .         .         .        V.
  27.417   1450.5259      1.05  Q         .         .         .        V.
  27.500   1450.5317      0.86  Q         .         .         .        V.
  27.583   1450.5363      0.66  Q         .         .         .        V.
  27.667   1450.5394      0.47  Q         .         .         .        V.
  27.750   1450.5414      0.28  Q         .         .         .        V.
  27.833   1450.5420      0.09  Q         .         .         .        V.
  27.917   1450.5420      0.00  Q         .         .         .        V.


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  FLOW PROCESS FROM NODE    780.00 TO NODE   6311.00 IS CODE = 5.2
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  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
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         THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
         TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
         INTERVALS(Reference: the National Engineering Handbook,
         Hydrology, Chapter 17, page 17-52, August,1972,
         U.S. Department of Commerce).


         ASSUMED REGULAR CHANNEL INFORMATION:
           BASEWIDTH(FT) =   20.00     CHANNEL Z =  1.00
           UPSTREAM ELEVATION(FT) =     408.00
           DOWNSTREAM ELEVATION(FT) =     382.00
           CHANNEL LENGTH(FT) =    2533.00     MANNING'S FACTOR = 0.040
           CONSTANT LOSS RATE(CFS) =    0.00


         CHANNEL ROUTING COEFFICIENT ESTIMATED:
           MAXIMUM INFLOW(CFS) =  5743.68
           AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  4229.15
           CHANNEL NORMAL VELOCITY FOR Q =  4229.15 CFS =  13.09 FPS
           ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.885

         MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
         UNIT INTERVALS IS CSTAR = 0.961


         CONVEX METHOD CHANNEL ROUTING RESULTS:
                                          OUTFLOW LESS
          MODEL        INFLOW     ROUTED      LOSS
           TIME      (STREAM 1)    FLOW     (STREAM 1)
          (HRS)        (CFS)       (CFS)      (CFS)
          14.000       867.19      852.37      852.37
          14.083       898.29      879.45      879.45
          14.167       943.41      916.17      916.17
          14.250      1004.54      967.57      967.57
          14.333      1081.20     1034.73     1034.73
          14.417      1181.46     1120.76     1120.76
          14.500      1302.57     1229.07     1229.07
          14.583      1438.25     1355.70     1355.70
          14.667      1568.75     1488.89     1488.89
          14.750      1671.16     1607.91     1607.91
          14.833      1758.14     1704.59     1704.59
          14.917      1840.91     1790.21     1790.21
          15.000      1919.73     1871.46     1871.46
          15.083      1995.82     1949.25     1949.25
          15.167      2070.28     2024.74     2024.74
          15.250      2144.13     2098.98     2098.98
          15.333      2218.38     2173.01     2173.01
          15.417      2289.95     2246.15     2246.15
          15.500      2350.65     2313.30     2313.30
          15.583      2395.33     2367.64     2367.64
          15.667      2423.53     2405.89     2405.89
          15.750      2428.89     2425.05     2425.05
          15.833      2380.56     2408.80     2408.80
          15.917      2300.01     2348.42     2348.42
          16.000      2278.22     2292.90     2292.90
          16.083      2406.24     2331.61     2331.61
          16.167      2709.87     2528.62     2528.62
          16.250      3138.98     2879.88     2879.88
          16.333      3671.92     3348.81     3348.81
          16.417      4370.43     3947.57     3947.57
          16.500      5212.88     4701.60     4701.60
          16.583      5743.68     5412.03     5412.03
          16.667      5649.22     5691.82     5691.82
          16.750      5222.05     5474.62     5474.62
          16.833      4713.12     5021.88     5021.88
          16.917      4253.57     4535.50     4535.50
          17.000      3919.33     4126.61     4126.61
          17.083      3655.41     3818.49     3818.49
          17.167      3428.95     3568.31     3568.31
          17.250      3217.30     3347.04     3347.04
          17.333      3011.23     3137.31     3137.31
          17.417      2811.76     2933.82     2933.82
          17.500      2590.52     2725.22     2725.22
          17.583      2336.78     2491.06     2491.06
          17.667      2093.78     2242.51     2242.51
          17.750      1887.22     2014.33     2014.33
          17.833      1707.27     1817.91     1817.91
          17.917      1544.00     1644.20     1644.20
          18.000      1399.33     1488.20     1488.20
          18.083      1247.66     1340.20     1340.20
          18.167      1089.08     1185.82     1185.82
          18.250       982.51     1048.86     1048.86
          18.333       922.44      960.30      960.30
          18.417       868.16      901.51      901.51
          18.500       802.45      842.35      842.35
          18.583       736.90      776.95      776.95
          18.667       688.99      718.69      718.69
          18.750       652.09      674.92      674.92
          18.833       620.97      640.14      640.14
          18.917       587.59      607.94      607.94
          19.000       559.48      576.78      576.78
          19.083       540.91      552.49      552.49
          19.167       524.02      534.39      534.39
          19.250       509.82      518.56      518.56
          19.333       497.10      504.91      504.91
          19.417       485.21      492.50      492.50
          19.500       473.86      480.81      480.81
          19.583       463.03      469.66      469.66
          19.667       452.32      458.87      458.87
          19.750       441.22      447.99      447.99
          19.833       428.94      436.42      436.42
          19.917       408.38      420.75      420.75
          20.000       390.43      401.46      401.46
============================================================================
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   1450.542 AF
    OUTFLOW VOLUME =   1450.542 AF
    LOSS    VOLUME =      0.000 AF
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  FLOW PROCESS FROM NODE   6300.00 TO NODE   6311.00 IS CODE =   1
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  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
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      (UNIT-HYDROGRAPH ADDED TO STREAM #2)

         WATERSHED AREA =     299.300 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.250 HOURS
          CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
          THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
          MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.250
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.750
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.260
         LOW LOSS FRACTION = 0.500
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.58
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.22
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.62
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.71
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  3.75
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  6.28

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.727
          30-MINUTE FACTOR = 0.727
           1-HOUR FACTOR = 0.727
           3-HOUR FACTOR = 0.955
           6-HOUR FACTOR = 0.976
          24-HOUR FACTOR = 0.985

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  33.333


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


============================================================================
                     UNIT HYDROGRAPH DETERMINATION

----------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
----------------------------------------------------------------------------
        1                3.852               139.411
        2               18.445               528.231
        3               39.624               766.604
        4               55.845               587.160
        5               64.124               299.680
        6               70.038               214.036
        7               74.639               166.538
        8               78.230               130.017
        9               81.158               105.957
       10               83.587                87.936
       11               85.638                74.235
       12               87.267                58.971
       13               88.619                48.932
       14               89.699                39.084
       15               90.702                36.306
       16               91.629                33.565
       17               92.506                31.749
       18               93.325                29.632
       19               94.080                27.335
       20               94.768                24.914
       21               95.424                23.727
       22               95.971                19.796
       23               96.509                19.477
       24               97.020                18.507
       25               97.406                13.985
       26               97.766                13.021
       27               98.126                13.018
       28               98.458                12.019
       29               98.594                 4.931
       30               98.692                 3.557
       31               98.791                 3.557
       32               98.889                 3.550
       33               98.987                 3.557
       34               99.085                 3.551
       35               99.183                 3.557
       36               99.281                 3.550
       37               99.380                 3.550
       38               99.478                 3.550
       39               99.576                 3.550
       40               99.674                 3.550
       41               99.772                 3.550
       42               99.870                 3.550
       43               99.968                 3.550
       44              100.000                 1.157


----------------------------------------------------------------------------
    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =      64.2934
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =      89.9667
----------------------------------------------------------------------------
```

2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 125.0 250.0 375.0 500.0
14.000	27.5881	58.21	. Q . V . . .
14.083	28.0080	60.96	. Q . V . . .
14.167	28.4795	68.47	. Q . V . . .
14.250	29.0236	79.01	. Q . V . . .
14.333	29.6273	87.65	. Q . V . . .
14.417	30.2682	93.06	. Q . V . . .
14.500	30.9407	97.64	. Q . V . . .
14.583	31.6418	101.80	. Q . V . . .
14.667	32.3699	105.73	. Q . V . . .
14.750	33.1243	109.54	. Q . V . . .
14.833	33.9049	113.35	. Q. V . . .
14.917	34.7122	117.21	. Q. V . . .
15.000	35.5467	121.16	. Q. V . . .
15.083	36.4094	125.26	. Q V . . .
15.167	37.3019	129.60	. Q V . . .
15.250	38.2266	134.27	. Q V . . .
15.333	39.1866	139.39	. .Q V . . .
15.417	40.1575	140.98	. .Q V . . .
15.500	41.0659	131.90	. Q V . . .
15.583	41.8695	116.68	. Q. V . . .
15.667	42.6152	108.28	. Q . V . . .
15.750	43.3806	111.14	. Q . V. . .
15.833	44.2140	121.02	. Q. V. . .
15.917	45.1754	139.59	. .Q V . . .
16.000	46.3747	174.14	. . Q V . . .
16.083	48.1979	264.72	. . .Q . . .
16.167	51.0745	417.68	. . . V . Q .
16.250	54.4218	486.04	. . . V . . Q .
16.333	57.1596	397.52	. . . V .Q . .
16.417	59.0598	275.90	. . . Q V . . .
16.500	60.6747	234.49	. . Q . V . . .
16.583	62.1858	219.41	. . Q . V . . .
16.667	63.6121	207.09	. . Q . V . . .
16.750	64.9422	193.14	. . Q . V . . .
16.833	66.1860	180.60	. . Q . V. . .
16.917	67.3536	169.54	. . Q . V. . .
17.000	68.4440	158.33	. . Q . V . . .
17.083	69.4609	147.65	. .Q . V . . .
17.167	70.3794	133.36	. Q . .V . . .
17.250	71.2006	119.24	. Q. . .V . . .
17.333	71.9435	107.87	. Q . . .V . . .
17.417	72.6370	100.69	. Q . . . V . . .
17.500	73.2883	94.57	. Q . . . V . . .
17.583	73.9025	89.19	. Q . . . V . . .
17.667	74.4836	84.37	. Q . . . . V . . .
17.750	75.0381	80.51	. Q . . . . V . . .
17.833	75.5636	76.30	. Q . . . . V . . .
17.917	76.0692	73.41	. Q . . . . V . . .
18.000	76.5546	70.48	. Q . . . . V . . .
18.083	77.0112	66.30	. Q . . . . V . . .
18.167	77.4397	62.22	. Q . . . . V . . .
18.250	77.8372	57.72	. Q . . . . V . . .
18.333	78.2047	53.37	. Q . . . . V . . .
18.417	78.5367	48.20	. Q . . . . V . . .
18.500	78.8494	45.41	. Q . . . . V . . .
18.583	79.1492	43.53	. Q . . . . V . . .
18.667	79.4381	41.95	. Q . . . . V . . .
18.750	79.7161	40.36	. Q . . . . V . . .
18.833	79.9841	38.92	. Q . . . . V . . .
18.917	80.2430	37.59	. Q . . . . V . . .
19.000	80.4939	36.43	. Q . . . . V . . .
19.083	80.7380	35.45	. Q . . . . V . . .
19.167	80.9758	34.53	. Q . . . . V . . .
19.250	81.2076	33.65	. Q . . . . V . . .
19.333	81.4335	32.80	. Q . . . . V . . .
19.417	81.6541	32.03	. Q . . . . V . . .
19.500	81.8693	31.24	. Q . . . . V . . .
19.583	82.0783	30.35	. Q . . . . V . . .
19.667	82.2764	28.77	. Q . . . . V . . .
19.750	82.4671	27.69	. Q . . . . V . . .
19.833	82.6538	27.10	. Q . . . . V . . .
19.917	82.8369	26.59	. Q . . . . V . . .
20.000	83.0164	26.06	. Q . . . . V . . .

FLOW PROCESS FROM NODE 6311.00 TO NODE 6311.00 IS CODE = 7

>>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

FLOW PROCESS FROM NODE 6311.00 TO NODE 6311.00 IS CODE = 6

>>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

FLOW PROCESS FROM NODE 6311.00 TO NODE 6311.00 IS CODE = 11

>>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<

STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 1475.0 2950.0 4425.0 5900.0
14.000	405.4675	910.58	. Q V . . .
14.083	411.9441	940.41	. Q V . . .
14.167	418.7254	984.64	. Q V . . .
14.250	425.9332	1046.58	. Q .V . . .
14.333	433.6632	1122.39	. Q .V . . .
14.417	442.0229	1213.83	. Q .V . . .
14.500	451.1600	1326.71	. Q .V . . .
14.583	461.1978	1457.50	. Q.V . . .
14.667	472.1801	1594.61	. Q V . . .
14.750	484.0081	1717.44	. .QV . . .
14.833	496.5284	1817.94	. . Q . . .
14.917	509.6649	1907.43	. . QV . . .
15.000	523.3883	1992.63	. . Q . . .
15.083	537.6756	2074.52	. . VQ . . .
15.167	552.5126	2154.34	. . Q . . .
15.250	567.8931	2233.25	. . VQ . . .
15.333	583.8187	2312.40	. . Q . . .
15.417	600.2590	2387.12	. . VQ . . .
15.500	617.0992	2445.20	. . Q . . .
15.583	634.2087	2484.31	. . Q . . .

15.667	651.5239	2514.17	. . VQ . . .
15.750	668.9908	2536.19	. . Q . . .
15.833	686.4138	2529.82	. . Q . . .
15.917	703.5488	2488.01	. . Q V . . .
16.000	720.5395	2467.04	. . Q V . . .
16.083	738.4206	2596.33	. . Q V. . .
16.167	758.7119	2946.29	. . Q. . .
16.250	781.8931	3365.92	. . V Q . .
16.333	807.6943	3746.33	. . V Q . .
16.417	836.7817	4223.48	. . .V Q . .
16.500	870.7768	4936.09	. . . V . Q .
16.583	909.5608	5631.43	. . . V . Q .
16.667	950.1870	5898.92	. . . V . Q.
16.750	989.2211	5667.76	. . . V . Q .
16.833	1025.0509	5202.48	. . . V . Q .
16.917	1057.4547	4705.04	. . . V .Q .
17.000	1086.9653	4284.94	. . . VQ. .
17.083	1114.2803	3966.14	. . . Q V . .
17.167	1139.7739	3701.67	. . . Q V. .
17.250	1163.6464	3466.28	. . . Q V .
17.333	1185.9961	3245.18	. . . Q V .
17.417	1206.8950	3034.52	. . Q .V .
17.500	1226.3151	2819.79	. . Q. .V .
17.583	1244.0853	2580.25	. . Q . . V .
17.667	1260.1107	2326.88	. . Q . . V .
17.750	1274.5380	2094.84	. . Q . . . V .
17.833	1287.5835	1894.21	. . Q . . . V .
17.917	1299.4128	1717.62	. .Q . . . V .
18.000	1310.1476	1558.68	. Q . . . V .
18.083	1319.8342	1406.50	. Q. . . V .
18.167	1328.4296	1248.04	. Q . . . V .
18.250	1336.0507	1106.58	. Q . . . V .
18.333	1343.0319	1013.67	. Q . . . V .
18.417	1349.5726	949.71	. Q . . . V .
18.500	1355.6866	887.76	. Q . . . V .
18.583	1361.3374	820.49	. Q . . . V .
18.667	1366.5759	760.64	. Q . . . V .
18.750	1371.5021	715.28	. Q . . . V .
18.833	1376.1787	679.05	. Q . . . V .
18.917	1380.6245	645.53	. Q . . . V .
19.000	1384.8478	613.21	. Q . . . V .
19.083	1388.8970	587.94	. Q . . . V .
19.167	1392.8152	568.92	. Q . . . V .
19.250	1396.6183	552.22	. Q . . . V .
19.333	1400.3215	537.71	. Q . . . V .
19.417	1403.9341	524.53	. Q . . . V .
19.500	1407.4606	512.04	. Q . . . V .
19.583	1410.9042	500.00	. Q . . . V .
19.667	1414.2626	487.64	. Q . . . V .
19.750	1417.5387	475.69	. Q . . . V .
19.833	1420.7310	463.52	. Q . . . V .
19.917	1423.8118	447.34	. Q . . . V .
20.000	1426.7561	427.51	. Q . . . V .
20.083	1429.6013	413.13	. Q . . . V .
20.167	1432.3898	404.89	. Q . . . V .
20.250	1435.1272	397.48	. Q . . . V .
20.333	1437.8130	389.98	. Q . . . V .
20.417	1440.4471	382.48	. Q . . . V .
20.500	1443.0323	375.38	. Q . . . V .
20.583	1445.5707	368.56	. Q . . . V .
20.667	1448.0643	362.07	. Q . . . V .
20.750	1450.5150	355.84	. Q . . . V .
20.833	1452.9244	349.85	. Q . . . V .
20.917	1455.2953	344.24	. Q . . . V .
21.000	1457.6317	339.24	. Q . . . V .
21.083	1459.9365	334.66	. Q . . . V .

21.167	1462.2111	330.26	. Q . . . V .
21.250	1464.4564	326.03	. Q . . . V .
21.333	1466.6738	321.97	. Q . . . V .
21.417	1468.8643	318.05	. Q . . . V .
21.500	1471.0287	314.27	. Q . . . V .
21.583	1473.1680	310.62	. Q . . . V .
21.667	1475.2828	307.07	. Q . . . V .
21.750	1477.3740	303.64	. Q . . . V .
21.833	1479.4421	300.29	. Q . . . V .
21.917	1481.4880	297.07	. Q . . . V .
22.000	1483.5129	294.01	.Q . . . V .
22.083	1485.5175	291.06	.Q . . . V .
22.167	1487.5023	288.20	.Q . . . V .
22.250	1489.4679	285.41	.Q . . . V .
22.333	1491.4148	282.69	.Q . . . V .
22.417	1493.3434	280.04	.Q . . . V .
22.500	1495.2542	277.45	.Q . . . V .
22.583	1497.1476	274.93	.Q . . . V .
22.667	1499.0240	272.47	.Q . . . V .
22.750	1500.8839	270.06	.Q . . . V .
22.833	1502.7277	267.71	.Q . . . V.
22.917	1504.5555	265.41	.Q . . . V.
23.000	1506.3680	263.17	.Q . . . V.
23.083	1508.1654	260.97	.Q . . . V.
23.167	1509.9480	258.82	.Q . . . V.
23.250	1511.7161	256.72	.Q . . . V.
23.333	1513.4700	254.66	.Q . . . V.
23.417	1515.2100	252.65	.Q . . . V.
23.500	1516.9364	250.68	.Q . . . V.
23.583	1518.6495	248.75	.Q . . . V.
23.667	1520.3496	246.85	.Q . . . V.
23.750	1522.0370	245.00	.Q . . . V.
23.833	1523.7118	243.18	.Q . . . V.
23.917	1525.3743	241.40	.Q . . . V.
24.000	1527.0248	239.65	.Q . . . V.
24.083	1528.6538	236.54	.Q . . . V.
24.167	1530.2323	229.19	.Q . . . V.
24.250	1531.7296	217.41	.Q . . . V.
24.333	1533.1290	203.19	.Q . . . V.
24.417	1534.4065	185.49	.Q . . . V.
24.500	1535.4867	156.84	.Q . . . V.
24.583	1536.3101	119.56	Q . . . V.
24.667	1536.9402	91.50	Q . . . V.
24.750	1537.4612	75.64	Q . . . V.
24.833	1537.9003	63.76	Q . . . V.
24.917	1538.2734	54.19	Q . . . V.
25.000	1538.5922	46.28	Q . . . V.
25.083	1538.8645	39.55	Q . . . V.
25.167	1539.0969	33.74	Q . . . V.
25.250	1539.2953	28.79	Q . . . V.
25.333	1539.4645	24.57	Q . . . V.
25.417	1539.6083	20.87	Q . . . V.
25.500	1539.7291	17.55	Q . . . V.
25.583	1539.8306	14.72	Q . . . V.
25.667	1539.9154	12.32	Q . . . V.
25.750	1539.9862	10.29	Q . . . V.
25.833	1540.0458	8.65	Q . . . V.
25.917	1540.0962	7.32	Q . . . V.
26.000	1540.1378	6.05	Q . . . V.
26.083	1540.1729	5.09	Q . . . V.
26.167	1540.2048	4.64	Q . . . V.
26.250	1540.2350	4.37	Q . . . V.
26.333	1540.2632	4.09	Q . . . V.
26.417	1540.2898	3.86	Q . . . V.
26.500	1540.3148	3.63	Q . . . V.
26.583	1540.3383	3.40	Q . . . V.

26.667	1540.3601	3.17	Q	.	.	.	V.
26.750	1540.3804	2.95	Q	.	.	.	V.
26.833	1540.3992	2.73	Q	.	.	.	V.
26.917	1540.4164	2.50	Q	.	.	.	V.
27.000	1540.4321	2.28	Q	.	.	.	V.
27.083	1540.4464	2.07	Q	.	.	.	V.
27.167	1540.4591	1.85	Q	.	.	.	V.
27.250	1540.4703	1.63	Q	.	.	.	V.
27.333	1540.4801	1.42	Q	.	.	.	V.
27.417	1540.4884	1.21	Q	.	.	.	V.
27.500	1540.4952	1.00	Q	.	.	.	V.
27.583	1540.5006	0.79	Q	.	.	.	V.
27.667	1540.5046	0.59	Q	.	.	.	V.
27.750	1540.5073	0.40	Q	.	.	.	V.
27.833	1540.5088	0.21	Q	.	.	.	V.
27.917	1540.5092	0.06	Q	.	.	.	V.
28.000	1540.5092	0.00	Q	.	.	.	V.

****
FLOW PROCESS FROM NODE 6311.00 TO NODE 6330.00 IS CODE = 5.2

>>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
==========

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
INTERVALS(Reference: the National Engineering Handbook,
Hydrology, Chapter 17, page 17-52, August,1972,
U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 30.00 CHANNEL Z = 1.00
UPSTREAM ELEVATION(FT) = 382.00
DOWNSTREAM ELEVATION(FT) = 375.00
CHANNEL LENGTH(FT) = 1141.00 MANNING'S FACTOR = 0.040
CONSTANT LOSS RATE(CFS) = 0.00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 5898.92
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 4338.41
CHANNEL NORMAL VELOCITY FOR Q = 4338.41 CFS = 10.60 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.862

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
UNIT INTERVALS IS CSTAR = 0.993

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.000	910.58	902.71	902.71
14.083	940.41	930.98	930.98
14.167	984.64	970.67	970.67
14.250	1046.58	1027.01	1027.01
14.333	1122.39	1098.42	1098.42
14.417	1213.83	1184.92	1184.92
14.500	1326.71	1291.03	1291.03
14.583	1457.50	1416.14	1416.14
14.667	1594.61	1551.23	1551.23
14.750	1717.44	1678.53	1678.53
14.833	1817.94	1786.08	1786.08
14.917	1907.43	1879.08	1879.08
15.000	1992.63	1965.65	1965.65
15.083	2074.52	2048.59	2048.59
15.167	2154.34	2129.07	2129.07
15.250	2233.25	2208.27	2208.27
15.333	2312.40	2287.34	2287.34
15.417	2387.12	2363.46	2363.46
15.500	2445.20	2426.78	2426.78
15.583	2484.31	2471.89	2471.89
15.667	2514.17	2504.69	2504.69
15.750	2536.19	2529.20	2529.20
15.833	2529.82	2531.77	2531.77
15.917	2488.01	2501.16	2501.16
16.000	2467.04	2473.73	2473.73
16.083	2596.33	2555.75	2555.75
16.167	2946.29	2836.03	2836.03
16.250	3365.92	3233.26	3233.26
16.333	3746.33	3625.83	3625.83
16.417	4223.48	4072.67	4072.67
16.500	4936.09	4711.07	4711.07
16.583	5631.43	5411.30	5411.30
16.667	5898.92	5813.27	5813.27
16.750	5667.76	5739.78	5739.78
16.833	5202.48	5349.21	5349.21
16.917	4705.04	4862.41	4862.41
17.000	4284.94	4418.09	4418.09
17.083	3966.14	4067.28	4067.28
17.167	3701.67	3785.51	3785.51
17.250	3466.28	3540.86	3540.86
17.333	3245.18	3315.20	3315.20
17.417	3034.52	3101.22	3101.22
17.500	2819.79	2887.75	2887.75
17.583	2580.25	2656.01	2656.01
17.667	2326.88	2407.05	2407.05
17.750	2094.84	2168.34	2168.34
17.833	1894.21	1957.79	1957.79
17.917	1717.62	1773.57	1773.57
18.000	1558.68	1609.03	1609.03
18.083	1406.50	1454.68	1454.68
18.167	1248.04	1298.18	1298.18
18.250	1106.58	1151.40	1151.40
18.333	1013.67	1043.19	1043.19
18.417	949.71	970.02	970.02
18.500	887.76	907.37	907.37
18.583	820.49	841.77	841.77
18.667	760.64	779.60	779.60
18.750	715.28	729.67	729.67
18.833	679.05	690.54	690.54
18.917	645.53	656.15	656.15
19.000	613.21	623.45	623.45
19.083	587.94	595.95	595.95
19.167	568.92	574.96	574.96
19.250	552.22	557.51	557.51
19.333	537.71	542.31	542.31
19.417	524.53	528.71	528.71
19.500	512.04	516.00	516.00
19.583	500.00	503.82	503.82
19.667	487.64	491.55	491.55
19.750	475.69	479.47	479.47
19.833	463.52	467.37	467.37
19.917	447.34	452.45	452.45
20.000	427.51	433.78	433.78

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PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 1540.509 AF
OUTFLOW VOLUME = 1540.509 AF

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    LOSS    VOLUME =      0.000 AF


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  FLOW PROCESS FROM NODE   6320.00 TO NODE   6330.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
============================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #2)

         WATERSHED AREA =     300.700 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.290 HOURS
          CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
          THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
          MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
         VALLEY(DEVELOPED):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.250
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.750
         VALLEY(UNDEVELOPED)/DESERT:
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.240
         LOW LOSS FRACTION = 0.430
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.58
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.22
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.62
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.71
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  3.75
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  6.28

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.727
          30-MINUTE FACTOR = 0.727
           1-HOUR FACTOR = 0.727
           3-HOUR FACTOR = 0.955
           6-HOUR FACTOR = 0.976
          24-HOUR FACTOR = 0.985

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  28.736


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


============================================================================
                     UNIT HYDROGRAPH DETERMINATION

----------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER         MEAN VALUES          ORDINATES(CFS)
----------------------------------------------------------------------------
        1               3.181               115.682
        2              14.148               398.807
        3              32.649               672.813
        4              49.391               608.859
        5              59.445               365.623
        6              65.754               229.414
        7              70.572               175.227
        8              74.508               143.109
        9              77.679               115.331
       10              80.307                95.584
       11              82.561                81.961
       12              84.486                69.998
       13              86.124                59.571
       14              87.475                49.137
       15              88.623                41.748
       16              89.558                33.981
       17              90.435                31.907
       18              91.248                29.581
       19              92.036                28.658
       20              92.761                26.336
       21              93.465                25.630
       22              94.104                23.223
       23              94.697                21.573
       24              95.280                21.195
       25              95.767                17.699
       26              96.231                16.876
       27              96.695                16.868
       28              97.112                15.192
       29              97.431                11.595
       30              97.741                11.275
       31              98.051                11.279
       32              98.361                11.271
       33              98.547                 6.740
       34              98.632                 3.085
       35              98.716                 3.070
       36              98.801                 3.077
       37              98.885                 3.077
       38              98.970                 3.077
       39              99.054                 3.077
       40              99.139                 3.077
       41              99.224                 3.085
       42              99.308                 3.070
       43              99.393                 3.070
       44              99.477                 3.070
       45              99.562                 3.070
       46              99.646                 3.070
       47              99.730                 3.070
       48              99.815                 3.070
       49              99.899                 3.070
       50              99.984                 3.070
       51             100.000                 0.594

----------------------------------------------------------------------------
    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =      56.7124
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =      98.2652
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2 4 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 125.0 250.0 375.0 500.0
14.000	31.2408	65.69	. Q . V . . .
14.083	31.7104	68.19	. Q . V . . .
14.167	32.2195	73.92	. Q . V . . .
14.250	32.7901	82.85	. Q . V . . .
14.333	33.4185	91.25	. Q . V . . .
14.417	34.0875	97.14	. Q . V . . .
14.500	34.7879	101.69	. Q . V . . .
14.583	35.5166	105.81	. Q . V . . .
14.667	36.2723	109.72	. Q . V . . .
14.750	37.0540	113.50	. Q. V . . .
14.833	37.8614	117.23	. Q. V . . .
14.917	38.6950	121.04	. Q. V . . .
15.000	39.5554	124.94	. Q. V . . .
15.083	40.4439	129.01	. Q V . . .
15.167	41.3617	133.26	. Q V . . .
15.250	42.3108	137.81	. .Q V . . .
15.333	43.2935	142.68	. .Q V . . .
15.417	44.2912	144.87	. .Q V . . .
15.500	45.2533	139.71	. .Q V . . .
15.583	46.1323	127.62	. Q V . . .
15.667	46.9466	118.24	. Q. V. . .
15.750	47.7585	117.90	. Q. V. . .
15.833	48.6211	125.24	. Q V. . .
15.917	49.5930	141.13	. .Q V . . .
16.000	50.7667	170.41	. . Q V . . .
16.083	52.4713	247.51	. . Q.V . . .
16.167	55.0192	369.95	. . . V Q. .
16.250	58.1823	459.29	. . . V . Q .
16.333	61.0424	415.28	. . . V . Q .
16.417	63.1729	309.34	. . . QV . .
16.500	64.8841	248.47	. . Q. V . .
16.583	66.4546	228.04	. . Q . V . .
16.667	67.9533	217.61	. . Q . V . .
16.750	69.3615	204.46	. . Q . V . .
16.833	70.6833	191.94	. . Q . V . .
16.917	71.9320	181.31	. . Q . V. .
17.000	73.1129	171.47	. . Q . V. .
17.083	74.2216	160.98	. . Q . V .
17.167	75.2395	147.80	. .Q . V .
17.250	76.1569	133.20	. Q . .V .
17.333	76.9837	120.05	. Q. . .V .
17.417	77.7554	112.06	. Q . . .V .
17.500	78.4846	105.87	. Q . . .V .
17.583	79.1793	100.87	. Q . . . V .
17.667	79.8401	95.94	. Q . . . V .
17.750	80.4738	92.02	. Q . . . V .
17.833	81.0797	87.97	. Q . . . V .
17.917	81.6611	84.43	. Q . . . V .
18.000	82.2219	81.43	. Q . . . V .
18.083	82.7555	77.48	. Q . . . V .
18.167	83.2629	73.68	. Q . . . V .
18.250	83.7396	69.21	. Q . . . V .
18.333	84.1841	64.55	. Q . . . V .
18.417	84.5991	60.25	. Q . . . V .
18.500	84.9959	57.62	. Q . . . V .
18.583	85.3769	55.32	. Q . . . V .
18.667	85.7415	52.94	. Q . . . V .
18.750	86.0806	49.24	. Q . . . V .
18.833	86.3988	46.20	. Q . . . V .
18.917	86.7062	44.63	. Q . . . V .
19.000	87.0045	43.32	. Q . . . V .
19.083	87.2942	42.05	. Q . . . V .
19.167	87.5752	40.80	. Q . . . V .
19.250	87.8482	39.64	. Q . . . V .
19.333	88.1139	38.58	. Q . . . V .
19.417	88.3728	37.60	. Q . . . V .
19.500	88.6254	36.67	. Q . . . V .
19.583	88.8722	35.84	. Q . . . V .
19.667	89.1138	35.07	. Q . . . V .
19.750	89.3504	34.36	. Q . . . V .
19.833	89.5827	33.72	. Q . . . V .
19.917	89.8105	33.08	. Q . . . V .
20.000	90.0339	32.43	. Q . . . V .

****
FLOW PROCESS FROM NODE 6330.00 TO NODE 6330.00 IS CODE = 7

>>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
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****
FLOW PROCESS FROM NODE 6330.00 TO NODE 6330.00 IS CODE = 6

>>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
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****
FLOW PROCESS FROM NODE 6330.00 TO NODE 6330.00 IS CODE = 11

>>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
==========

STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 1525.0 3050.0 4575.0 6100.0
14.000	434.7236	968.40	. Q V . . .
14.083	441.6049	999.16	. Q V . . .
14.167	448.7991	1044.59	. Q V . . .
14.250	456.4427	1109.86	. Q .V . . .
14.333	464.6361	1189.67	. Q .V . . .
14.417	473.4657	1282.06	. Q .V . . .
14.500	483.0575	1392.72	. Q.V . . .
14.583	493.5392	1521.95	. Q. V . . .
14.667	504.9783	1660.95	. Q V . . .
14.750	517.3201	1792.03	. .QV . . .
14.833	530.4283	1903.32	. . Q . . .
14.917	544.2032	2000.12	. . Q . . .
15.000	558.6013	2090.59	. . Q . . .
15.083	573.5985	2177.60	. . Q . . .
15.167	589.1793	2262.33	. . Q . . .
15.250	605.3369	2346.08	. . VQ . . .
15.333	622.0726	2430.03	. . Q . . .
15.417	639.3475	2508.33	. . VQ . . .
15.500	657.0231	2566.49	. . Q . . .
15.583	674.9260	2599.50	. . VQ . . .

15.667	692.9902	2622.93	. . VQ . . .
15.750	711.2209	2647.10	. . Q . . .
15.833	729.5199	2657.01	. . Q . . .
15.917	747.7175	2642.29	. . QV . . .
16.000	765.9279	2644.14	. . QV . . .
16.083	785.2341	2803.26	. . QV. . .
16.167	807.3138	3205.99	. . V.Q . .
16.250	832.7446	3692.55	. . V Q . .
16.333	860.5760	4041.12	. . .V Q . .
16.417	890.7552	4382.01	. . .V Q . .
16.500	924.9118	4959.54	. . . V . Q .
16.583	963.7502	5639.34	. . . V . Q .
16.667	1005.2852	6030.88	. . . V . Q.
16.750	1046.2235	5944.24	. . . V . Q .
16.833	1084.3856	5541.15	. . . V . Q .
16.917	1119.1219	5043.72	. . . V . Q .
17.000	1150.7305	4589.56	. . . V Q .
17.083	1179.8507	4228.26	. . . QV . .
17.167	1206.9396	3933.31	. . . Q V. .
17.250	1232.2430	3674.06	. . . Q V .
17.333	1255.9017	3435.25	. . . Q V .
17.417	1278.0317	3213.28	. . .Q .V .
17.500	1298.6489	2993.61	. . Q. .V .
17.583	1317.6357	2756.89	. . Q . . V .
17.667	1334.8739	2502.99	. . Q . . V .
17.750	1350.4412	2260.36	. . Q . . V .
17.833	1364.5304	2045.76	. . Q . . V .
17.917	1377.3265	1858.00	. . Q . . V .
18.000	1388.9688	1690.46	. .Q . . V .
18.083	1399.5209	1532.16	. Q . . V .
18.167	1408.9689	1371.86	. Q . . V .
18.250	1417.3752	1220.60	. Q . . V .
18.333	1425.0043	1107.74	. Q . . V .
18.417	1432.0999	1030.28	. Q . . V .
18.500	1438.7458	964.99	. Q . . V .
18.583	1444.9241	897.08	. Q . . V .
18.667	1450.6578	832.54	. Q . . V .
18.750	1456.0222	778.91	. Q . . V .
18.833	1461.0962	736.74	. Q . . V .
18.917	1465.9225	700.78	. Q . . V .
19.000	1470.5145	666.76	. Q . . V .
19.083	1474.9086	638.01	. Q . . V .
19.167	1479.1493	615.76	. Q . . V .
19.250	1483.2620	597.15	. Q . . V .
19.333	1487.2626	580.89	. Q . . V .
19.417	1491.1628	566.31	. Q . . V .
19.500	1494.9691	552.67	. Q . . V .
19.583	1498.6858	539.66	. Q . . V .
19.667	1502.3126	526.62	. Q . . V .
19.750	1505.8514	513.83	. Q . . V .
19.833	1509.3025	501.09	. Q . . V .
19.917	1512.6464	485.53	. Q . . V .
20.000	1515.8572	466.21	. Q . . V .
20.083	1518.9524	449.43	. Q . . V .
20.167	1521.9722	438.46	. Q . . V .
20.250	1524.9287	429.29	. Q . . V .
20.333	1527.8282	421.02	. Q . . V .
20.417	1530.6727	413.02	. Q . . V .
20.500	1533.4644	405.34	. Q . . V .
20.583	1536.2051	397.95	. Q . . V .
20.667	1538.8971	390.88	. Q . . V .
20.750	1541.5426	384.12	. Q . . V .
20.833	1544.1434	377.65	. Q . . V .
20.917	1546.7021	371.53	. Q . . V .
21.000	1549.2225	365.96	. Q . . V .
21.083	1551.7080	360.88	. Q . . V .
21.167	1554.1604	356.08	. Q . . V .
21.250	1556.5812	351.49	. Q . . V .
21.333	1558.9716	347.08	. Q . . V .
21.417	1561.3326	342.83	. Q . . V .
21.500	1563.6655	338.73	. Q . . V .
21.583	1565.9711	334.77	. Q . . V .
21.667	1568.2502	330.93	. Q . . V .
21.750	1570.5038	327.21	. Q . . V .
21.833	1572.7324	323.59	. Q . . V .
21.917	1574.9369	320.10	. Q . . V .
22.000	1577.1184	316.75	. Q . . V .
22.083	1579.2778	313.54	. Q . . V .
22.167	1581.4158	310.43	. Q . . V .
22.250	1583.5330	307.41	. Q . . V .
22.333	1585.6299	304.47	.Q . . V .
22.417	1587.7070	301.61	.Q . . V .
22.500	1589.7650	298.81	.Q . . V .
22.583	1591.8042	296.09	.Q . . V .
22.667	1593.8251	293.42	.Q . . V .
22.750	1595.8280	290.82	.Q . . V .
22.833	1597.8135	288.29	.Q . . V.
22.917	1599.7819	285.81	.Q . . V.
23.000	1601.7335	283.38	.Q . . V.
23.083	1603.6688	281.01	.Q . . V.
23.167	1605.5881	278.69	.Q . . V.
23.250	1607.4918	276.42	.Q . . V.
23.333	1609.3802	274.20	.Q . . V.
23.417	1611.2537	272.02	.Q . . V.
23.500	1613.1124	269.89	.Q . . V.
23.583	1614.9568	267.81	.Q . . V.
23.667	1616.7871	265.76	.Q . . V.
23.750	1618.6036	263.76	.Q . . V.
23.833	1620.4066	261.80	.Q . . V.
23.917	1622.1964	259.87	.Q . . V.
24.000	1623.9731	257.98	.Q . . V.
24.083	1625.7269	254.64	.Q . . V.
24.167	1627.4257	246.66	.Q . . V.
24.250	1629.0308	233.06	.Q . . V.
24.333	1630.5233	216.72	.Q . . V.
24.417	1631.8894	198.36	.Q . . V.
24.500	1633.0742	172.04	.Q . . V.
24.583	1634.0153	136.64	Q . . V.
24.667	1634.7384	105.00	Q . . V.
24.750	1635.3219	84.73	Q . . V.
24.833	1635.8115	71.10	Q . . V.
24.917	1636.2274	60.38	Q . . V.
25.000	1636.5828	51.60	Q . . V.
25.083	1636.8872	44.20	Q . . V.
25.167	1637.1479	37.85	Q . . V.
25.250	1637.3712	32.42	Q . . V.
25.333	1637.5626	27.79	Q . . V.
25.417	1637.7263	23.77	Q . . V.
25.500	1637.8652	20.18	Q . . V.
25.583	1637.9827	17.05	Q . . V.
25.667	1638.0818	14.39	Q . . V.
25.750	1638.1652	12.11	Q . . V.
25.833	1638.2356	10.23	Q . . V.
25.917	1638.2954	8.69	Q . . V.
26.000	1638.3457	7.29	Q . . V.
26.083	1638.3881	6.15	Q . . V.
26.167	1638.4257	5.46	Q . . V.
26.250	1638.4604	5.05	Q . . V.
26.333	1638.4928	4.70	Q . . V.
26.417	1638.5231	4.39	Q . . V.
26.500	1638.5514	4.10	Q . . V.
26.583	1638.5778	3.82	Q . . V.

26.667	1638.6022	3.54	Q	.	.	.	V.
26.750	1638.6248	3.28	Q	.	.	.	V.
26.833	1638.6458	3.04	Q	.	.	.	V.
26.917	1638.6650	2.80	Q	.	.	.	V.
27.000	1638.6827	2.57	Q	.	.	.	V.
27.083	1638.6989	2.33	Q	.	.	.	V.
27.167	1638.7133	2.10	Q	.	.	.	V.
27.250	1638.7261	1.87	Q	.	.	.	V.
27.333	1638.7373	1.64	Q	.	.	.	V.
27.417	1638.7471	1.41	Q	.	.	.	V.
27.500	1638.7552	1.18	Q	.	.	.	V.
27.583	1638.7618	0.96	Q	.	.	.	V.
27.667	1638.7670	0.74	Q	.	.	.	V.
27.750	1638.7706	0.53	Q	.	.	.	V.
27.833	1638.7728	0.33	Q	.	.	.	V.
27.917	1638.7738	0.14	Q	.	.	.	V.
28.000	1638.7742	0.05	Q	.	.	.	V
28.083	1638.7743	0.02	Q	.	.	.	V
28.167	1638.7743	0.00	Q	.	.	.	V

****
FLOW PROCESS FROM NODE 6330.00 TO NODE 6355.00 IS CODE = 5.2

>>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
==========

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
INTERVALS(Reference: the National Engineering Handbook,
Hydrology, Chapter 17, page 17-52, August,1972,
U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 30.00 CHANNEL Z = 1.00
UPSTREAM ELEVATION(FT) = 375.00
DOWNSTREAM ELEVATION(FT) = 314.00
CHANNEL LENGTH(FT) = 6086.00 MANNING'S FACTOR = 0.040
CONSTANT LOSS RATE(CFS) = 0.00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 6030.88
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 4472.14
CHANNEL NORMAL VELOCITY FOR Q = 4472.14 CFS = 12.72 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.882

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
UNIT INTERVALS IS CSTAR = 0.822

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.000	968.40	926.97	926.97
14.083	999.16	952.38	952.38
14.167	1044.59	980.56	980.56
14.250	1109.86	1018.02	1018.02
14.333	1189.67	1071.70	1071.70
14.417	1282.06	1142.01	1142.01
14.500	1392.72	1226.26	1226.26
14.583	1521.95	1326.12	1326.12
14.667	1660.95	1443.91	1443.91
14.750	1792.03	1575.87	1575.87
14.833	1903.32	1709.76	1709.76
14.917	2000.12	1831.68	1831.68
15.000	2090.59	1937.79	1937.79
15.083	2177.60	2033.16	2033.16
15.167	2262.33	2122.82	2122.82
15.250	2346.08	2209.18	2209.18
15.333	2430.03	2293.73	2293.73
15.417	2508.33	2377.72	2377.72
15.500	2566.49	2458.92	2458.92
15.583	2599.50	2527.91	2527.91
15.667	2622.93	2575.73	2575.73
15.750	2647.10	2606.70	2606.70
15.833	2657.01	2631.83	2631.83
15.917	2642.29	2649.22	2649.22
16.000	2644.14	2648.44	2648.44
16.083	2803.26	2644.29	2644.29
16.167	3205.99	2721.79	2721.79
16.250	3692.55	2985.24	2985.24
16.333	4041.12	3404.07	3404.07
16.417	4382.01	3811.26	3811.26
16.500	4959.54	4166.52	4166.52
16.583	5639.34	4625.42	4625.42
16.667	6030.88	5231.73	5231.73
16.750	5944.24	5757.82	5757.82
16.833	5541.15	5940.02	5940.02
16.917	5043.72	5746.84	5746.84
17.000	4589.56	5335.08	5335.08
17.083	4228.26	4874.00	4874.00
17.167	3933.31	4463.91	4463.91
17.250	3674.06	4126.30	4126.30
17.333	3435.25	3841.18	3841.18
17.417	3213.28	3587.29	3587.29
17.500	2993.61	3354.02	3354.02
17.583	2756.89	3131.16	3131.16
17.667	2502.99	2902.60	2902.60
17.750	2260.36	2658.95	2658.95
17.833	2045.76	2412.38	2412.38
17.917	1858.00	2182.72	2182.72
18.000	1690.46	1978.53	1978.53
18.083	1532.16	1797.71	1797.71
18.167	1371.86	1632.32	1632.32
18.250	1220.60	1471.78	1471.78
18.333	1107.74	1315.85	1315.85
18.417	1030.28	1182.49	1182.49
18.500	964.99	1083.25	1083.25
18.583	897.08	1007.85	1007.85
18.667	832.54	939.49	939.49
18.750	778.91	873.14	873.14
18.833	736.74	813.60	813.60
18.917	700.78	764.51	764.51
19.000	666.76	724.14	724.14
19.083	638.01	688.34	688.34
19.167	615.76	656.57	656.57
19.250	597.15	630.46	630.46
19.333	580.89	609.30	609.30
19.417	566.31	591.38	591.38
19.500	552.67	575.64	575.64
19.583	539.66	561.32	561.32
19.667	526.62	547.86	547.86
19.750	513.83	534.76	534.76
19.833	501.09	521.83	521.83
19.917	485.53	509.04	509.04
20.000	466.21	494.92	494.92

==========
PROCESS SUMMARY OF STORAGE:

```
    INFLOW  VOLUME =   1638.774 AF
    OUTFLOW VOLUME =   1638.774 AF
    LOSS    VOLUME =      0.000 AF


****************************************************************************
  FLOW PROCESS FROM NODE   6340.00 TO NODE   6355.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
============================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #2)

         WATERSHED AREA =     697.900 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.340 HOURS
          CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
          THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
          MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.900
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.210
         LOW LOSS FRACTION = 0.450
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.58
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.22
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.62
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.71
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  3.75
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  6.28

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.727
          30-MINUTE FACTOR = 0.727
           1-HOUR FACTOR = 0.727
           3-HOUR FACTOR = 0.955
           6-HOUR FACTOR = 0.976
          24-HOUR FACTOR = 0.985

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  24.510


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


============================================================================
                      UNIT HYDROGRAPH DETERMINATION

----------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
----------------------------------------------------------------------------
        1                1.545               130.419
        2                7.337               488.804
        3               20.261              1090.852
        4               37.173              1427.448
        5               57.561              1720.753
        6               73.834              1373.504
        7               84.155               871.070
        8               90.157               506.624
        9               93.846               311.340
       10               95.934               176.209
       11               96.823                75.053
       12               97.453                53.201
       13               98.047                50.140
       14               98.563                43.554
       15               98.877                26.445
       16               99.042                13.975
       17               99.137                 8.025
       18               99.206                 5.797
       19               99.261                 4.649
       20               99.315                 4.546
       21               99.365                 4.228
       22               99.414                 4.161
       23               99.461                 3.902
       24               99.505                 3.743
       25               99.548                 3.674
       26               99.587                 3.272
       27               99.625                 3.204
       28               99.663                 3.169
       29               99.695                 2.719
       30               99.726                 2.582
       31               99.756                 2.583
       32               99.787                 2.570
       33               99.813                 2.195
       34               99.830                 1.492
       35               99.848                 1.489
       36               99.866                 1.488
       37               99.883                 1.487
       38               99.899                 1.328
       39               99.905                 0.518
       40               99.910                 0.406
       41               99.915                 0.406
       42               99.919                 0.404
       43               99.924                 0.406
       44               99.929                 0.406
       45               99.934                 0.405
       46               99.939                 0.408
       47               99.944                 0.405
       48               99.948                 0.408
       49               99.953                 0.404
       50               99.958                 0.405
       51               99.963                 0.405
       52               99.968                 0.405
       53               99.972                 0.405
       54               99.977                 0.404
       55               99.982                 0.405
       56               99.987                 0.405
       57               99.992                 0.405
       58               99.996                 0.405
       59              100.000                 0.311

----------------------------------------------------------------------------
    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =     130.7956
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =     228.8943
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================================================================================

                    2 4 - H O U R    S T O R M
                  R U N O F F    H Y D R O G R A P H

================================================================================
            HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
        (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      300.0     600.0     900.0    1200.0
--------------------------------------------------------------------------------
  14.000     71.5275    151.07  .    Q    . V       .         .         .
  14.083     72.5995    155.66  .    Q    . V       .         .         .
  14.167     73.7394    165.51  .    Q    . V       .         .         .
  14.250     75.0088    184.32  .     Q   .  V      .         .         .
  14.333     76.4434    208.30  .     Q   .  V      .         .         .
  14.417     78.0759    237.04  .      Q  .  V      .         .         .
  14.500     79.8755    261.30  .       Q .  V     .         .         .
  14.583     81.7970    279.00  .        Q.   V     .         .         .
  14.667     83.8071    291.88  .        Q.   V     .         .         .
  14.750     85.8906    302.53  .         Q    V    .         .         .
  14.833     88.0367    311.60  .         Q    V    .         .         .
  14.917     90.2395    319.86  .         Q    V    .         .         .
  15.000     92.5000    328.22  .         Q     V   .         .         .
  15.083     94.8232    337.32  .         .Q    V   .         .         .
  15.167     97.2122    346.89  .         .Q    V   .         .         .
  15.250     99.6724    357.22  .         .Q     V  .         .         .
  15.333    102.2081    368.18  .         . Q    V  .         .         .
  15.417    104.8014    376.54  .         . Q     V .         .         .
  15.500    107.3865    375.35  .         . Q     V .         .         .
  15.583    109.8552    358.46  .         .Q       V.         .         .
  15.667    112.1574    334.28  .         .Q       V.         .         .
  15.750    114.2686    306.55  .         Q        V.         .         .
  15.833    116.3079    296.10  .        Q.         V         .         .
  15.917    118.4688    313.77  .         Q         V         .         .
  16.000    120.9683    362.93  .         . Q       .V        .         .
  16.083    124.3170    486.22  .         .     Q   .V        .         .
  16.167    129.1127    696.33  .         .         . VQ      .         .
  16.250    135.7515    963.96  .         .         .  V      . Q       .
  16.333    143.3485   1103.09  .         .         .    V    .     Q   .
  16.417    151.3331   1159.36  .         .         .     V   .       Q .
  16.500    158.0660    977.61  .         .         .      V  . Q       .
  16.583    163.2366    750.78  .         .         .    Q  V .         .
  16.667    167.2896    588.50  .         .        Q.        V.         .
  16.750    170.7721    505.66  .         .     Q   .         V.        .
  16.833    173.8614    448.56  .         .   Q     .         V         .
  16.917    176.6331    402.45  .         .  Q      .         V         .
  17.000    179.2557    380.79  .         . Q       .         .V        .
  17.083    181.7599    363.62  .         . Q       .         .V        .
  17.167    184.0983    339.54  .         .Q        .         . V       .
  17.250    186.1874    303.34  .         Q         .         . V       .
  17.333    188.0195    266.01  .       Q .         .         . V       .
  17.417    189.5980    229.20  .      Q  .         .         .  V      .
  17.500    190.9803    200.71  .     Q   .         .         .  V      .
  17.583    192.2268    180.99  .     Q   .         .         .  V      .
  17.667    193.3814    167.65  .    Q    .         .         .  V      .
  17.750    194.4678    157.74  .    Q    .         .         .  V      .
  17.833    195.5038    150.42  .    Q    .         .         .   V     .
  17.917    196.5020    144.94  .   Q     .         .         .   V     .
  18.000    197.4674    140.19  .   Q     .         .         .   V     .
  18.083    198.3998    135.39  .   Q     .         .         .   V     .
  18.167    199.2929    129.68  .   Q     .         .         .   V     .
  18.250    200.1368    122.53  .   Q     .         .         .   V     .
  18.333    200.9263    114.64  .  Q      .         .         .    V    .
  18.417    201.6559    105.93  .  Q      .         .         .    V    .
  18.500    202.3358     98.72  .  Q      .         .         .    V    .
  18.583    202.9795     93.47  .  Q      .         .         .    V    .
  18.667    203.5964     89.57  . Q       .         .         .    V    .
  18.750    204.1909     86.32  . Q       .         .         .    V    .
  18.833    204.7665     83.58  . Q       .         .         .    V    .
  18.917    205.3279     81.51  . Q       .         .         .    V    .
  19.000    205.8763     79.62  . Q       .         .         .    V    .
  19.083    206.4120     77.80  . Q       .         .         .     V   .
  19.167    206.9354     75.99  . Q       .         .         .     V   .
  19.250    207.4459     74.13  . Q       .         .         .     V   .
  19.333    207.9462     72.63  . Q       .         .         .     V   .
  19.417    208.4371     71.29  . Q       .         .         .     V   .
  19.500    208.9194     70.02  . Q       .         .         .     V   .
  19.583    209.3931     68.79  . Q       .         .         .     V   .
  19.667    209.8587     67.61  . Q       .         .         .     V   .
  19.750    210.3166     66.48  . Q       .         .         .     V   .
  19.833    210.7671     65.41  . Q       .         .         .     V   .
  19.917    211.2105     64.39  . Q       .         .         .     V   .
  20.000    211.6472     63.40  . Q       .         .         .     V   .


********************************************************************************
  FLOW PROCESS FROM NODE   6355.00 TO NODE   6355.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
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********************************************************************************
  FLOW PROCESS FROM NODE   6355.00 TO NODE   6355.00 IS CODE =   6
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6355.00 TO NODE   6355.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================

          STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
        (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.     1600.0    3200.0    4800.0    6400.0
--------------------------------------------------------------------------------
  14.000    495.5606   1078.04  .     Q   V         .         .         .
  14.083    503.1917   1108.04  .     Q   V         .         .         .
  14.167    511.0847   1146.07  .      Q  V         .         .         .
  14.250    519.3653   1202.34  .      Q  .V        .         .         .
  14.333    528.1807   1280.00  .       Q .V        .         .         .
  14.417    537.6783   1379.05  .       Q .V        .         .         .
  14.500    547.9233   1487.56  .        Q.V        .         .         .
  14.583    558.9778   1605.12  .         QV        .         .         .
  14.667    570.9323   1735.79  .         Q V       .         .         .
  14.750    583.8690   1878.40  .         .QV       .         .         .
  14.833    597.7902   2021.36  .         . Q       .         .         .
  14.917    612.6079   2151.54  .         .  Q      .         .         .
  15.000    628.2141   2266.02  .         .  VQ     .         .         .
  15.083    644.5397   2370.48  .         .  VQ     .         .         .
  15.167    661.5487   2469.70  .         .   VQ    .         .         .
  15.250    679.2237   2566.41  .         .   V Q   .         .         .
  15.333    697.5564   2661.91  .         .   V Q   .         .         .
  15.417    716.5251   2754.26  .         .    V Q  .         .         .
  15.500    736.0449   2834.27  .         .    V Q  .         .         .
  15.583    755.9235   2886.37  .         .     V Q .         .         .
```

15.667	775.9648	2910.01	. . V Q . . .
15.750	796.0286	2913.25	. . VQ . . .
15.833	816.1934	2927.94	. . VQ . . .
15.917	836.5997	2962.99	. . VQ . . .
16.000	857.3392	3011.38	. . Q . . .
16.083	878.8991	3130.51	. . VQ. . .
16.167	902.4399	3418.13	. . V.Q . .
16.250	929.6382	3949.20	. . V. Q . .
16.333	960.6793	4507.16	. . V Q . .
16.417	994.9123	4970.63	. . .V .Q .
16.500	1030.3402	5144.13	. . . V . Q .
16.583	1067.3663	5376.19	. . . V . Q .
16.667	1107.4506	5820.22	. . . V . Q .
16.750	1150.5875	6263.48	. . . V . Q.
16.833	1194.5859	6388.58	. . . V . Q.
16.917	1236.9364	6149.29	. . . V . Q .
17.000	1276.3019	5715.87	. . . V . Q .
17.083	1312.3737	5237.63	. . . V . Q .
17.167	1345.4553	4803.45	. . . V Q .
17.250	1375.9625	4429.64	. . . Q V. .
17.333	1404.2489	4107.19	. . . Q V .
17.417	1430.5333	3816.50	. . . Q V .
17.500	1455.0149	3554.72	. . . Q .V .
17.583	1477.8258	3312.15	. . Q .V .
17.667	1498.9708	3070.26	. . Q. . V .
17.750	1518.3695	2816.70	. . Q . . V .
17.833	1536.0197	2562.79	. . Q . . V .
17.917	1552.0503	2327.66	. . Q . . V .
18.000	1566.6420	2118.72	. . Q . . V .
18.083	1579.9553	1933.10	. . Q . . V .
18.167	1592.0903	1762.00	. .Q . . V .
18.250	1603.0704	1594.31	. Q. . . V .
18.333	1612.9222	1430.49	. Q . . . V .
18.417	1621.7957	1288.42	. Q . . . V .
18.500	1629.9359	1181.97	. Q . . . V .
18.583	1637.5208	1101.32	. Q . . . V .
18.667	1644.6079	1029.06	. Q . . . V .
18.750	1651.2158	959.47	. Q . . . V .
18.833	1657.3948	897.18	. Q . . . V .
18.917	1663.2214	846.02	. Q . . . V .
19.000	1668.7570	803.76	. Q . . . V .
19.083	1674.0334	766.14	. Q . . . V .
19.167	1679.0786	732.56	. Q . . . V .
19.250	1683.9312	704.59	. Q . . . V .
19.333	1688.6277	681.93	. Q . . . V .
19.417	1693.1915	662.67	. Q . . . V .
19.500	1697.6382	645.66	. Q . . . V .
19.583	1701.9778	630.10	. Q . . . V .
19.667	1706.2166	615.47	. Q . . . V .
19.750	1710.3573	601.24	. Q . . . V .
19.833	1714.4017	587.24	. Q . . . V .
19.917	1718.3510	573.43	. Q . . . V .
20.000	1722.1962	558.32	. Q . . . V .
20.083	1725.9167	540.23	. Q . . . V .
20.167	1729.5092	521.62	. Q . . . V .
20.250	1732.9984	506.65	. Q . . . V .
20.333	1736.4087	495.17	. Q . . . V .
20.417	1739.7515	485.37	. Q . . . V .
20.500	1743.0320	476.33	. Q . . . V .
20.583	1746.2531	467.69	. Q . . . V .
20.667	1749.4169	459.38	. Q . . . V .
20.750	1752.5258	451.40	. Q . . . V .
20.833	1755.5819	443.75	. Q . . . V .
20.917	1758.5873	436.38	. Q . . . V .
21.000	1761.5438	429.29	. Q . . . V .
21.083	1764.4554	422.77	. Q . . . V .

21.167	1767.3259	416.79	. Q . . . V .
21.250	1770.1580	411.21	. Q . . . V .
21.333	1772.9534	405.90	. Q . . . V .
21.417	1775.7137	400.81	. Q . . . V .
21.500	1778.4404	395.92	. Q . . . V .
21.583	1781.1346	391.21	. Q . . . V .
21.667	1783.7975	386.65	. Q . . . V .
21.750	1786.4299	382.23	. Q . . . V .
21.833	1789.0330	377.96	. Q . . . V .
21.917	1791.6073	373.80	. Q . . . V .
22.000	1794.1539	369.78	. Q . . . V .
22.083	1796.6738	365.90	. Q . . . V .
22.167	1799.1681	362.17	. Q . . . V .
22.250	1801.6376	358.57	. Q . . . V .
22.333	1804.0830	355.08	. Q . . . V .
22.417	1806.5051	351.69	. Q . . . V .
22.500	1808.9044	348.38	. Q . . . V .
22.583	1811.2816	345.16	. Q . . . V .
22.667	1813.6371	342.02	. Q . . . V .
22.750	1815.9714	338.94	. Q . . . V .
22.833	1818.2852	335.95	. Q . . . V .
22.917	1820.5786	333.02	. Q . . . V .
23.000	1822.8524	330.16	. Q . . . V.
23.083	1825.1069	327.36	. Q . . . V.
23.167	1827.3427	324.62	. Q . . . V.
23.250	1829.5599	321.95	. Q . . . V.
23.333	1831.7592	319.33	.Q . . . V.
23.417	1833.9408	316.77	.Q . . . V.
23.500	1836.1051	314.26	.Q . . . V.
23.583	1838.2524	311.80	.Q . . . V.
23.667	1840.3833	309.40	.Q . . . V.
23.750	1842.4979	307.04	.Q . . . V.
23.833	1844.5966	304.73	.Q . . . V.
23.917	1846.6797	302.46	.Q . . . V.
24.000	1848.7474	300.24	.Q . . . V.
24.083	1850.7963	297.48	.Q . . . V.
24.167	1852.8103	292.44	.Q . . . V.
24.250	1854.7515	281.85	.Q . . . V.
24.333	1856.5765	265.00	.Q . . . V.
24.417	1858.2488	242.80	.Q . . . V.
24.500	1859.7611	219.59	.Q . . . V.
24.583	1861.0947	193.63	.Q . . . V.
24.667	1862.2059	161.35	.Q . . . V.
24.750	1863.0829	127.33	Q . . . V.
24.833	1863.7734	100.26	Q . . . V.
24.917	1864.3369	81.82	Q . . . V.
25.000	1864.8091	68.57	Q . . . V.
25.083	1865.2096	58.16	Q . . . V.
25.167	1865.5511	49.60	Q . . . V.
25.250	1865.8433	42.42	Q . . . V.
25.333	1866.0935	36.33	Q . . . V.
25.417	1866.3080	31.14	Q . . . V.
25.500	1866.4918	26.69	Q . . . V.
25.583	1866.6487	22.78	Q . . . V.
25.667	1866.7819	19.34	Q . . . V.
25.750	1866.8945	16.37	Q . . . V.
25.833	1866.9897	13.82	Q . . . V.
25.917	1867.0702	11.67	Q . . . V.
26.000	1867.1383	9.90	Q . . . V.
26.083	1867.1959	8.37	Q . . . V.
26.167	1867.2445	7.06	Q . . . V.
26.250	1867.2865	6.10	Q . . . V.
26.333	1867.3242	5.48	Q . . . V.
26.417	1867.3590	5.05	Q . . . V.
26.500	1867.3914	4.70	Q . . . V.
26.583	1867.4215	4.39	Q . . . V.

26.667	1867.4497	4.09	Q	.	.	.	V.
26.750	1867.4758	3.79	Q	.	.	.	V.
26.833	1867.5000	3.51	Q	.	.	.	V.
26.917	1867.5225	3.25	Q	.	.	.	V.
27.000	1867.5432	3.01	Q	.	.	.	V.
27.083	1867.5623	2.76	Q	.	.	.	V.
27.167	1867.5796	2.52	Q	.	.	.	V.
27.250	1867.5953	2.28	Q	.	.	.	V.
27.333	1867.6095	2.05	Q	.	.	.	V.
27.417	1867.6219	1.82	Q	.	.	.	V.
27.500	1867.6328	1.58	Q	.	.	.	V.
27.583	1867.6421	1.35	Q	.	.	.	V.
27.667	1867.6499	1.13	Q	.	.	.	V.
27.750	1867.6561	0.90	Q	.	.	.	V.
27.833	1867.6609	0.69	Q	.	.	.	V.
27.917	1867.6642	0.48	Q	.	.	.	V.
28.000	1867.6661	0.28	Q	.	.	.	V.
28.083	1867.6671	0.14	Q	.	.	.	V
28.167	1867.6675	0.05	Q	.	.	.	V
28.250	1867.6676	0.02	Q	.	.	.	V
28.333	1867.6677	0.02	Q	.	.	.	V
28.417	1867.6678	0.01	Q	.	.	.	V
28.500	1867.6680	0.01	Q	.	.	.	V

****
FLOW PROCESS FROM NODE 6355.00 TO NODE 6371.00 IS CODE = 5.2

>>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
==========

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
INTERVALS(Reference: the National Engineering Handbook,
Hydrology, Chapter 17, page 17-52, August,1972,
U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 30.00 CHANNEL Z = 1.00
UPSTREAM ELEVATION(FT) = 314.00
DOWNSTREAM ELEVATION(FT) = 220.00
CHANNEL LENGTH(FT) = 5919.00 MANNING'S FACTOR = 0.040
CONSTANT LOSS RATE(CFS) = 0.00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 6388.58
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 4831.34
CHANNEL NORMAL VELOCITY FOR Q = 4831.34 CFS = 15.32 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.900

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
UNIT INTERVALS IS CSTAR = 0.877

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.000	1078.04	1043.30	1043.30
14.083	1108.04	1069.97	1069.97
14.167	1146.07	1099.15	1099.15
14.250	1202.34	1134.96	1134.96
14.333	1280.00	1186.16	1186.16
14.417	1379.05	1257.56	1257.56
14.500	1487.56	1350.21	1350.21
14.583	1605.12	1455.44	1455.44
14.667	1735.79	1570.21	1570.21
14.750	1878.40	1697.09	1697.09
14.833	2021.36	1836.09	1836.09
14.917	2151.54	1978.51	1978.51
15.000	2266.02	2111.99	2111.99
15.083	2370.48	2231.00	2231.00
15.167	2469.70	2338.67	2338.67
15.250	2566.41	2439.66	2439.66
15.333	2661.91	2537.25	2537.25
15.417	2754.26	2633.18	2633.18
15.500	2834.27	2726.41	2726.41
15.583	2886.37	2809.78	2809.78
15.667	2910.01	2869.63	2869.63
15.750	2913.25	2901.72	2901.72
15.833	2927.94	2911.38	2911.38
15.917	2962.99	2923.84	2923.84
16.000	3011.38	2953.26	2953.26
16.083	3130.51	2997.44	2997.44
16.167	3418.13	3097.43	3097.43
16.250	3949.20	3338.34	3338.34
16.333	4507.16	3799.57	3799.57
16.417	4970.63	4341.84	4341.84
16.500	5144.13	4828.24	4828.24
16.583	5376.19	5080.89	5080.89
16.667	5820.22	5307.31	5307.31
16.750	6263.48	5694.85	5694.85
16.833	6388.58	6131.34	6131.34
16.917	6149.29	6339.34	6339.34
17.000	5715.87	6206.19	6206.19
17.083	5237.63	5836.97	5836.97
17.167	4803.45	5378.45	5378.45
17.250	4429.64	4935.11	4935.11
17.333	4107.19	4544.27	4544.27
17.417	3816.50	4206.21	4206.21
17.500	3554.72	3905.23	3905.23
17.583	3312.15	3634.57	3634.57
17.667	3070.26	3385.85	3385.85
17.750	2816.70	3143.02	3143.02
17.833	2562.79	2892.41	2892.41
17.917	2327.66	2638.97	2638.97
18.000	2118.72	2398.95	2398.95
18.083	1933.10	2182.51	2182.51
18.167	1762.00	1989.83	1989.83
18.250	1594.31	1814.03	1814.03
18.333	1430.49	1644.86	1644.86
18.417	1288.42	1479.85	1479.85
18.500	1181.97	1331.91	1331.91
18.583	1101.32	1215.36	1215.36
18.667	1029.06	1126.67	1126.67
18.750	959.47	1051.21	1051.21
18.833	897.18	980.52	980.52
18.917	846.02	916.17	916.17
19.000	803.76	861.83	861.83
19.083	766.14	816.84	816.84
19.167	732.56	777.66	777.66
19.250	704.59	742.82	742.82
19.333	681.93	713.22	713.22
19.417	662.67	688.96	688.96
19.500	645.66	668.60	668.60
19.583	630.10	650.87	650.87
19.667	615.47	634.84	634.84
19.750	601.24	619.90	619.90
19.833	587.24	605.53	605.53

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         19.917       573.43      591.46      591.46
         20.000       558.32      577.58      577.58
================================================================================
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   1867.667 AF
    OUTFLOW VOLUME =   1867.668 AF
    LOSS    VOLUME =      0.000 AF


****************************************************************************
  FLOW PROCESS FROM NODE   6360.00 TO NODE   6371.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
============================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #2)

         WATERSHED AREA =     922.300 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.250 HOURS
          CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
          THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
          MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.900
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.120
         LOW LOSS FRACTION = 0.510
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.58
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.22
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.62
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.71
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  3.75
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  6.28

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.727
          30-MINUTE FACTOR = 0.727
           1-HOUR FACTOR = 0.727
           3-HOUR FACTOR = 0.955
           6-HOUR FACTOR = 0.976
          24-HOUR FACTOR = 0.985

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  33.333


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


============================================================================
                      UNIT HYDROGRAPH DETERMINATION

----------------------------------------------------------------------------
     INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
      NUMBER          MEAN VALUES          ORDINATES(CFS)
----------------------------------------------------------------------------
         1                2.292               255.704
         2               13.821              1285.900
         3               35.522              2420.567
         4               62.164              2971.648
         5               80.648              2061.668
         6               89.997              1042.866
         7               94.646               518.513
         8               96.625               220.790
         9               97.489                96.296
        10               98.211                80.598
        11               98.708                55.360
        12               99.005                33.223
        13               99.174                18.845
        14               99.253                 8.821
        15               99.326                 8.100
        16               99.394                 7.535
        17               99.458                 7.164
        18               99.518                 6.727
        19               99.574                 6.257
        20               99.626                 5.759
        21               99.675                 5.514
        22               99.718                 4.708
        23               99.759                 4.643
        24               99.799                 4.443
        25               99.827                 3.130
        26               99.851                 2.675
        27               99.875                 2.675
        28               99.897                 2.469
        29               99.906                 1.014
        30               99.913                 0.730
        31               99.919                 0.731
        32               99.926                 0.729
        33               99.932                 0.731
        34               99.939                 0.729
        35               99.946                 0.730
        36               99.952                 0.729
        37               99.959                 0.729
        38               99.965                 0.729
        39               99.972                 0.730
        40               99.978                 0.729
        41               99.985                 0.729
        42               99.991                 0.729
        43               99.998                 0.729
        44              100.000                 0.237

----------------------------------------------------------------------------
    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =     154.3473
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =     320.9865
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                    2 4 - H O U R    S T O R M
                  R U N O F F    H Y D R O G R A P H

================================================================================
            HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
       (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      475.0     950.0    1425.0    1900.0
--------------------------------------------------------------------------------
  14.000     93.1887    258.95  .    Q    .V        .         .         .
  14.083     95.0463    269.72  .    Q    .V        .         .         .
  14.167     97.0919    297.01  .     Q   . V       .         .         .
  14.250     99.4483    342.16  .      Q  . V       .         .         .
  14.333    102.1764    396.11  .       Q . V       .         .         .
  14.417    105.1775    435.77  .        Q.  V      .         .         .
  14.500    108.3438    459.75  .        Q.  V      .         .         .
  14.583    111.6203    475.74  .         Q  V      .         .         .
  14.667    114.9787    487.63  .         Q   V     .         .         .
  14.750    118.4084    497.99  .         Q   V     .         .         .
  14.833    121.9128    508.85  .         Q    V    .         .         .
  14.917    125.4933    519.88  .         Q    V    .         .         .
  15.000    129.1539    531.52  .         .Q    V   .         .         .
  15.083    132.8985    543.72  .         .Q    V   .         .         .
  15.167    136.7348    557.03  .         .Q     V  .         .         .
  15.250    140.6701    571.42  .         . Q    V  .         .         .
  15.333    144.7167    587.56  .         . Q     V .         .         .
  15.417    148.8326    597.63  .         . Q     V .         .         .
  15.500    152.8231    579.42  .         . Q      V.         .         .
  15.583    156.4765    530.49  .         .Q       V.         .         .
  15.667    159.7219    471.23  .        Q.        V.         .         .
  15.750    162.8064    447.87  .        Q.         V         .         .
  15.833    166.0406    469.60  .        Q.         V         .         .
  15.917    169.6792    528.34  .         .Q        .V        .         .
  16.000    174.0907    640.54  .         .  Q      .V        .         .
  16.083    180.2009    887.20  .         .       Q . V       .         .
  16.167    189.6607   1373.57  .         .         .  V    Q .         .
  16.250    202.0719   1802.11  .         .         .    V    .       Q  .
  16.333    215.1546   1899.61  .         .         .     V   .        Q.
  16.417    225.2200   1461.49  .         .         .       V Q         .
  16.500    232.1720   1009.42  .         .        .Q       V .         .
  16.583    237.5264    777.47  .         .     Q   .        V.         .
  16.667    242.1749    674.96  .         .   Q     .         V         .
  16.750    246.5237    631.44  .         .  Q      .         V         .
  16.833    250.7251    610.04  .         . Q       .         .V        .
  16.917    254.7254    580.84  .         . Q       .         .V        .
  17.000    258.5161    550.41  .         .Q        .         . V       .
  17.083    262.0959    519.79  .         Q         .         . V       .
  17.167    265.3885    478.09  .         Q         .         .  V      .
  17.250    268.3053    423.51  .       Q .         .         .  V      .
  17.333    270.7946    361.45  .      Q  .         .         .  V      .
  17.417    272.9601    314.43  .     Q   .         .         .   V     .
  17.500    274.9172    284.16  .    Q    .         .         .   V     .
  17.583    276.7300    263.22  .    Q    .         .         .   V     .
  17.667    278.4380    248.00  .    Q    .         .         .   V     .
  17.750    280.0622    235.82  .   Q     .         .         .   V     .
  17.833    281.6090    224.60  .   Q     .         .         .    V    .
  17.917    283.0880    214.74  .   Q     .         .         .    V    .
  18.000    284.5053    205.80  .   Q     .         .         .    V    .
  18.083    285.8540    195.83  .   Q     .         .         .    V    .
  18.167    287.0991    180.78  .  Q      .         .         .    V    .
  18.250    288.2008    159.97  .  Q      .         .         .    V    .
  18.333    289.1435    136.87  . Q       .         .         .     V   .
  18.417    289.9695    119.93  . Q       .         .         .     V   .
  18.500    290.7289    110.27  . Q       .         .         .     V   .
  18.583    291.4475    104.34  . Q       .         .         .     V   .
  18.667    292.1397    100.51  . Q       .         .         .     V   .
  18.750    292.8118     97.59  . Q       .         .         .     V   .
  18.833    293.4655     94.92  .Q        .         .         .     V   .
  18.917    294.1028     92.54  .Q        .         .         .     V   .
  19.000    294.7256     90.42  .Q        .         .         .     V   .
  19.083    295.3352     88.52  .Q        .         .         .     V   .
  19.167    295.9328     86.77  .Q        .         .         .     V   .
  19.250    296.5189     85.11  .Q        .         .         .     V   .
  19.333    297.0941     83.52  .Q        .         .         .      V  .
  19.417    297.6590     82.01  .Q        .         .         .      V  .
  19.500    298.2138     80.57  .Q        .         .         .      V  .
  19.583    298.7590     79.16  .Q        .         .         .      V  .
  19.667    299.2938     77.66  .Q        .         .         .      V  .
  19.750    299.8194     76.31  .Q        .         .         .      V  .
  19.833    300.3366     75.11  .Q        .         .         .      V  .
  19.917    300.8460     73.97  .Q        .         .         .      V  .
  20.000    301.3478     72.86  .Q        .         .         .      V  .


********************************************************************************
  FLOW PROCESS FROM NODE   6371.00 TO NODE   6371.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6371.00 TO NODE   6371.00 IS CODE =   6
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6371.00 TO NODE   6371.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================

          STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
       (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.     1750.0    3500.0    5250.0    7000.0
--------------------------------------------------------------------------------
  14.000    579.1592   1302.25  .      Q  V        .         .         .
  14.083    588.3857   1339.69  .      Q  V        .         .         .
  14.167    598.0012   1396.16  .      Q  V        .         .         .
  14.250    608.1742   1477.13  .       Q .V       .         .         .
  14.333    619.0714   1582.27  .        Q.V       .         .         .
  14.417    630.7334   1693.33  .        Q.V       .         .         .
  14.500    643.1987   1809.96  .         QV       .         .         .
  14.583    656.4988   1931.19  .         .Q       .         .         .
  14.667    670.6713   2057.85  .         .QV      .         .         .
  14.750    685.7889   2195.08  .         . Q      .         .         .
  14.833    701.9387   2344.94  .         . VQ     .         .         .
  14.917    719.1452   2498.39  .         .  VQ    .         .         .
  15.000    737.3512   2643.51  .         .  V Q   .         .         .
  15.083    756.4608   2774.72  .         .  V Q   .         .         .
  15.167    776.4036   2895.69  .         .   V Q  .         .         .
  15.250    797.1410   3011.08  .         .   V  Q .         .         .
  15.333    818.6617   3124.81  .         .   V  Q .         .         .
  15.417    840.9124   3230.81  .         .    V  Q.         .         .
  15.500    863.6798   3305.83  .         .    V  Q.         .         .
  15.583    886.6843   3340.26  .         .     V  Q.        .         .
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15.667	909.6930	3340.86	. . V Q. . .
15.750	932.7618	3349.59	. . V Q. . .
15.833	956.0468	3380.98	. . V Q. . .
15.917	979.8221	3452.18	. . V Q. . .
16.000	1004.5728	3593.79	. . V Q . .
16.083	1031.3265	3884.64	. . V . Q . .
16.167	1062.1185	4471.00	. . V. Q . .
16.250	1097.5211	5140.45	. . V Q. .
16.333	1136.7716	5699.18	. . V . Q .
16.417	1176.7394	5803.33	. . .V . Q .
16.500	1216.9437	5837.66	. . . V . Q .
16.583	1257.2905	5858.36	. . . V . Q .
16.667	1298.4907	5982.27	. . . V . Q .
16.750	1342.0602	6326.29	. . . V . Q .
16.833	1388.4884	6741.38	. . . V . Q .
16.917	1436.1481	6920.19	. . . V . Q.
17.000	1482.6812	6756.60	. . . V . Q .
17.083	1526.4606	6356.77	. . . V . Q .
17.167	1566.7948	5856.53	. . . V . Q .
17.250	1603.7000	5358.62	. . . VQ .
17.333	1637.4860	4905.72	. . . QV. .
17.417	1668.6199	4520.64	. . . Q V .
17.500	1697.4724	4189.39	. . . Q .V .
17.583	1724.3168	3897.80	. . . Q .V .
17.667	1749.3434	3633.86	. . Q .V .
17.750	1772.6136	3378.84	. . Q. . V .
17.833	1794.0807	3117.02	. . Q . . V .
17.917	1813.7344	2853.71	. . Q . . V .
18.000	1831.6733	2604.75	. . Q . . V .
18.083	1848.0531	2378.34	. . Q . . V .
18.167	1863.0022	2170.61	. . Q . . V .
18.250	1876.5973	1974.00	. .Q . . V .
18.333	1888.8682	1781.73	. Q . . V .
18.417	1899.8859	1599.78	. Q. . V .
18.500	1909.8182	1442.17	. Q . . V .
18.583	1918.9071	1319.70	. Q . . V .
18.667	1927.3588	1227.18	. Q . . V .
18.750	1935.2706	1148.80	. Q . . V .
18.833	1942.6772	1075.44	. Q . . V .
18.917	1949.6243	1008.71	. Q . . V .
19.000	1956.1825	952.25	. Q . . V .
19.083	1962.4177	905.35	. Q . . V .
19.167	1968.3711	864.43	. Q . . V .
19.250	1974.0731	827.93	. Q . . V .
19.333	1979.5603	796.74	. Q . . V .
19.417	1984.8701	770.98	. Q . . V .
19.500	1990.0297	749.17	. Q . . V .
19.583	1995.0574	730.02	. Q . . V .
19.667	1999.9644	712.50	. Q . . V .
19.750	2004.7593	696.21	. Q . . V .
19.833	2009.4469	680.64	. Q . . V .
19.917	2014.0297	665.42	. Q . . V .
20.000	2018.5093	650.44	. Q . . V .
20.083	2022.8798	634.60	. Q . . V .
20.167	2027.1244	616.31	. Q . . V .
20.250	2031.2357	596.96	. Q . . V .
20.333	2035.2310	580.11	. Q . . V .
20.417	2039.1338	566.69	. Q . . V .
20.500	2042.9591	555.44	. Q . . V .
20.583	2046.7145	545.29	. Q . . V .
20.667	2050.4038	535.69	. Q . . V .
20.750	2054.0298	526.49	. Q . . V .
20.833	2057.5950	517.65	. Q . . V .
20.917	2061.1016	509.17	. Q . . V .
21.000	2064.5520	500.99	. Q . . V .
21.083	2067.9482	493.13	. Q . . V .

21.167	2071.2937	485.77	. Q . . V .
21.250	2074.5923	478.97	. Q . . V .
21.333	2077.8472	472.63	. Q . . V .
21.417	2081.0608	466.61	. Q . . V .
21.500	2084.2346	460.85	. Q . . V .
21.583	2087.3704	455.31	. Q . . V .
21.667	2090.4695	449.97	. Q . . V .
21.750	2093.5330	444.81	. Q . . V .
21.833	2096.5620	439.82	. Q . . V .
21.917	2099.5576	434.97	. Q . . V .
22.000	2102.5208	430.26	. Q . . V .
22.083	2105.4526	425.70	. Q . . V .
22.167	2108.3540	421.29	. Q . . V .
22.250	2111.2261	417.04	. Q . . V .
22.333	2114.0701	412.93	. Q . . V .
22.417	2116.8865	408.95	. Q . . V .
22.500	2119.6763	405.08	. Q . . V .
22.583	2122.4402	401.31	. Q . . V .
22.667	2125.1787	397.64	. Q . . V .
22.750	2127.8926	394.05	. Q . . V .
22.833	2130.5823	390.54	. Q . . V .
22.917	2133.2483	387.12	. Q . . V .
23.000	2135.8914	383.78	. Q . . V.
23.083	2138.5120	380.51	. Q . . V.
23.167	2141.1106	377.32	. Q . . V.
23.250	2143.6877	374.19	. Q . . V.
23.333	2146.2439	371.14	. Q . . V.
23.417	2148.7793	368.15	. Q . . V.
23.500	2151.2947	365.22	. Q . . V.
23.583	2153.7903	362.35	. Q . . V.
23.667	2156.2664	359.54	. Q . . V.
23.750	2158.7236	356.79	. Q . . V.
23.833	2161.1624	354.10	. Q . . V.
23.917	2163.5828	351.45	. Q . . V.
24.000	2165.9854	348.86	.Q . . V.
24.083	2168.3635	345.30	.Q . . V.
24.167	2170.6863	337.27	.Q . . V.
24.250	2172.9104	322.95	.Q . . V.
24.333	2174.9895	301.88	.Q . . V.
24.417	2176.9080	278.55	.Q . . V.
24.500	2178.6558	253.78	.Q . . V.
24.583	2180.2324	228.94	.Q . . V.
24.667	2181.6296	202.87	.Q . . V.
24.750	2182.8140	171.95	Q . . V.
24.833	2183.7664	138.28	Q . . V.
24.917	2184.5188	109.24	Q . . V.
25.000	2185.1260	88.17	Q . . V.
25.083	2185.6299	73.17	Q . . V.
25.167	2186.0552	61.77	Q . . V.
25.250	2186.4172	52.57	Q . . V.
25.333	2186.7266	44.92	Q . . V.
25.417	2186.9915	38.46	Q . . V.
25.500	2187.2185	32.97	Q . . V.
25.583	2187.4131	28.26	Q . . V.
25.667	2187.5793	24.15	Q . . V.
25.750	2187.7209	20.55	Q . . V.
25.833	2187.8408	17.41	Q . . V.
25.917	2187.9421	14.71	Q . . V.
26.000	2188.0278	12.43	Q . . V.
26.083	2188.1003	10.53	Q . . V.
26.167	2188.1616	8.91	Q . . V.
26.250	2188.2134	7.52	Q . . V.
26.333	2188.2578	6.45	Q . . V.
26.417	2188.2971	5.72	Q . . V.
26.500	2188.3333	5.23	Q . . V.
26.583	2188.3667	4.85	Q . . V.

26.667	2188.3977	4.52	Q	.	.	.	V.
26.750	2188.4268	4.21	Q	.	.	.	V.
26.833	2188.4536	3.91	Q	.	.	.	V.
26.917	2188.4785	3.62	Q	.	.	.	V.
27.000	2188.5017	3.36	Q	.	.	.	V.
27.083	2188.5229	3.10	Q	.	.	.	V.
27.167	2188.5425	2.85	Q	.	.	.	V.
27.250	2188.5603	2.61	Q	.	.	.	V.
27.333	2188.5767	2.36	Q	.	.	.	V.
27.417	2188.5913	2.13	Q	.	.	.	V.
27.500	2188.6042	1.89	Q	.	.	.	V.
27.583	2188.6157	1.65	Q	.	.	.	V.
27.667	2188.6255	1.42	Q	.	.	.	V.
27.750	2188.6338	1.19	Q	.	.	.	V.
27.833	2188.6404	0.97	Q	.	.	.	V.
27.917	2188.6455	0.75	Q	.	.	.	V.
28.000	2188.6492	0.54	Q	.	.	.	V.
28.083	2188.6516	0.34	Q	.	.	.	V.
28.167	2188.6526	0.15	Q	.	.	.	V.
28.250	2188.6531	0.07	Q	.	.	.	V.
28.333	2188.6533	0.04	Q	.	.	.	V.
28.417	2188.6536	0.03	Q	.	.	.	V.
28.500	2188.6536	0.02	Q	.	.	.	V.
28.583	2188.6536	0.01	Q	.	.	.	V.
28.667	2188.6536	0.01	Q	.	.	.	V.

****
FLOW PROCESS FROM NODE 6371.00 TO NODE 6395.00 IS CODE = 5.2

>>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
==========

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
INTERVALS(Reference: the National Engineering Handbook,
Hydrology, Chapter 17, page 17-52, August,1972,
U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 35.00 CHANNEL Z = 1.00
UPSTREAM ELEVATION(FT) = 220.00
DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 959.00 MANNING'S FACTOR = 0.040
CONSTANT LOSS RATE(CFS) = 0.00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 6920.19
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 5320.69
CHANNEL NORMAL VELOCITY FOR Q = 5320.69 CFS = 11.75 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.874

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
UNIT INTERVALS IS CSTAR = 0.998

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.000	1302.25	1294.65	1294.65
14.083	1339.69	1330.74	1330.74
14.167	1396.16	1382.66	1382.66
14.250	1477.13	1457.78	1457.78
14.333	1582.27	1557.14	1557.14
14.417	1693.33	1666.78	1666.78
14.500	1809.96	1782.07	1782.07
14.583	1931.19	1902.20	1902.20
14.667	2057.85	2027.57	2027.57
14.750	2195.08	2162.27	2162.27
14.833	2344.94	2309.11	2309.11
14.917	2498.39	2461.70	2461.70
15.000	2643.51	2608.81	2608.81
15.083	2774.72	2743.34	2743.34
15.167	2895.69	2866.76	2866.76
15.250	3011.08	2983.49	2983.49
15.333	3124.81	3097.61	3097.61
15.417	3230.81	3205.46	3205.46
15.500	3305.83	3287.88	3287.88
15.583	3340.26	3332.01	3332.01
15.667	3340.86	3340.70	3340.70
15.750	3349.59	3347.50	3347.50
15.833	3380.98	3373.48	3373.48
15.917	3452.18	3435.17	3435.17
16.000	3593.79	3559.96	3559.96
16.083	3884.64	3815.15	3815.15
16.167	4471.00	4330.91	4330.91
16.250	5140.45	4980.42	4980.42
16.333	5699.18	5565.55	5565.55
16.417	5803.33	5778.26	5778.26
16.500	5837.66	5829.43	5829.43
16.583	5858.36	5853.41	5853.41
16.667	5982.27	5952.68	5952.68
16.750	6326.29	6244.12	6244.12
16.833	6741.38	6642.16	6642.16
16.917	6920.19	6877.35	6877.35
17.000	6756.60	6795.59	6795.59
17.083	6356.77	6452.28	6452.28
17.167	5856.53	5976.10	5976.10
17.250	5358.62	5477.67	5477.67
17.333	4905.72	5014.03	5014.03
17.417	4520.64	4612.74	4612.74
17.500	4189.39	4268.61	4268.61
17.583	3897.80	3967.53	3967.53
17.667	3633.86	3696.97	3696.97
17.750	3378.84	3439.82	3439.82
17.833	3117.02	3179.62	3179.62
17.917	2853.71	2916.66	2916.66
18.000	2604.75	2664.28	2664.28
18.083	2378.34	2432.48	2432.48
18.167	2170.61	2220.28	2220.28
18.250	1974.00	2021.02	2021.02
18.333	1781.73	1827.71	1827.71
18.417	1599.78	1643.29	1643.29
18.500	1442.17	1479.87	1479.87
18.583	1319.70	1349.00	1349.00
18.667	1227.18	1249.31	1249.31
18.750	1148.80	1167.55	1167.55
18.833	1075.44	1092.98	1092.98
18.917	1008.71	1024.66	1024.66
19.000	952.25	965.75	965.75
19.083	905.35	916.57	916.57
19.167	864.43	874.21	874.21
19.250	827.93	836.66	836.66
19.333	796.74	804.20	804.20
19.417	770.98	777.14	777.14
19.500	749.17	754.39	754.39
19.583	730.02	734.60	734.60
19.667	712.50	716.69	716.69

```
         19.750       696.21      700.11      700.11
         19.833       680.64      684.36      684.36
         19.917       665.42      669.06      669.06
         20.000       650.44      654.02      654.02
================================================================================
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   2188.654 AF
    OUTFLOW VOLUME =   2188.653 AF
    LOSS    VOLUME =      0.000 AF


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  FLOW PROCESS FROM NODE   6380.00 TO NODE   6395.00 IS CODE =   1
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  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
============================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #2)

         WATERSHED AREA =     329.600 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.330 HOURS
          CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
          THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
          MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.900
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.150
         LOW LOSS FRACTION = 0.500
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.58
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.22
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.62
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.71
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  3.75
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  6.28

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.727
          30-MINUTE FACTOR = 0.727
           1-HOUR FACTOR = 0.727
           3-HOUR FACTOR = 0.955
           6-HOUR FACTOR = 0.976
          24-HOUR FACTOR = 0.985

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  25.253


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  14.00
         MODEL TIME(HOURS) FOR END OF RESULTS =  20.00


============================================================================
                     UNIT HYDROGRAPH DETERMINATION

----------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
----------------------------------------------------------------------------
         1                1.602                63.859
         2                7.797               246.932
         3               21.404               542.405
         4               39.370               716.138
         5               60.064               824.885
         6               75.891               630.876
         7               85.613               387.515
         8               91.167               221.417
         9               94.489               132.407
        10               96.293                71.884
        11               97.026                29.243
        12               97.665                25.478
        13               98.270                24.118
        14               98.850                23.087
        15               98.984                 5.349
        16               99.089                 4.176
        17               99.176                 3.468
        18               99.236                 2.391
        19               99.292                 2.234
        20               99.345                 2.124
        21               99.396                 2.026
        22               99.445                 1.965
        23               99.491                 1.826
        24               99.536                 1.815
        25               99.577                 1.639
        26               99.617                 1.559
        27               99.656                 1.556
        28               99.690                 1.365
        29               99.721                 1.257
        30               99.753                 1.257
        31               99.784                 1.254
        32               99.812                 1.082
        33               99.830                 0.737
        34               99.848                 0.724
        35               99.866                 0.724
        36               99.885                 0.724
        37               99.900                 0.614
        38               99.906                 0.230
        39               99.911                 0.198
        40               99.916                 0.197
        41               99.921                 0.199
        42               99.926                 0.197
        43               99.930                 0.197
        44               99.935                 0.198
        45               99.940                 0.198
        46               99.945                 0.197
        47               99.950                 0.199
        48               99.955                 0.197
        49               99.960                 0.197
        50               99.965                 0.196
        51               99.970                 0.197
        52               99.975                 0.197
        53               99.980                 0.197
        54               99.985                 0.196
        55               99.990                 0.197
        56               99.995                 0.197
        57              100.000                 0.197
        58              100.000                 0.013


----------------------------------------------------------------------------
    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =      59.4090
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =     110.4620
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                    2 4 - H O U R    S T O R M
                  R U N O F F    H Y D R O G R A P H

================================================================================
            HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
        (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      150.0     300.0     450.0     600.0
--------------------------------------------------------------------------------
  14.000     31.7638     80.26  .    Q    .V        .         .         .
  14.083     32.3394     83.58  .    Q    .V        .         .         .
  14.167     32.9582     89.85  .    Q    .V        .         .         .
  14.250     33.6530    100.87  .     Q   . V       .         .         .
  14.333     34.4425    114.64  .      Q  . V       .         .         .
  14.417     35.3392    130.19  .       Q . V       .         .         .
  14.500     36.3221    142.72  .        Q.  V      .         .         .
  14.583     37.3658    151.55  .         Q  V      .         .         .
  14.667     38.4530    157.86  .         Q  V      .         .         .
  14.750     39.5754    162.97  .         Q   V     .         .         .
  14.833     40.7275    167.29  .         .Q  V     .         .         .
  14.917     41.9066    171.20  .         .Q   V    .         .         .
  15.000     43.1136    175.25  .         .Q   V    .         .         .
  15.083     44.3507    179.64  .         .Q    V   .         .         .
  15.167     45.6200    184.29  .         . Q   V   .         .         .
  15.250     46.9225    189.13  .         . Q   V   .         .         .
  15.333     48.2610    194.35  .         . Q    V  .         .         .
  15.417     49.6267    198.29  .         .  Q   V  .         .         .
  15.500     50.9858    197.34  .         .  Q    V .         .         .
  15.583     52.2850    188.65  .         . Q     V .         .         .
  15.667     53.4982    176.15  .         .Q       V.         .         .
  15.750     54.6203    162.92  .         Q        V.         .         .
  15.833     55.7149    158.93  .         Q         V         .         .
  15.917     56.8756    168.53  .         .Q        V         .         .
  16.000     58.2072    193.35  .         . Q        .V       .         .
  16.083     59.9581    254.23  .         .     Q    .V       .         .
  16.167     62.4338    359.48  .         .          . VQ     .         .
  16.250     65.8054    489.55  .         .          .  V     . Q       .
  16.333     69.6400    556.79  .         .          .   V    .        Q  .
  16.417     73.5654    569.97  .         .          .    V   .        Q  .
  16.500     76.8172    472.16  .         .          .     V  .Q         .
  16.583     79.3172    363.01  .         .          .   Q   V .         .
  16.667     81.3122    289.67  .         .        Q.       V.          .
  16.750     83.0522    252.65  .         .     Q    .        V          .
  16.833     84.6173    227.25  .         .    Q     .        V          .
  16.917     86.0455    207.37  .         .  Q       .        .V         .
  17.000     87.4184    199.35  .         .  Q       .        .V         .
  17.083     88.7335    190.95  .         . Q        .        . V        .
  17.167     89.9664    179.02  .         .Q         .        . V        .
  17.250     91.0513    157.54  .         Q          .        . V        .
  17.333     92.0123    139.53  .        Q.          .        .  V       .
  17.417     92.8447    120.87  .       Q .          .        .  V       .
  17.500     93.5730    105.74  .      Q  .          .        .  V       .
  17.583     94.2251     94.69  .     Q   .          .        .   V      .
  17.667     94.8220     86.67  .    Q    .          .        .   V      .
  17.750     95.3759     80.43  .    Q    .          .        .   V      .
  17.833     95.8958     75.48  .    Q    .          .        .   V      .
  17.917     96.3880     71.48  .   Q     .          .        .   V      .
  18.000     96.8553     67.85  .   Q     .          .        .    V     .
  18.083     97.2977     64.24  .   Q     .          .        .    V     .
  18.167     97.7131     60.31  .   Q     .          .        .    V     .
  18.250     98.0986     55.98  .  Q      .          .        .    V     .
  18.333     98.4523     51.35  .  Q      .          .        .    V     .
  18.417     98.7742     46.74  .  Q      .          .        .    V     .
  18.500     99.0715     43.16  . Q       .          .        .    V     .
  18.583     99.3512     40.62  . Q       .          .        .    V     .
  18.667     99.6180     38.74  . Q       .          .        .     V    .
  18.750     99.8743     37.22  . Q       .          .        .     V    .
  18.833    100.1229     36.09  . Q       .          .        .     V    .
  18.917    100.3652     35.18  . Q       .          .        .     V    .
  19.000    100.6015     34.31  . Q       .          .        .     V    .
  19.083    100.8318     33.44  . Q       .          .        .     V    .
  19.167    101.0559     32.54  . Q       .          .        .     V    .
  19.250    101.2754     31.87  . Q       .          .        .     V    .
  19.333    101.4906     31.25  . Q       .          .        .     V    .
  19.417    101.7018     30.67  . Q       .          .        .     V    .
  19.500    101.9091     30.10  . Q       .          .        .     V    .
  19.583    102.1127     29.56  .Q        .          .        .     V    .
  19.667    102.3128     29.05  .Q        .          .        .      V   .
  19.750    102.5095     28.57  .Q        .          .        .      V   .
  19.833    102.7030     28.10  .Q        .          .        .      V   .
  19.917    102.8935     27.65  .Q        .          .        .      V   .
  20.000    103.0809     27.22  .Q        .          .        .      V   .


********************************************************************************
  FLOW PROCESS FROM NODE   6395.00 TO NODE   6395.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6395.00 TO NODE   6395.00 IS CODE =   6
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6395.00 TO NODE   6395.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================

          STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
        (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.     1775.0    3550.0    5325.0    7100.0
--------------------------------------------------------------------------------
   0.083      0.0071      1.04  Q         .         .         .         .
   0.167      0.0520      6.52  Q         .         .         .         .
   0.250      0.1840     19.16  Q         .         .         .         .
   0.333      0.4546     39.30  Q         .         .         .         .
   0.417      0.8916     63.45  Q         .         .         .         .
   0.500      1.5025     88.70  Q         .         .         .         .
   0.583      2.2849    113.61  Q         .         .         .         .
   0.667      3.2428    139.08  Q         .         .         .         .
   0.750      4.4028    168.43  Q         .         .         .         .
   0.833      5.7878    201.11  VQ        .         .         .         .
   0.917      7.3793    231.07  VQ        .         .         .         .
   1.000      9.1296    254.15  VQ        .         .         .         .
   1.083     10.9954    270.92  VQ        .         .         .         .
   1.167     12.9490    283.66  VQ        .         .         .         .
   1.250     14.9733    293.92  VQ        .         .         .         .
   1.333     17.0572    302.58  VQ        .         .         .         .
   1.417     19.1925    310.05  VQ        .         .         .         .
   1.500     21.3726    316.56  VQ        .         .         .         .
   1.583     23.5924    322.31  VQ        .         .         .         .
   1.667     25.8478    327.48  VQ        .         .         .         .
```

1.750	28.1355	332.17	VQ	.	.	.	.
1.833	30.4525	336.43	VQ	.	.	.	.
1.917	32.7961	340.29	VQ	.	.	.	.
2.000	35.1636	343.77	VQ	.	.	.	.
2.083	37.5526	346.89	VQ	.	.	.	.
2.167	39.9613	349.73	VQ	.	.	.	.
2.250	42.3880	352.36	VQ	.	.	.	.
2.333	44.8309	354.72	VQ	.	.	.	.
2.417	47.2880	356.76	V Q	.	.	.	.
2.500	49.7574	358.56	V Q	.	.	.	.
2.583	52.2384	360.24	V Q	.	.	.	.
2.667	54.7306	361.87	V Q	.	.	.	.
2.750	57.2340	363.49	V Q	.	.	.	.
2.833	59.7485	365.11	.VQ	.	.	.	.
2.917	62.2742	366.73	.VQ	.	.	.	.
3.000	64.8111	368.35	.VQ	.	.	.	.
3.083	67.3591	369.98	.VQ	.	.	.	.
3.167	69.9184	371.61	.VQ	.	.	.	.
3.250	72.4890	373.25	.VQ	.	.	.	.
3.333	75.0710	374.91	.VQ	.	.	.	.
3.417	77.6646	376.58	.VQ	.	.	.	.
3.500	80.2697	378.26	.VQ	.	.	.	.
3.583	82.8865	379.96	.VQ	.	.	.	.
3.667	85.5151	381.68	.VQ	.	.	.	.
3.750	88.1557	383.41	.VQ	.	.	.	.
3.833	90.8082	385.15	.VQ	.	.	.	.
3.917	93.4728	386.91	.VQ	.	.	.	.
4.000	96.1497	388.68	.VQ	.	.	.	.
4.083	98.8387	390.45	.VQ	.	.	.	.
4.167	101.5399	392.21	.VQ	.	.	.	.
4.250	104.2529	393.93	.VQ	.	.	.	.
4.333	106.9776	395.62	.VQ	.	.	.	.
4.417	109.7138	397.29	.VQ	.	.	.	.
4.500	112.4615	398.97	.VQ	.	.	.	.
4.583	115.2209	400.66	. Q	.	.	.	.
4.667	117.9920	402.37	. Q	.	.	.	.
4.750	120.7750	404.09	. Q	.	.	.	.
4.833	123.5701	405.84	. Q	.	.	.	.
4.917	126.3772	407.60	. Q	.	.	.	.
5.000	129.1967	409.38	. Q	.	.	.	.
5.083	132.0285	411.18	. Q	.	.	.	.
5.167	134.8729	413.01	. Q	.	.	.	.
5.250	137.7300	414.85	. Q	.	.	.	.
5.333	140.6000	416.72	. Q	.	.	.	.
5.417	143.4829	418.60	. Q	.	.	.	.
5.500	146.3790	420.51	. Q	.	.	.	.
5.583	149.2884	422.45	. Q	.	.	.	.
5.667	152.2113	424.40	. Q	.	.	.	.
5.750	155.1478	426.38	. Q	.	.	.	.
5.833	158.0982	428.39	. Q	.	.	.	.
5.917	161.0625	430.42	. Q	.	.	.	.
6.000	164.0409	432.47	. Q	.	.	.	.
6.083	167.0337	434.55	. Q	.	.	.	.
6.167	170.0410	436.66	. Q	.	.	.	.
6.250	173.0630	438.79	. QV	.	.	.	.
6.333	176.0998	440.95	. QV	.	.	.	.
6.417	179.1518	443.14	. QV	.	.	.	.
6.500	182.2190	445.36	. QV	.	.	.	.
6.583	185.3017	447.61	. QV	.	.	.	.
6.667	188.4001	449.88	. QV	.	.	.	.
6.750	191.5143	452.19	. QV	.	.	.	.
6.833	194.6447	454.53	. QV	.	.	.	.
6.917	197.7914	456.90	. QV	.	.	.	.
7.000	200.9546	459.30	. QV	.	.	.	.
7.083	204.1346	461.74	. QV	.	.	.	.
7.167	207.3316	464.21	. QV	.	.	.	.
7.250	210.5459	466.71	. QV	.	.	.	.
7.333	213.7777	469.26	. QV	.	.	.	.
7.417	217.0272	471.83	. QV	.	.	.	.
7.500	220.2948	474.45	. QV	.	.	.	.
7.583	223.5806	477.10	. QV	.	.	.	.
7.667	226.8849	479.79	. QV	.	.	.	.
7.750	230.2081	482.52	. Q V	.	.	.	.
7.833	233.5504	485.30	. Q V	.	.	.	.
7.917	236.9120	488.11	. Q V	.	.	.	.
8.000	240.2934	490.97	. Q V	.	.	.	.
8.083	243.6947	493.87	. Q V	.	.	.	.
8.167	247.1164	496.82	. Q V	.	.	.	.
8.250	250.5586	499.82	. Q V	.	.	.	.
8.333	254.0219	502.86	. Q V	.	.	.	.
8.417	257.5064	505.95	. Q V	.	.	.	.
8.500	261.0126	509.09	. Q V	.	.	.	.
8.583	264.5407	512.29	. Q V	.	.	.	.
8.667	268.0912	515.53	. Q V	.	.	.	.
8.750	271.6645	518.83	. Q V	.	.	.	.
8.833	275.2608	522.19	. Q V	.	.	.	.
8.917	278.8807	525.61	. Q V	.	.	.	.
9.000	282.5245	529.08	. Q V	.	.	.	.
9.083	286.1927	532.61	. QV	.	.	.	.
9.167	289.8856	536.21	. Q V	.	.	.	.
9.250	293.6037	539.87	. Q V	.	.	.	.
9.333	297.3475	543.60	. Q V	.	.	.	.
9.417	301.1174	547.39	. Q V	.	.	.	.
9.500	304.9140	551.26	. Q V	.	.	.	.
9.583	308.7377	555.20	. Q V	.	.	.	.
9.667	312.5890	559.21	. Q V	.	.	.	.
9.750	316.4684	563.30	. Q V	.	.	.	.
9.833	320.3766	567.47	. Q V	.	.	.	.
9.917	324.3141	571.72	. Q V	.	.	.	.
10.000	328.2814	576.05	. Q V	.	.	.	.
10.083	332.2791	580.47	. Q V	.	.	.	.
10.167	336.3080	584.99	. Q V	.	.	.	.
10.250	340.3685	589.59	. Q V	.	.	.	.
10.333	344.4615	594.30	. Q V	.	.	.	.
10.417	348.5875	599.10	. Q V	.	.	.	.
10.500	352.7473	604.00	. Q V	.	.	.	.
10.583	356.9416	609.01	. Q V	.	.	.	.
10.667	361.1711	614.14	. Q V	.	.	.	.
10.750	365.4368	619.37	. Q V	.	.	.	.
10.833	369.7393	624.73	. Q V	.	.	.	.
10.917	374.0795	630.20	. Q V	.	.	.	.
11.000	378.4584	635.81	. Q V	.	.	.	.
11.083	382.8768	641.55	. Q V	.	.	.	.
11.167	387.3356	647.43	. Q V	.	.	.	.
11.250	391.8359	653.44	. Q V	.	.	.	.
11.333	396.3787	659.61	. Q V	.	.	.	.
11.417	400.9651	665.94	. Q V	.	.	.	.
11.500	405.5961	672.42	. Q V	.	.	.	.
11.583	410.2729	679.08	. Q V	.	.	.	.
11.667	414.9968	685.91	. Q V	.	.	.	.
11.750	419.7690	692.92	. Q V	.	.	.	.
11.833	424.5909	700.13	. Q V	.	.	.	.
11.917	429.4637	707.53	. Q V	.	.	.	.
12.000	434.3890	715.16	. Q V	.	.	.	.
12.083	439.3778	724.37	. Q V	.	.	.	.
12.167	444.4729	739.81	. Q V	.	.	.	.
12.250	449.7377	764.45	. Q V	.	.	.	.
12.333	455.2301	797.50	. Q V	.	.	.	.
12.417	460.9648	832.67	. Q V	.	.	.	.
12.500	466.9318	866.41	. Q V	.	.	.	.
12.583	473.1200	898.52	. Q V	.	.	.	.
12.667	479.5282	930.47	. Q V	.	.	.	.

12.750	486.1762	965.29	. Q V . . . .
12.833	493.0827	1002.82	. Q V . . . .
12.917	500.2326	1038.17	. Q V . . . .
13.000	507.5880	1068.00	. Q V . . . .
13.083	515.1172	1093.26	. Q V . . . .
13.167	522.8063	1116.45	. Q V. . . .
13.250	530.6506	1138.99	. Q V. . . .
13.333	538.6491	1161.38	. Q V. . . .
13.417	546.8018	1183.77	. Q V. . . .
13.500	555.1111	1206.51	. Q V. . . .
13.583	563.5819	1229.96	. Q V. . . .
13.667	572.2230	1254.69	. Q V. . . .
13.750	581.0474	1281.29	. Q V . . .
13.833	590.0709	1310.21	. Q V . . .
13.917	599.3095	1341.45	. Q V . . .
14.000	608.7786	1374.91	. Q V . . .
14.083	618.5191	1414.32	. Q V . . .
14.167	628.6604	1472.52	. Q V . . .
14.250	639.3949	1558.65	. Q .V . . .
14.333	650.9086	1671.78	. Q.V . . .
14.417	663.2844	1796.97	. QV . . .
14.500	676.5406	1924.79	. QV . . .
14.583	690.6849	2053.75	. .QV . . .
14.667	705.7360	2185.43	. . Q . . .
14.750	721.7501	2325.25	. . VQ . . .
14.833	738.8052	2476.40	. . VQ . . .
14.917	756.9381	2632.90	. . VQ . . .
15.000	776.1121	2784.06	. . V Q . . .
15.083	796.2429	2922.98	. . V Q . . .
15.167	817.2556	3051.05	. . V Q . . .
15.250	839.1056	3172.62	. . V Q . . .
15.333	861.7775	3291.96	. . V Q . . .
15.417	885.2194	3403.75	. . V Q. . . .
15.500	909.2223	3485.22	. . V Q. . . .
15.583	933.4693	3520.67	. . V Q. . . .
15.667	957.6901	3516.86	. . V Q. . . .
15.750	981.8666	3510.43	. . V Q. . . .
15.833	1006.1945	3532.41	. . V Q. . . .
15.917	1031.0134	3603.70	. . V Q . . .
16.000	1056.8627	3753.31	. . V .Q . . .
16.083	1084.8888	4069.39	. . V . Q . . .
16.167	1117.1918	4690.39	. . V. Q . . .
16.250	1154.8636	5469.96	. . V Q . . .
16.333	1197.0284	6122.33	. . V . Q . .
16.417	1240.7490	6348.23	. . .V . Q . .
16.500	1284.1484	6301.59	. . . V . Q . .
16.583	1326.9612	6216.41	. . . V . Q . .
16.667	1369.9526	6242.36	. . . V . Q . .
16.750	1414.6962	6496.76	. . . V . Q . .
16.833	1462.0061	6869.41	. . . V . Q . .
16.917	1510.7990	7084.72	. . . V . Q. .
17.000	1558.9735	6994.94	. . . V . Q. .
17.083	1604.7257	6643.23	. . . V . Q . .
17.167	1647.1163	6155.12	. . . V . Q . .
17.250	1685.9264	5635.21	. . . V.Q . .
17.333	1721.4192	5153.55	. . . Q. . .
17.417	1754.0198	4733.61	. . . Q V . .
17.500	1784.1462	4374.36	. . . Q .V . .
17.583	1812.1229	4062.22	. . . Q .V . .
17.667	1838.1810	3783.64	. . .Q .V . .
17.750	1862.4252	3520.25	. . Q. . V . .
17.833	1884.8431	3255.09	. . Q . . V . .
17.917	1905.4226	2988.14	. . Q . . V . .
18.000	1924.2389	2732.13	. . Q . . V . .
18.083	1941.4340	2496.72	. . Q . . V . .
18.167	1957.1405	2280.60	. . Q . . V . .

18.250	1971.4448	2076.99	. .Q . . V .
18.333	1984.3860	1879.06	. Q . . V .
18.417	1996.0253	1690.03	. Q. . V .
18.500	2006.5144	1523.03	. Q . . V .
18.583	2016.0848	1389.62	. Q . . V .
18.667	2024.9557	1288.05	. Q . . V .
18.750	2033.2529	1204.76	. Q . . V .
18.833	2041.0289	1129.07	. Q . . V .
18.917	2048.3281	1059.84	. Q . . V .
19.000	2055.2156	1000.06	. Q . . V .
19.083	2061.7583	950.01	. Q . . V .
19.167	2068.0032	906.76	. Q . . V .
19.250	2073.9846	868.52	. Q . . V .
19.333	2079.7383	835.44	. Q . . V .
19.417	2085.3018	807.80	. Q . . V .
19.500	2090.7046	784.49	. Q . . V .
19.583	2095.9675	764.17	. Q . . V .
19.667	2101.1035	745.74	. Q . . V .
19.750	2106.1218	728.67	. Q . . V .
19.833	2111.0286	712.46	. Q . . V .
19.917	2115.8269	696.71	. Q . . V .
20.000	2120.5188	681.25	. Q . . V .
20.083	2125.1001	665.20	. Q . . V .
20.167	2129.5569	647.11	. Q . . V .
20.250	2133.8794	627.64	. Q . . V .
20.333	2138.0793	609.83	. Q . . V .
20.417	2142.1790	595.25	. Q . . V .
20.500	2146.1951	583.15	. Q . . V .
20.583	2150.1372	572.40	. Q . . V .
20.667	2154.0100	562.35	. Q . . V .
20.750	2157.8167	552.74	. Q . . V .
20.833	2161.5593	543.45	. Q . . V .
20.917	2165.2410	534.59	. Q . . V .
21.000	2168.8640	526.06	. Q . . V .
21.083	2172.4304	517.86	. Q . . V .
21.167	2175.9436	510.12	. Q . . V .
21.250	2179.4072	502.93	. Q . . V .
21.333	2182.8247	496.23	. Q . . V .
21.417	2186.1987	489.90	. Q . . V .
21.500	2189.5310	483.85	. Q . . V .
21.583	2192.8232	478.03	. Q . . V .
21.667	2196.0769	472.43	. Q . . V .
21.750	2199.2932	467.01	. Q . . V .
21.833	2202.4734	461.77	. Q . . V .
21.917	2205.6187	456.69	. Q . . V .
22.000	2208.7300	451.75	. Q . . V .
22.083	2211.8083	446.96	. Q . . V .
22.167	2214.8547	442.33	. Q . . V .
22.250	2217.8704	437.86	. Q . . V .
22.333	2220.8562	433.54	. Q . . V .
22.417	2223.8132	429.36	. Q . . V .
22.500	2226.7422	425.30	. Q . . V .
22.583	2229.6440	421.34	. Q . . V .
22.667	2232.5193	417.48	. Q . . V .
22.750	2235.3687	413.71	. Q . . V .
22.833	2238.1926	410.03	. Q . . V .
22.917	2240.9917	406.44	. Q . . V .
23.000	2243.7666	402.93	. Q . . V.
23.083	2246.5181	399.50	. Q . . V.
23.167	2249.2463	396.15	. Q . . V.
23.250	2251.9521	392.87	. Q . . V.
23.333	2254.6357	389.66	. Q . . V.
23.417	2257.2979	386.52	. Q . . V.
23.500	2259.9387	383.45	. Q . . V.
23.583	2262.5588	380.44	. Q . . V.
23.667	2265.1587	377.49	. Q . . V.

```
  23.750   2267.7385    374.60  . Q       .         .         .         V.
  23.833   2270.2991    371.77  . Q       .         .         .         V.
  23.917   2272.8403    369.00  . Q       .         .         .         V.
  24.000   2275.3630    366.28  . Q       .         .         .         V.
  24.083   2277.8601    362.58  . Q       .         .         .         V.
  24.167   2280.3015    354.50  .Q        .         .         .         V.
  24.250   2282.6389    339.38  .Q        .         .         .         V.
  24.333   2284.8215    316.93  .Q        .         .         .         V.
  24.417   2286.8237    290.72  .Q        .         .         .         V.
  24.500   2288.6399    263.69  .Q        .         .         .         V.
  24.583   2290.2739    237.27  .Q        .         .         .         V.
  24.667   2291.7241    210.58  .Q        .         .         .         V.
  24.750   2292.9656    180.27  .Q        .         .         .         V.
  24.833   2293.9778    146.96  Q         .         .         .         V.
  24.917   2294.7815    116.69  Q         .         .         .         V.
  25.000   2295.4263     93.61  Q         .         .         .         V.
  25.083   2295.9570     77.06  Q         .         .         .         V.
  25.167   2296.4026     64.70  Q         .         .         .         V.
  25.250   2296.7810     54.95  Q         .         .         .         V.
  25.333   2297.1040     46.91  Q         .         .         .         V.
  25.417   2297.3806     40.15  Q         .         .         .         V.
  25.500   2297.6177     34.41  Q         .         .         .         V.
  25.583   2297.8208     29.51  Q         .         .         .         V.
  25.667   2297.9946     25.25  Q         .         .         .         V.
  25.750   2298.1428     21.52  Q         .         .         .         V.
  25.833   2298.2686     18.26  Q         .         .         .         V.
  25.917   2298.3750     15.45  Q         .         .         .         V.
  26.000   2298.4648     13.06  Q         .         .         .         V.
  26.083   2298.5410     11.06  Q         .         .         .         V.
  26.167   2298.6055      9.36  Q         .         .         .         V.
  26.250   2298.6599      7.91  Q         .         .         .         V.
  26.333   2298.7065      6.76  Q         .         .         .         V.
  26.417   2298.7476      5.94  Q         .         .         .         V.
  26.500   2298.7847      5.39  Q         .         .         .         V.
  26.583   2298.8188      4.98  Q         .         .         .         V.
  26.667   2298.8508      4.63  Q         .         .         .         V.
  26.750   2298.8806      4.31  Q         .         .         .         V.
  26.833   2298.9082      4.01  Q         .         .         .         V.
  26.917   2298.9338      3.71  Q         .         .         .         V.
  27.000   2298.9575      3.44  Q         .         .         .         V.
  27.083   2298.9795      3.18  Q         .         .         .         V.
  27.167   2298.9998      2.93  Q         .         .         .         V.
  27.250   2299.0183      2.68  Q         .         .         .         V.
  27.333   2299.0352      2.44  Q         .         .         .         V.
  27.417   2299.0503      2.20  Q         .         .         .         V.
  27.500   2299.0637      1.96  Q         .         .         .         V.
  27.583   2299.0757      1.72  Q         .         .         .         V.
  27.667   2299.0859      1.49  Q         .         .         .         V.
  27.750   2299.0947      1.26  Q         .         .         .         V.
  27.833   2299.1018      1.03  Q         .         .         .         V.
  27.917   2299.1074      0.81  Q         .         .         .         V.
  28.000   2299.1116      0.60  Q         .         .         .         V.
  28.083   2299.1143      0.39  Q         .         .         .         V.
  28.167   2299.1157      0.20  Q         .         .         .         V.
  28.250   2299.1165      0.10  Q         .         .         .         V.
  28.333   2299.1167      0.05  Q         .         .         .         V.
  28.417   2299.1169      0.03  Q         .         .         .         V.
  28.500   2299.1172      0.03  Q         .         .         .          V
  28.583   2299.1172      0.02  Q         .         .         .          V
  28.667   2299.1172      0.01  Q         .         .         .          V
================================================================================

  END OF FLOODSCx ROUTING ANALYSIS
```

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

HYDROLOGY ANALYSIS FOR CANADA GOBERNADORA PROPOSED CONDITION 100-YEAR HIGH CONFIDENCE STORM EVENT (BASIN-MULTI-DAY)

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**************************************************************************

             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
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                         Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: CP63CHS4.FLD
  TIME/DATE OF STUDY: 13:19 04/01/2004


**************************************************************************
  FLOW PROCESS FROM NODE    100.00 TO NODE    780.00 IS CODE =   1
--------------------------------------------------------------------------

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  4741.3 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

        WATERSHED AREA =    4741.300 ACRES
        BASEFLOW =   0.000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    0.480 HOURS
         CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
         THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
         MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
        VALLEY(DEVELOPED):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  1.000
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        VALLEY(UNDEVELOPED)/DESERT:
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:
        +------------------+--------+--------+--------+--------+--------+
        | RAINFALL DEPTHS & |        |        |        |        |        |
        |    LOSS RATES     |  DAY 1 |  DAY 2 |  DAY 3 |  DAY 4 |  DAY 5 |
        |==================+========+========+========+========+========|
        | 5-MINUTE (INCHES) |    0.58|    0.27|    0.12|    0.06|    0.04|
        |30-MINUTE (INCHES) |    1.22|    0.56|    0.24|    0.13|    0.09|
        |   1-HOUR (INCHES) |    1.62|    0.75|    0.33|    0.17|    0.12|
        |   3-HOUR (INCHES) |    2.71|    1.25|    0.54|    0.28|    0.21|
        |   6-HOUR (INCHES) |    3.75|    1.73|    0.75|    0.39|    0.29|
        |  24-HOUR (INCHES) |    6.28|    2.89|    1.26|    0.66|    0.48|
        |==================+========+========+========+========+========|
        | LOSS RATE(IN/HR)  |   0.190|   0.190|   0.190|   0.190|   0.190|
        | LOW LOSS FRACTION |   0.550|   0.750|   0.900|   0.970|   0.990|
        +------------------+--------+--------+--------+--------+--------+
          5-MINUTE FACTOR = 0.793
         30-MINUTE FACTOR = 0.793
          1-HOUR FACTOR = 0.793
          3-HOUR FACTOR = 0.969
          6-HOUR FACTOR = 0.984
         24-HOUR FACTOR = 0.990

          UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
          UNIT INTERVAL PERCENTAGE OF LAG-TIME =  17.361


          RUNOFF HYDROGRAPH LISTING LIMITS:
          MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  96.00
          MODEL TIME(HOURS) FOR END OF RESULTS = 124.00


==========================================================================
                       UNIT HYDROGRAPH DETERMINATION

--------------------------------------------------------------------------
     INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
      NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------
         1                1.137               652.130
         2                4.082              1688.625
         3                8.525              2547.514
         4               14.577              3470.279
         5               24.203              5519.575
         6               43.203             10894.611
         7               57.937              8448.228
         8               65.484              4327.674
         9               70.911              3111.621
        10               75.443              2599.076
        11               78.982              2029.171
        12               82.133              1806.516
        13               84.749              1499.854
        14               87.075              1334.078
        15               88.974              1088.566
        16               90.645               958.165
        17               92.163               870.854
        18               93.467               747.418
        19               94.550               621.273
        20               95.489               538.119
        21               96.255               439.106
        22               96.815               321.374
        23               97.375               321.055
        24               97.900               301.316
        25               98.079               102.631
        26               98.169                51.477
        27               98.259                51.411
        28               98.349                51.608
        29               98.439                51.604
        30               98.528                51.219
        31               98.618                51.477
        32               98.708                51.477
        33               98.798                51.608
        34               98.887                51.346
        35               98.977                51.608
        36               99.067                51.604
        37               99.157                51.604
        38               99.247                51.604
        39               99.337                51.604
        40               99.427                51.604
        41               99.517                51.604
        42               99.607                51.604
        43               99.697                51.604
        44               99.787                51.604
        45               99.877                51.604
        46               99.967                51.604
        47              100.000                18.785


--------------------------------------------------------------------------
    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =    2535.6968
```

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1991.0461

5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	2025.0	4050.0	6075.0	8100.0
96.000	524.3721	57.05	Q	V	.	.	.
(PEAK DAY 2, HOUR 24.000)							
96.083	524.7745	58.43	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.083)							
96.167	525.2059	62.64	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.167)							
96.250	525.6828	69.24	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.250)							
96.333	526.2228	78.41	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.333)							
96.417	526.8649	93.23	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.417)							
96.500	527.7108	122.82	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.500)							
96.583	528.7158	145.93	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.583)							
96.667	529.8037	157.97	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.667)							
96.750	530.9523	166.77	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.750)							
96.833	532.1523	174.25	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.833)							
96.917	533.3935	180.21	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.917)							
97.000	534.6719	185.62	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.000)							
97.083	535.9819	190.22	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.083)							
97.167	537.3209	194.42	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.167)							
97.250	538.6843	197.97	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.250)							
97.333	540.0699	201.20	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.333)							
97.417	541.4763	204.20	.Q	V	.	.	.
(PEAK DAY 1, HOUR 1.417)							
97.500	542.9012	206.90	.Q	V	.	.	.
(PEAK DAY 1, HOUR 1.500)							
97.583	544.3423	209.26	.Q	V	.	.	.
(PEAK DAY 1, HOUR 1.583)							
97.667	545.7985	211.43	.Q	V	.	.	.
(PEAK DAY 1, HOUR 1.667)							
97.750	547.2676	213.33	.Q	V	.	.	.
(PEAK DAY 1, HOUR 1.750)							
97.833	548.7479	214.94	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.833)							
97.917	550.2393	216.54	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.917)							
98.000	551.7415	218.12	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.000)							
98.083	553.2509	219.16	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.083)							
98.167	554.7665	220.08	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.167)							
98.250	556.2885	220.99	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.250)							
98.333	557.8170	221.93	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.333)							
98.417	559.3518	222.86	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.417)							
98.500	560.8932	223.82	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.500)							
98.583	562.4412	224.77	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.583)							
98.667	563.9959	225.74	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.667)							
98.750	565.5573	226.71	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.750)							
98.833	567.1254	227.70	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.833)							
98.917	568.7004	228.68	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.917)							
99.000	570.2823	229.69	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.000)							
99.083	571.8711	230.70	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.083)							
99.167	573.4670	231.73	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.167)							
99.250	575.0699	232.75	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.250)							
99.333	576.6802	233.80	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.333)							
99.417	578.2975	234.84	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.417)							
99.500	579.9223	235.92	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.500)							
99.583	581.5544	236.98	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.583)							
99.667	583.1940	238.07	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.667)							
99.750	584.8411	239.16	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.750)							
99.833	586.4959	240.27	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.833)							
99.917	588.1577	241.29	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.917)							
100.000	589.8264	242.29	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.000)							
100.083	591.5018	243.27	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.083)							
100.167	593.1842	244.29	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.167)							
100.250	594.8736	245.30	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.250)							
100.333	596.5702	246.34	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.333)							
100.417	598.2739	247.37	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.417)							
100.500	599.9849	248.44	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.500)							
100.583	601.7031	249.49	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.583)							
100.667	603.4288	250.58	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.667)							
100.750	605.1620	251.66	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.750)							
100.833	606.9028	252.77	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.833)							
100.917	608.6512	253.87	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.917)							
101.000	610.4075	255.01	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 5.000)							
101.083	612.1716	256.14	.Q	. V	.	.	.

```
 (PEAK DAY 1, HOUR   5.083)
 101.167    613.9436    257.30  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.167)
 101.250    615.7236    258.46  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.250)
 101.333    617.5119    259.65  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.333)
 101.417    619.3083    260.84  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.417)
 101.500    621.1131    262.06  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.500)
 101.583    622.9263    263.27  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.583)
 101.667    624.7480    264.52  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.667)
 101.750    626.5784    265.76  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.750)
 101.833    628.4175    267.05  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.833)
 101.917    630.2655    268.32  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.917)
 102.000    632.1225    269.64  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   6.000)
 102.083    633.9885    270.94  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   6.083)
 102.167    635.8638    272.29  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   6.167)
 102.250    637.7483    273.63  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   6.250)
 102.333    639.6423    275.02  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   6.333)
 102.417    641.5458    276.39  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   6.417)
 102.500    643.4592    277.81  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   6.500)
 102.583    645.3822    279.23  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   6.583)
 102.667    647.3153    280.69  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.667)
 102.750    649.2584    282.14  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.750)
 102.833    651.2119    283.64  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.833)
 102.917    653.1755    285.13  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.917)
 103.000    655.1499    286.67  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.000)
 103.083    657.1348    288.21  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.083)
 103.167    659.1306    289.79  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.167)
 103.250    661.1373    291.37  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.250)
 103.333    663.1552    293.00  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.333)
 103.417    665.1843    294.63  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.417)
 103.500    667.2250    296.31  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.500)
 103.583    669.2772    297.98  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.583)
 103.667    671.3414    299.71  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.667)
 103.750    673.4174    301.43  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.750)
 103.833    675.5057    303.22  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.833)
 103.917    677.6062    305.00  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.917)
 104.000    679.7194    306.84  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   8.000)
 104.083    681.8453    308.67  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   8.083)
 104.167    683.9842    310.57  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   8.167)
 104.250    686.1362    312.46  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   8.250)
 104.333    688.3016    314.43  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   8.333)
 104.417    690.4805    316.38  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   8.417)
 104.500    692.6734    318.41  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   8.500)
 104.583    694.8802    320.42  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   8.583)
 104.667    697.1014    322.52  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.667)
 104.750    699.3370    324.61  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.750)
 104.833    701.5876    326.78  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.833)
 104.917    703.8530    328.94  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.917)
 105.000    706.1339    331.18  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.000)
 105.083    708.4301    333.42  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.083)
 105.167    710.7424    335.75  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.167)
 105.250    713.0707    338.07  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.250)
 105.333    715.4156    340.48  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.333)
 105.417    717.7772    342.89  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.417)
 105.500    720.1559    345.39  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.500)
 105.583    722.5518    347.89  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.583)
 105.667    724.9657    350.49  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.667)
 105.750    727.3975    353.09  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.750)
 105.833    729.8478    355.80  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.833)
 105.917    732.3168    358.50  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.917)
 106.000    734.8052    361.31  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR  10.000)
 106.083    737.3130    364.13  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR  10.083)
 106.167    739.8409    367.06  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR  10.167)
 106.250    742.3892    370.00  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR  10.250)
 106.333    744.9584    373.06  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR  10.333)
 106.417    747.5488    376.12  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.417)
 106.500    750.1611    379.32  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.500)
 106.583    752.7955    382.51  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.583)
 106.667    755.4529    385.85  .Q        .    V    .         .         .
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 (PEAK DAY 1, HOUR  10.667)
106.750    758.1334    389.20  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.750)
106.833    760.8378    392.69  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.833)
106.917    763.5665    396.19  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.917)
107.000    766.3203    399.86  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.000)
107.083    769.0995    403.53  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.083)
107.167    771.9052    407.38  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  11.167)
107.250    774.7374    411.24  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  11.250)
107.333    777.5974    415.28  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  11.333)
107.417    780.4854    419.34  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  11.417)
107.500    783.4028    423.60  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  11.500)
107.583    786.3495    427.88  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  11.583)
107.667    789.3273    432.36  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  11.667)
107.750    792.3361    436.88  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  11.750)
107.833    795.3776    441.62  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  11.833)
107.917    798.4520    446.40  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  11.917)
108.000    801.5609    451.42  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.000)
108.083    804.7167    458.21  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.083)
108.167    807.9401    468.03  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.167)
108.250    811.2471    480.19  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.250)
108.333    814.6569    495.10  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.333)
108.417    818.2075    515.54  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.417)
108.500    821.9995    550.61  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.500)
108.583    825.9893    579.32  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.583)
108.667    830.1044    597.50  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.667)
108.750    834.3231    612.56  .  Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.750)
108.833    838.6390    626.67  .  Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.833)
108.917    843.0424    639.37  .  Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.917)
109.000    847.5322    651.92  .  Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.000)
109.083    852.1049    663.96  .  Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.083)
109.167    856.7635    676.43  .  Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.167)
109.250    861.5088    689.01  .  Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.250)
109.333    866.3477    702.61  .  Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.333)
109.417    871.2896    717.55  .  Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.417)
109.500    876.3552    735.54  .  Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.500)
109.583    881.5556    755.09  .  Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.583)
109.667    886.9045    776.66  .  Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.667)
109.750    892.4076    799.06  .  Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.750)
109.833    898.0772    823.23  .   Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.833)
109.917    903.9202    848.40  .   Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.917)
110.000    909.9514    875.72  .   Q      .       V .         .         .
 (PEAK DAY 1, HOUR  14.000)
110.083    916.2261    911.09  .   Q      .       V .         .         .
 (PEAK DAY 1, HOUR  14.083)
110.167    922.8422    960.67  .   Q      .       V .         .         .
 (PEAK DAY 1, HOUR  14.167)
110.250    929.8752   1021.19  .    Q     .       V .         .         .
 (PEAK DAY 1, HOUR  14.250)
110.333    937.4159   1094.90  .    Q     .       V .         .         .
 (PEAK DAY 1, HOUR  14.333)
110.417    945.6345   1193.34  .    Q     .       V .         .         .
 (PEAK DAY 1, HOUR  14.417)
110.500    954.9769   1356.53  .     Q    .        V.         .         .
 (PEAK DAY 1, HOUR  14.500)
110.583    965.2540   1492.23  .      Q   .        V.         .         .
 (PEAK DAY 1, HOUR  14.583)
110.667    976.1564   1583.02  .      Q   .        V.         .         .
 (PEAK DAY 1, HOUR  14.667)
110.750    987.5969   1661.17  .       Q  .        V.         .         .
 (PEAK DAY 1, HOUR  14.750)
110.833    999.5599   1737.02  .       Q  .         V         .         .
 (PEAK DAY 1, HOUR  14.833)
110.917   1012.0135   1808.27  .       Q  .         V         .         .
 (PEAK DAY 1, HOUR  14.917)
111.000   1024.9714   1881.49  .        Q.         V         .         .
 (PEAK DAY 1, HOUR  15.000)
111.083   1038.4275   1953.82  .        Q.         V         .         .
 (PEAK DAY 1, HOUR  15.083)
111.167   1052.4082   2029.99  .         Q         .V        .         .
 (PEAK DAY 1, HOUR  15.167)
111.250   1066.9198   2107.09  .         Q         .V        .         .
 (PEAK DAY 1, HOUR  15.250)
111.333   1082.0043   2190.26  .         Q         .V        .         .
 (PEAK DAY 1, HOUR  15.333)
111.417   1097.5770   2261.16  .         .Q        . V       .         .
 (PEAK DAY 1, HOUR  15.417)
111.500   1113.5178   2314.61  .         .Q        . V       .         .
 (PEAK DAY 1, HOUR  15.500)
111.583   1129.7285   2353.79  .         .Q        . V       .         .
 (PEAK DAY 1, HOUR  15.583)
111.667   1146.1561   2385.29  .         .Q        .  V      .         .
 (PEAK DAY 1, HOUR  15.667)
111.750   1162.5571   2381.42  .         .Q        .  V      .         .
 (PEAK DAY 1, HOUR  15.750)
111.833   1178.1958   2270.74  .         .Q        .  V      .         .
 (PEAK DAY 1, HOUR  15.833)
111.917   1193.8363   2271.00  .         .Q        .  V      .         .
 (PEAK DAY 1, HOUR  15.917)
112.000   1210.8542   2471.00  .         . Q       .   V     .         .
 (PEAK DAY 1, HOUR  16.000)
112.083   1231.4600   2991.95  .         .   Q     .   V     .         .
 (PEAK DAY 1, HOUR  16.083)
112.167   1257.0110   3710.00  .         .       Q .    V    .         .
 (PEAK DAY 1, HOUR  16.167)
112.250   1287.2900   4396.52  .         .         .Q   V    .         .
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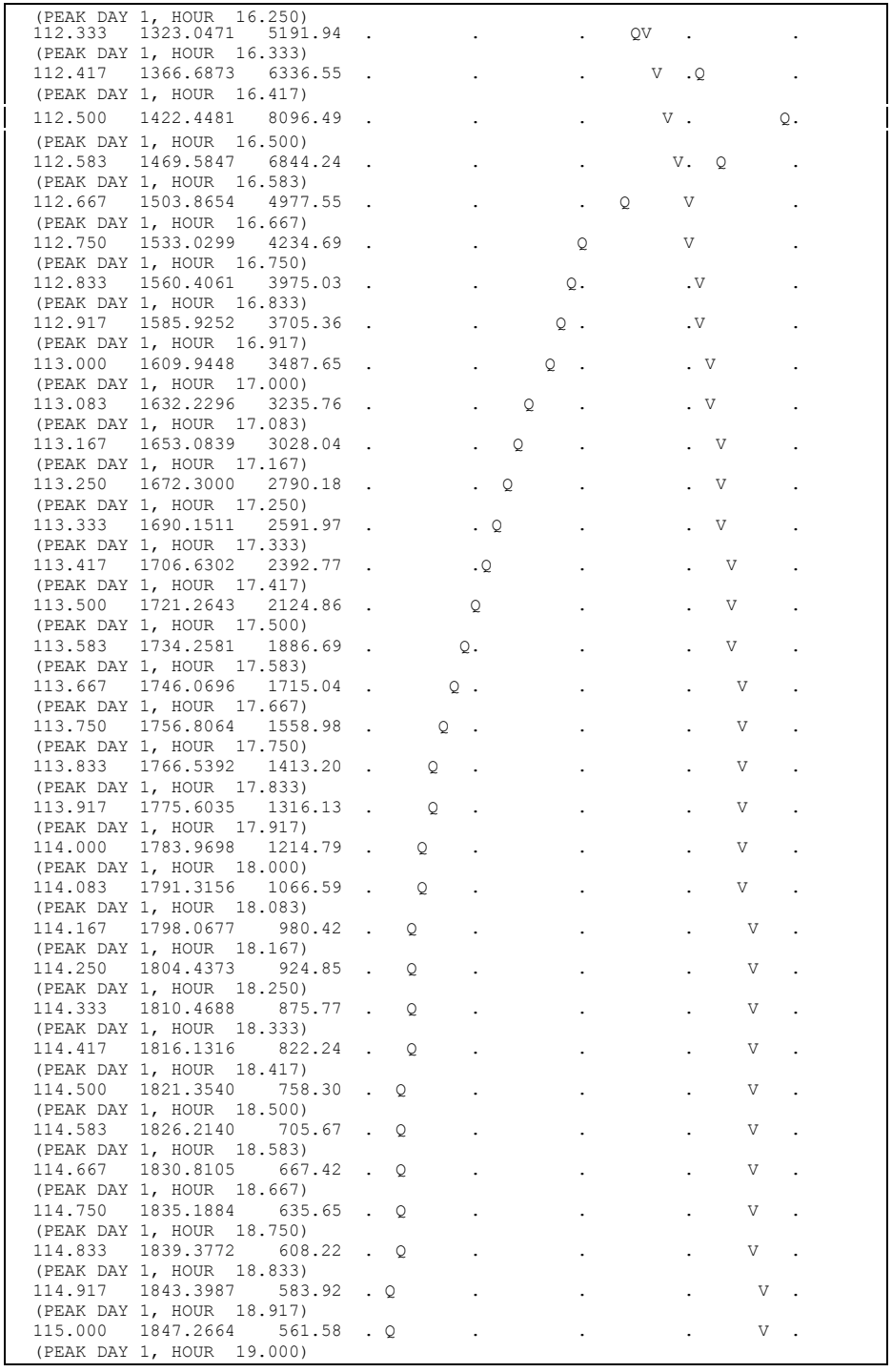
(PEAK DAY 1, HOUR 16.250)
112.333 1323.0471 5191.94
(PEAK DAY 1, HOUR 16.333)
112.417 1366.6873 6336.55
(PEAK DAY 1, HOUR 16.417)
112.500 1422.4481 8096.49
(PEAK DAY 1, HOUR 16.500)
112.583 1469.5847 6844.24
(PEAK DAY 1, HOUR 16.583)
112.667 1503.8654 4977.55
(PEAK DAY 1, HOUR 16.667)
112.750 1533.0299 4234.69
(PEAK DAY 1, HOUR 16.750)
112.833 1560.4061 3975.03
(PEAK DAY 1, HOUR 16.833)
112.917 1585.9252 3705.36
(PEAK DAY 1, HOUR 16.917)
113.000 1609.9448 3487.65
(PEAK DAY 1, HOUR 17.000)
113.083 1632.2296 3235.76
(PEAK DAY 1, HOUR 17.083)
113.167 1653.0839 3028.04
(PEAK DAY 1, HOUR 17.167)
113.250 1672.3000 2790.18
(PEAK DAY 1, HOUR 17.250)
113.333 1690.1511 2591.97
(PEAK DAY 1, HOUR 17.333)
113.417 1706.6302 2392.77
(PEAK DAY 1, HOUR 17.417)
113.500 1721.2643 2124.86
(PEAK DAY 1, HOUR 17.500)
113.583 1734.2581 1886.69
(PEAK DAY 1, HOUR 17.583)
113.667 1746.0696 1715.04
(PEAK DAY 1, HOUR 17.667)
113.750 1756.8064 1558.98
(PEAK DAY 1, HOUR 17.750)
113.833 1766.5392 1413.20
(PEAK DAY 1, HOUR 17.833)
113.917 1775.6035 1316.13
(PEAK DAY 1, HOUR 17.917)
114.000 1783.9698 1214.79
(PEAK DAY 1, HOUR 18.000)
114.083 1791.3156 1066.59
(PEAK DAY 1, HOUR 18.083)
114.167 1798.0677 980.42
(PEAK DAY 1, HOUR 18.167)
114.250 1804.4373 924.85
(PEAK DAY 1, HOUR 18.250)
114.333 1810.4688 875.77
(PEAK DAY 1, HOUR 18.333)
114.417 1816.1316 822.24
(PEAK DAY 1, HOUR 18.417)
114.500 1821.3540 758.30
(PEAK DAY 1, HOUR 18.500)
114.583 1826.2140 705.67
(PEAK DAY 1, HOUR 18.583)
114.667 1830.8105 667.42
(PEAK DAY 1, HOUR 18.667)
114.750 1835.1884 635.65
(PEAK DAY 1, HOUR 18.750)
114.833 1839.3772 608.22
(PEAK DAY 1, HOUR 18.833)
114.917 1843.3987 583.92
(PEAK DAY 1, HOUR 18.917)
115.000 1847.2664 561.58
(PEAK DAY 1, HOUR 19.000)
115.083 1851.0087 543.39
(PEAK DAY 1, HOUR 19.083)
115.167 1854.6389 527.11
(PEAK DAY 1, HOUR 19.167)
115.250 1858.1722 513.04
(PEAK DAY 1, HOUR 19.250)
115.333 1861.6184 500.38
(PEAK DAY 1, HOUR 19.333)
115.417 1864.9816 488.33
(PEAK DAY 1, HOUR 19.417)
115.500 1868.2661 476.91
(PEAK DAY 1, HOUR 19.500)
115.583 1871.4744 465.84
(PEAK DAY 1, HOUR 19.583)
115.667 1874.6071 454.86
(PEAK DAY 1, HOUR 19.667)
115.750 1877.6595 443.22
(PEAK DAY 1, HOUR 19.750)
115.833 1880.6226 430.23
(PEAK DAY 1, HOUR 19.833)
115.917 1883.4233 406.68
(PEAK DAY 1, HOUR 19.917)
116.000 1886.1075 389.75
(PEAK DAY 1, HOUR 20.000)
116.083 1888.7346 381.46
(PEAK DAY 1, HOUR 20.083)
116.167 1891.3137 374.48
(PEAK DAY 1, HOUR 20.167)
116.250 1893.8436 367.34
(PEAK DAY 1, HOUR 20.250)
116.333 1896.3243 360.20
(PEAK DAY 1, HOUR 20.333)
116.417 1898.7587 353.47
(PEAK DAY 1, HOUR 20.417)
116.500 1901.1489 347.07
(PEAK DAY 1, HOUR 20.500)
116.583 1903.4972 340.98
(PEAK DAY 1, HOUR 20.583)
116.667 1905.8054 335.15
(PEAK DAY 1, HOUR 20.667)
116.750 1908.0751 329.56
(PEAK DAY 1, HOUR 20.750)
116.833 1910.3079 324.20
(PEAK DAY 1, HOUR 20.833)
116.917 1912.5077 319.41
(PEAK DAY 1, HOUR 20.917)
117.000 1914.6774 315.04
(PEAK DAY 1, HOUR 21.000)
117.083 1916.8182 310.85
(PEAK DAY 1, HOUR 21.083)
117.167 1918.9313 306.82
(PEAK DAY 1, HOUR 21.167)
117.250 1921.0177 302.95
(PEAK DAY 1, HOUR 21.250)
117.333 1923.0785 299.22
(PEAK DAY 1, HOUR 21.333)
117.417 1925.1145 295.63
(PEAK DAY 1, HOUR 21.417)
117.500 1927.1267 292.16
(PEAK DAY 1, HOUR 21.500)
117.583 1929.1157 288.80
(PEAK DAY 1, HOUR 21.583)
117.667 1931.0822 285.53
(PEAK DAY 1, HOUR 21.667)
117.750 1933.0267 282.35
(PEAK DAY 1, HOUR 21.750)
117.833 1934.9500 279.25

(PEAK DAY 1, HOUR 21.833)
117.917 1936.8530 276.33 .Q . . . V .
(PEAK DAY 1, HOUR 21.917)
118.000 1938.7368 273.53 .Q . . . V .
(PEAK DAY 1, HOUR 22.000)
118.083 1940.6019 270.81 .Q . . . V .
(PEAK DAY 1, HOUR 22.083)
118.167 1942.4487 268.16 .Q . . . V.
(PEAK DAY 1, HOUR 22.167)
118.250 1944.2778 265.58 .Q . . . V.
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118.333 1946.0896 263.06 .Q . . . V.
(PEAK DAY 1, HOUR 22.333)
118.417 1947.8844 260.61 .Q . . . V.
(PEAK DAY 1, HOUR 22.417)
118.500 1949.6627 258.22 .Q . . . V.
(PEAK DAY 1, HOUR 22.500)
118.583 1951.4249 255.88 .Q . . . V.
(PEAK DAY 1, HOUR 22.583)
118.667 1953.1715 253.60 .Q . . . V.
(PEAK DAY 1, HOUR 22.667)
118.750 1954.9027 251.37 .Q . . . V.
(PEAK DAY 1, HOUR 22.750)
118.833 1956.6189 249.19 .Q . . . V.
(PEAK DAY 1, HOUR 22.833)
118.917 1958.3204 247.06 .Q . . . V.
(PEAK DAY 1, HOUR 22.917)
119.000 1960.0077 244.98 .Q . . . V.
(PEAK DAY 1, HOUR 23.000)
119.083 1961.6809 242.95 .Q . . . V.
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119.167 1963.3403 240.95 .Q . . . V.
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119.250 1964.9863 239.01 .Q . . . V.
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119.333 1966.6193 237.10 .Q . . . V.
(PEAK DAY 1, HOUR 23.333)
119.417 1968.2393 235.23 .Q . . . V.
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119.500 1969.8467 233.40 .Q . . . V.
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119.583 1971.4418 231.61 .Q . . . V.
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119.667 1973.0248 229.85 .Q . . . V.
(PEAK DAY 1, HOUR 23.667)
119.750 1974.5959 228.13 .Q . . . V.
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119.833 1976.1555 226.44 .Q . . . V.
(PEAK DAY 1, HOUR 23.833)
119.917 1977.7036 224.79 .Q . . . V.
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120.000 1979.2406 223.16 .Q . . . V.
(PEAK DAY 1, HOUR 24.000)
120.083 1980.7501 219.19 .Q . . . V.
(PEAK DAY 1, HOUR 24.083)
120.167 1982.2065 211.46 .Q . . . V.
(PEAK DAY 1, HOUR 24.167)
120.250 1983.5886 200.67 Q . . . V.
(PEAK DAY 1, HOUR 24.250)
120.333 1984.8737 186.59 Q . . . V.
(PEAK DAY 1, HOUR 24.333)
120.417 1986.0109 165.13 Q . . . V.
(PEAK DAY 1, HOUR 24.417)
120.500 1986.8660 124.17 Q . . . V.
(PEAK DAY 1, HOUR 24.500)
120.583 1987.5026 92.43 Q . . . V.
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120.667 1988.0258 75.96 Q . . . V.
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120.750 1988.4669 64.06 Q . . . V.
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120.833 1988.8396 54.11 Q . . . V.
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120.917 1989.1586 46.31 Q . . . V.
(PEAK DAY 1, HOUR 24.917)
121.000 1989.4298 39.39 Q . . . V.
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121.083 1989.6614 33.63 Q . . . V.
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121.167 1989.8578 28.51 Q . . . V.
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121.250 1990.0254 24.33 Q . . . V.
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121.417 1990.2871 17.33 Q . . . V.
(PEAK DAY 1, HOUR 25.417)
121.500 1990.3868 14.48 Q . . . V.
(PEAK DAY 1, HOUR 25.500)
121.583 1990.4702 12.10 Q . . . V.
(PEAK DAY 1, HOUR 25.583)
121.667 1990.5394 10.05 Q . . . V.
(PEAK DAY 1, HOUR 25.667)
121.750 1990.5970 8.37 Q . . . V.
(PEAK DAY 1, HOUR 25.750)
121.833 1990.6462 7.14 Q . . . V.
(PEAK DAY 1, HOUR 25.833)
121.917 1990.6870 5.91 Q . . . V.
(PEAK DAY 1, HOUR 25.917)
122.000 1990.7198 4.77 Q . . . V.
(PEAK DAY 1, HOUR 26.000)
122.083 1990.7499 4.36 Q . . . V.
(PEAK DAY 1, HOUR 26.083)
122.167 1990.7784 4.14 Q . . . V.
(PEAK DAY 1, HOUR 26.167)
122.250 1990.8054 3.92 Q . . . V.
(PEAK DAY 1, HOUR 26.250)
122.333 1990.8309 3.70 Q . . . V.
(PEAK DAY 1, HOUR 26.333)
122.417 1990.8550 3.49 Q . . . V.
(PEAK DAY 1, HOUR 26.417)
122.500 1990.8776 3.28 Q . . . V.
(PEAK DAY 1, HOUR 26.500)
122.583 1990.8987 3.07 Q . . . V.
(PEAK DAY 1, HOUR 26.583)
122.667 1990.9183 2.86 Q . . . V.
(PEAK DAY 1, HOUR 26.667)
122.750 1990.9365 2.65 Q . . . V.
(PEAK DAY 1, HOUR 26.750)
122.833 1990.9534 2.44 Q . . . V.
(PEAK DAY 1, HOUR 26.833)
122.917 1990.9688 2.24 Q . . . V.
(PEAK DAY 1, HOUR 26.917)
123.000 1990.9828 2.03 Q . . . V.
(PEAK DAY 1, HOUR 27.000)
123.083 1990.9954 1.83 Q . . . V.
(PEAK DAY 1, HOUR 27.083)
123.167 1991.0066 1.63 Q . . . V.
(PEAK DAY 1, HOUR 27.167)
123.250 1991.0165 1.43 Q . . . V.
(PEAK DAY 1, HOUR 27.250)
123.333 1991.0249 1.23 Q . . . V.
(PEAK DAY 1, HOUR 27.333)
123.417 1991.0320 1.03 Q . . . V.

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 (PEAK DAY 1, HOUR  27.417)
123.500   1991.0377      0.84  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.500)
123.583   1991.0421      0.64  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.583)
123.667   1991.0452      0.45  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.667)
123.750   1991.0470      0.26  Q         .         .         .         V
 (PEAK DAY 1, HOUR  27.750)
123.833   1991.0475      0.07  Q         .         .         .         V
 (PEAK DAY 1, HOUR  27.833)
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE    780.00 TO NODE    780.00 IS CODE = 3.1
--------------------------------------------------------------------------------
  >>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #1<<<<<
================================================================================

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  4741.3 Ac. ***

                    INFLOW
                  (STREAM 1)
                       |
                       |
                       V                 __effective depth
                   -----------           |   (and volume)
                  |           |    |     |
                  |           |    |....V.........
                  | detention |<-->|           outflow
                  |   basin   |    |.........._______
                   -----------     |    ^     |  \
                       |           |  dead    |   basin outlet
                       V           | storage  |
                    OUTFLOW         ---------
                  (STREAM 1)



        ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 1
        THROUGH A FLOW-THROUGH DETENTION BASIN
        SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
          DEAD STORAGE(AF) =      0.000
          SPECIFIED DEAD STORAGE(AF) FILLED =      0.000
          SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET =      0.000
          DETENTION BASIN CONSTANT LOSS RATE(CFS) =    0.00


        BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

         INTERVAL    DEPTH      OUTFLOW     STORAGE
          NUMBER      (FT)       (CFS)       (AF)
              1        0.00        0.00       0.000
              2        4.00      678.00       0.500
              3        5.00      771.00       1.400
              4        6.00      853.30       3.500
              5        7.00      930.30       7.200
              6        9.00     1070.20      20.100
              7       11.00     1195.00      37.900
              8       13.00     1309.20      57.000
              9       15.00     1415.40      91.500
             10       17.00     1513.70     131.700
             11       19.00     1607.50     173.100
             12       21.00     1696.00     215.800
             13       23.00     1782.70     259.800
             14       25.00     1827.90     305.100
             15       27.00     1878.30     351.900
             16       29.00     1935.00     400.000
             17       31.00     1995.20     449.400


================================================================================
 MODIFIED-PULS BASIN ROUTING MODEL RESULTS(5-MINUTE COMPUTATION INTERVALS):
 (Note: Computed EFFECTIVE DEPTH and VOLUME are estimated at the clock time;
        MEAN OUTFLOW is the average value during the unit interval.)

                  CLOCK                                                MEAN
PEAK TIME         TIME    DEAD-STORAGE    INFLOW     LOSS  EFFECTIVE OUTFLOW  EFFECTIVE
DAY  (HRS)        (HRS)    FILLED(AF)      (CFS)     (CFS)  DEPTH(FT)  (CFS)   VOLUME(AF)
--------------------------------------------------------------------------------------
 1   0.001    96.001          0.000      57.05      0.00       0.34     57.1       0.042
 1   0.084    96.084          0.000      58.43      0.00       0.35     58.2       0.044
 1   0.167    96.167          0.000      62.64      0.00       0.38     62.1       0.048
 1   0.251    96.251          0.000      69.24      0.00       0.43     68.4       0.053
 1   0.334    96.334          0.000      78.41      0.00       0.49     77.3       0.061
 1   0.417    96.417          0.000      93.23      0.00       0.59     91.3       0.074
 1   0.501    96.501          0.000     122.82      0.00       0.81    118.8       0.101
 1   0.584    96.584          0.000     145.93      0.00       0.89    144.4       0.112
 1   0.667    96.667          0.000     157.97      0.00       0.96    156.8       0.120
 1   0.751    96.751          0.000     166.77      0.00       1.00    166.0       0.125
 1   0.834    96.834          0.000     174.25      0.00       1.05    173.4       0.131
 1   0.917    96.917          0.000     180.21      0.00       1.07    179.7       0.134
 1   1.001    97.001          0.000     185.62      0.00       1.11    185.0       0.139
 1   1.084    97.084          0.000     190.22      0.00       1.13    189.8       0.141
 1   1.167    97.167          0.000     194.42      0.00       1.16    194.0       0.145
 1   1.251    97.251          0.000     197.97      0.00       1.17    197.6       0.147
 1   1.334    97.334          0.000     201.20      0.00       1.19    200.8       0.149
 1   1.417    97.417          0.000     204.20      0.00       1.21    203.9       0.151
 1   1.501    97.501          0.000     206.90      0.00       1.23    206.6       0.153
 1   1.584    97.584          0.000     209.26      0.00       1.24    209.0       0.155
 1   1.667    97.667          0.000     211.43      0.00       1.25    211.2       0.157
 1   1.751    97.751          0.000     213.33      0.00       1.26    213.1       0.158
 1   1.834    97.834          0.000     214.94      0.00       1.27    214.8       0.159
 1   1.917    97.917          0.000     216.54      0.00       1.28    216.4       0.160
 1   2.001    98.001          0.000     218.12      0.00       1.29    218.0       0.161
 1   2.084    98.084          0.000     219.16      0.00       1.29    219.1       0.162
 1   2.167    98.167          0.000     220.08      0.00       1.30    220.0       0.163
 1   2.251    98.251          0.000     220.99      0.00       1.31    220.9       0.163
 1   2.334    98.334          0.000     221.93      0.00       1.31    221.8       0.164
 1   2.417    98.417          0.000     222.86      0.00       1.32    222.8       0.165
 1   2.501    98.501          0.000     223.82      0.00       1.32    223.7       0.165
 1   2.584    98.584          0.000     224.77      0.00       1.33    224.7       0.166
 1   2.667    98.667          0.000     225.74      0.00       1.33    225.6       0.167
 1   2.751    98.751          0.000     226.71      0.00       1.34    226.6       0.167
 1   2.834    98.834          0.000     227.70      0.00       1.35    227.6       0.168
 1   2.917    98.917          0.000     228.68      0.00       1.35    228.6       0.169
 1   3.001    99.001          0.000     229.69      0.00       1.36    229.6       0.170
 1   3.084    99.084          0.000     230.70      0.00       1.36    230.6       0.170
 1   3.167    99.167          0.000     231.73      0.00       1.37    231.6       0.171
 1   3.251    99.251          0.000     232.75      0.00       1.38    232.6       0.172
 1   3.334    99.334          0.000     233.80      0.00       1.38    233.7       0.173
 1   3.417    99.417          0.000     234.84      0.00       1.39    234.7       0.173
 1   3.501    99.501          0.000     235.92      0.00       1.39    235.8       0.174
 1   3.584    99.584          0.000     236.98      0.00       1.40    236.9       0.175
 1   3.667    99.667          0.000     238.07      0.00       1.41    238.0       0.176
 1   3.751    99.751          0.000     239.16      0.00       1.41    239.0       0.177
 1   3.834    99.834          0.000     240.27      0.00       1.42    240.2       0.178
 1   3.917    99.917          0.000     241.29      0.00       1.43    241.2       0.178
 1   4.001   100.001          0.000     242.29      0.00       1.43    242.2       0.179
 1   4.084   100.084          0.000     243.27      0.00       1.44    243.2       0.180
 1   4.167   100.167          0.000     244.29      0.00       1.44    244.2       0.180
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1	4.251	100.251	0.000	245.30	0.00	1.45	245.2	0.181
1	4.334	100.334	0.000	246.34	0.00	1.46	246.2	0.182
1	4.417	100.417	0.000	247.37	0.00	1.46	247.3	0.183
1	4.501	100.501	0.000	248.44	0.00	1.47	248.3	0.184
1	4.584	100.584	0.000	249.49	0.00	1.47	249.4	0.184
1	4.667	100.667	0.000	250.58	0.00	1.48	250.5	0.185
1	4.751	100.751	0.000	251.66	0.00	1.49	251.5	0.186
1	4.834	100.834	0.000	252.77	0.00	1.49	252.6	0.187
1	4.917	100.917	0.000	253.87	0.00	1.50	253.8	0.188
1	5.001	101.001	0.000	255.01	0.00	1.51	254.9	0.188
1	5.084	101.084	0.000	256.14	0.00	1.51	256.0	0.189
1	5.167	101.167	0.000	257.30	0.00	1.52	257.2	0.190
1	5.251	101.251	0.000	258.46	0.00	1.53	258.3	0.191
1	5.334	101.334	0.000	259.65	0.00	1.53	259.5	0.192
1	5.417	101.417	0.000	260.84	0.00	1.54	260.7	0.193
1	5.501	101.501	0.000	262.06	0.00	1.55	261.9	0.194
1	5.584	101.584	0.000	263.27	0.00	1.56	263.1	0.194
1	5.667	101.667	0.000	264.52	0.00	1.56	264.4	0.195
1	5.751	101.751	0.000	265.76	0.00	1.57	265.6	0.196
1	5.834	101.834	0.000	267.05	0.00	1.58	266.9	0.197
1	5.917	101.917	0.000	268.32	0.00	1.59	268.2	0.198
1	6.001	102.001	0.000	269.64	0.00	1.59	269.5	0.199
1	6.084	102.084	0.000	270.94	0.00	1.60	270.8	0.200
1	6.167	102.167	0.000	272.29	0.00	1.61	272.1	0.201
1	6.251	102.251	0.000	273.63	0.00	1.62	273.5	0.202
1	6.334	102.334	0.000	275.02	0.00	1.63	274.9	0.203
1	6.417	102.417	0.000	276.39	0.00	1.63	276.2	0.204
1	6.501	102.501	0.000	277.81	0.00	1.64	277.7	0.205
1	6.584	102.584	0.000	279.23	0.00	1.65	279.1	0.206
1	6.667	102.667	0.000	280.69	0.00	1.66	280.5	0.207
1	6.751	102.751	0.000	282.14	0.00	1.67	282.0	0.208
1	6.834	102.834	0.000	283.64	0.00	1.68	283.5	0.210
1	6.917	102.917	0.000	285.13	0.00	1.69	285.0	0.211
1	7.001	103.001	0.000	286.67	0.00	1.70	286.5	0.212
1	7.084	103.084	0.000	288.21	0.00	1.70	288.0	0.213
1	7.167	103.167	0.000	289.79	0.00	1.71	289.6	0.214
1	7.251	103.251	0.000	291.37	0.00	1.72	291.2	0.215
1	7.334	103.334	0.000	293.00	0.00	1.73	292.8	0.217
1	7.417	103.417	0.000	294.63	0.00	1.74	294.5	0.218
1	7.501	103.501	0.000	296.31	0.00	1.75	296.1	0.219
1	7.584	103.584	0.000	297.98	0.00	1.76	297.8	0.220
1	7.667	103.667	0.000	299.71	0.00	1.77	299.5	0.222
1	7.751	103.751	0.000	301.43	0.00	1.78	301.3	0.223
1	7.834	103.834	0.000	303.22	0.00	1.79	303.0	0.224
1	7.917	103.917	0.000	305.00	0.00	1.80	304.8	0.225
1	8.001	104.001	0.000	306.84	0.00	1.81	306.6	0.227
1	8.084	104.084	0.000	308.67	0.00	1.83	308.5	0.228
1	8.167	104.167	0.000	310.57	0.00	1.84	310.4	0.230
1	8.251	104.251	0.000	312.46	0.00	1.85	312.3	0.231
1	8.334	104.334	0.000	314.43	0.00	1.86	314.2	0.232
1	8.418	104.418	0.000	316.38	0.00	1.87	316.2	0.234
1	8.501	104.501	0.000	318.41	0.00	1.88	318.2	0.235
1	8.584	104.584	0.000	320.42	0.00	1.89	320.2	0.237
1	8.668	104.668	0.000	322.52	0.00	1.91	322.3	0.238
1	8.751	104.751	0.000	324.61	0.00	1.92	324.4	0.240
1	8.834	104.834	0.000	326.78	0.00	1.93	326.5	0.242
1	8.918	104.918	0.000	328.94	0.00	1.95	328.7	0.243
1	9.001	105.001	0.000	331.18	0.00	1.96	330.9	0.245
1	9.084	105.084	0.000	333.42	0.00	1.97	333.2	0.247
1	9.168	105.168	0.000	335.75	0.00	1.99	335.5	0.248
1	9.251	105.251	0.000	338.07	0.00	2.00	337.8	0.250
1	9.334	105.334	0.000	340.48	0.00	2.01	340.2	0.252
1	9.418	105.418	0.000	342.89	0.00	2.03	342.6	0.254
1	9.501	105.501	0.000	345.39	0.00	2.04	345.1	0.255
1	9.584	105.584	0.000	347.89	0.00	2.06	347.6	0.257
1	9.668	105.668	0.000	350.49	0.00	2.07	350.2	0.259
1	9.751	105.751	0.000	353.09	0.00	2.09	352.8	0.261
1	9.834	105.834	0.000	355.80	0.00	2.11	355.5	0.263
1	9.918	105.918	0.000	358.50	0.00	2.12	358.2	0.265
1	10.001	106.001	0.000	361.31	0.00	2.14	361.0	0.267
1	10.084	106.084	0.000	364.13	0.00	2.15	363.8	0.269
1	10.168	106.168	0.000	367.06	0.00	2.17	366.7	0.272
1	10.251	106.251	0.000	370.00	0.00	2.19	369.7	0.274
1	10.334	106.334	0.000	373.06	0.00	2.21	372.7	0.276
1	10.418	106.418	0.000	376.12	0.00	2.23	375.8	0.278
1	10.501	106.501	0.000	379.32	0.00	2.25	379.0	0.281
1	10.584	106.584	0.000	382.51	0.00	2.26	382.2	0.283
1	10.668	106.668	0.000	385.85	0.00	2.28	385.5	0.286
1	10.751	106.751	0.000	389.20	0.00	2.30	388.8	0.288
1	10.834	106.834	0.000	392.69	0.00	2.33	392.3	0.291
1	10.918	106.918	0.000	396.19	0.00	2.35	395.8	0.293
1	11.001	107.001	0.000	399.86	0.00	2.37	399.4	0.296
1	11.084	107.084	0.000	403.53	0.00	2.39	403.2	0.299
1	11.168	107.168	0.000	407.38	0.00	2.41	406.9	0.302
1	11.251	107.251	0.000	411.24	0.00	2.43	410.8	0.304
1	11.334	107.334	0.000	415.28	0.00	2.46	414.8	0.307
1	11.418	107.418	0.000	419.34	0.00	2.48	418.9	0.310
1	11.501	107.501	0.000	423.60	0.00	2.51	423.1	0.314
1	11.584	107.584	0.000	427.88	0.00	2.53	427.4	0.317
1	11.668	107.668	0.000	432.36	0.00	2.56	431.9	0.320
1	11.751	107.751	0.000	436.88	0.00	2.59	436.4	0.323
1	11.834	107.834	0.000	441.62	0.00	2.62	441.1	0.327
1	11.918	107.918	0.000	446.40	0.00	2.64	445.9	0.331
1	12.001	108.001	0.000	451.42	0.00	2.68	450.9	0.334
1	12.084	108.084	0.000	458.21	0.00	2.72	457.4	0.340
1	12.168	108.168	0.000	468.03	0.00	2.79	466.8	0.348
1	12.251	108.251	0.000	480.19	0.00	2.86	478.8	0.358
1	12.334	108.334	0.000	495.10	0.00	2.96	493.4	0.370
1	12.418	108.418	0.000	515.54	0.00	3.10	513.1	0.387
1	12.501	108.501	0.000	550.61	0.00	3.35	546.0	0.418
1	12.584	108.584	0.000	579.32	0.00	3.46	577.2	0.433
1	12.668	108.668	0.000	597.50	0.00	3.57	595.7	0.446
1	12.751	108.751	0.000	612.56	0.00	3.65	611.1	0.456
1	12.834	108.834	0.000	626.67	0.00	3.73	625.1	0.466
1	12.918	108.918	0.000	639.37	0.00	3.80	638.1	0.475
1	13.001	109.001	0.000	651.92	0.00	3.88	650.5	0.485
1	13.084	109.084	0.000	663.96	0.00	3.94	662.7	0.493
1	13.168	109.168	0.000	676.43	0.00	4.01	673.8	0.511
1	13.251	109.251	0.000	689.01	0.00	4.07	681.7	0.561
1	13.334	109.334	0.000	702.61	0.00	4.17	689.1	0.654
1	13.418	109.418	0.000	717.55	0.00	4.30	700.1	0.774
1	13.501	109.501	0.000	735.54	0.00	4.47	714.0	0.922
1	13.584	109.584	0.000	755.09	0.00	4.66	730.4	1.092
1	13.668	109.668	0.000	776.66	0.00	4.87	749.0	1.283
1	13.751	109.751	0.000	799.06	0.00	5.05	767.0	1.504
1	13.834	109.834	0.000	823.23	0.00	5.19	780.8	1.796
1	13.918	109.918	0.000	848.40	0.00	5.37	793.9	2.171
1	14.001	110.001	0.000	875.72	0.00	5.58	810.1	2.623
1	14.084	110.084	0.000	911.09	0.00	5.85	829.9	3.183
1	14.168	110.168	0.000	960.67	0.00	6.12	851.6	3.934
1	14.251	110.251	0.000	1021.19	0.00	6.39	873.0	4.955
1	14.334	110.334	0.000	1094.90	0.00	6.76	897.7	6.313
1	14.418	110.418	0.000	1193.34	0.00	7.15	926.2	8.152
1	14.501	110.501	0.000	1356.53	0.00	7.58	955.6	10.914
1	14.584	110.584	0.000	1492.23	0.00	8.11	989.4	14.377
1	14.668	110.668	0.000	1583.02	0.00	8.70	1028.8	18.194
1	14.751	110.751	0.000	1661.17	0.00	9.25	1067.5	22.282
1	14.834	110.834	0.000	1737.02	0.00	9.74	1100.9	26.664
1	14.918	110.918	0.000	1808.27	0.00	10.26	1132.5	31.317
1	15.001	111.001	0.000	1881.49	0.00	10.81	1166.1	36.244
1	15.084	111.084	0.000	1953.82	0.00	11.37	1199.8	41.437
1	15.168	111.168	0.000	2029.99	0.00	11.95	1232.6	46.929
1	15.251	111.251	0.000	2107.09	0.00	12.55	1266.3	52.720
1	15.334	111.334	0.000	2190.26	0.00	13.11	1299.3	58.856

1	15.418	111.418	0.000	2261.16	0.00	13.48	1324.8	65.305
1	15.501	111.501	0.000	2314.61	0.00	13.87	1345.0	71.982
1	15.584	111.584	0.000	2353.79	0.00	14.26	1365.8	78.787
1	15.668	111.668	0.000	2385.29	0.00	14.66	1386.8	85.663
1	15.751	111.751	0.000	2381.42	0.00	15.04	1407.5	92.370
1	15.834	111.834	0.000	2270.74	0.00	15.33	1424.7	98.197
1	15.918	111.918	0.000	2271.00	0.00	15.62	1438.8	103.929
1	16.001	112.001	0.000	2471.00	0.00	15.97	1454.4	110.931
1	16.084	112.084	0.000	2991.95	0.00	16.49	1475.7	121.373
1	16.168	112.168	0.000	3710.00	0.00	17.23	1506.6	136.548
1	16.251	112.251	0.000	4396.52	0.00	18.18	1546.9	156.174
1	16.334	112.334	0.000	5191.94	0.00	19.37	1596.4	180.936
1	16.418	112.418	0.000	6336.55	0.00	20.88	1657.1	213.163
1	16.501	112.501	0.000	8096.49	0.00	22.87	1733.8	256.983
1	16.584	112.584	0.000	6844.24	0.00	24.41	1795.9	291.752
1	16.668	112.668	0.000	4977.55	0.00	25.36	1825.7	313.458
1	16.751	112.751	0.000	4234.69	0.00	26.06	1845.8	329.911
1	16.834	112.834	0.000	3975.03	0.00	26.68	1862.5	344.460
1	16.918	112.918	0.000	3705.36	0.00	27.21	1877.3	357.050
1	17.001	113.001	0.000	3487.65	0.00	27.67	1890.9	368.047
1	17.084	113.084	0.000	3235.76	0.00	28.05	1902.7	377.228
1	17.168	113.168	0.000	3028.04	0.00	28.37	1912.7	384.910
1	17.251	113.251	0.000	2790.18	0.00	28.62	1920.7	390.897
1	17.334	113.334	0.000	2591.97	0.00	28.81	1927.0	395.477
1	17.418	113.418	0.000	2392.77	0.00	28.94	1931.5	398.654
1	17.501	113.501	0.000	2124.86	0.00	29.00	1934.2	399.967
1	17.584	113.584	0.000	1886.69	0.00	28.98	1934.8	399.636
1	17.668	113.668	0.000	1715.04	0.00	28.92	1933.7	398.130
1	17.751	113.751	0.000	1558.98	0.00	28.82	1931.3	395.566
1	17.834	113.834	0.000	1413.20	0.00	28.67	1927.7	392.023
1	17.918	113.918	0.000	1316.13	0.00	28.49	1923.1	387.842
1	18.001	114.001	0.000	1214.79	0.00	28.29	1917.8	383.001
1	18.084	114.084	0.000	1066.59	0.00	28.05	1911.5	377.182
1	18.168	114.168	0.000	980.42	0.00	27.79	1904.4	370.818
1	18.251	114.251	0.000	924.85	0.00	27.51	1896.7	364.125
1	18.334	114.334	0.000	875.77	0.00	27.22	1888.6	357.150
1	18.418	114.418	0.000	822.24	0.00	26.91	1880.3	349.863
1	18.501	114.501	0.000	758.30	0.00	26.59	1872.0	342.193
1	18.584	114.584	0.000	705.67	0.00	26.24	1863.6	334.219
1	18.668	114.668	0.000	667.42	0.00	25.89	1854.9	326.041
1	18.751	114.751	0.000	635.65	0.00	25.54	1846.0	317.705
1	18.834	114.834	0.000	608.22	0.00	25.18	1836.9	309.243
1	18.918	114.918	0.000	583.92	0.00	24.80	1827.9	300.676
1	19.001	115.001	0.000	561.58	0.00	24.42	1819.2	292.015
1	19.084	115.084	0.000	543.39	0.00	24.04	1810.5	283.288
1	19.168	115.168	0.000	527.11	0.00	23.65	1801.8	274.510
1	19.251	115.251	0.000	513.04	0.00	23.26	1793.0	265.694
1	19.335	115.335	0.000	500.38	0.00	22.87	1782.7	256.863
1	19.418	115.418	0.000	488.33	0.00	22.47	1768.2	248.048
1	19.501	115.501	0.000	476.91	0.00	22.07	1750.9	239.274
1	19.585	115.585	0.000	465.84	0.00	21.67	1733.7	230.542
1	19.668	115.668	0.000	454.86	0.00	21.28	1716.5	221.854
1	19.751	115.751	0.000	443.22	0.00	20.88	1699.3	213.203
1	19.835	115.835	0.000	430.23	0.00	20.47	1681.7	204.584
1	19.918	115.918	0.000	406.68	0.00	20.07	1663.8	195.927
1	20.001	116.001	0.000	389.75	0.00	19.66	1645.8	187.276
1	20.085	116.085	0.000	381.46	0.00	19.26	1628.0	178.691
1	20.168	116.168	0.000	374.48	0.00	18.86	1610.0	170.182
1	20.251	116.251	0.000	367.34	0.00	18.45	1591.3	161.752
1	20.335	116.335	0.000	360.20	0.00	18.05	1572.3	153.404
1	20.418	116.418	0.000	353.47	0.00	17.65	1553.5	145.139
1	20.501	116.501	0.000	347.07	0.00	17.25	1534.9	136.959
1	20.585	116.585	0.000	340.98	0.00	16.86	1516.2	128.865
1	20.668	116.668	0.000	335.15	0.00	16.46	1497.0	120.863
1	20.751	116.751	0.000	329.56	0.00	16.07	1477.5	112.957
1	20.835	116.835	0.000	324.20	0.00	15.68	1458.3	105.146
1	20.918	116.918	0.000	319.41	0.00	15.30	1439.3	97.434
1	21.001	117.001	0.000	315.04	0.00	14.90	1420.1	89.823
1	21.085	117.085	0.000	310.85	0.00	14.47	1398.7	82.331
1	21.168	117.168	0.000	306.82	0.00	14.04	1375.8	74.969
1	21.251	117.251	0.000	302.95	0.00	13.62	1353.4	67.734
1	21.335	117.335	0.000	299.22	0.00	13.21	1331.3	60.626
1	21.418	117.418	0.000	295.63	0.00	12.65	1304.8	53.676
1	21.501	117.501	0.000	292.16	0.00	11.95	1269.2	46.947
1	21.585	117.585	0.000	288.80	0.00	11.27	1229.7	40.467
1	21.668	117.668	0.000	285.53	0.00	10.59	1189.8	34.239
1	21.751	117.751	0.000	282.35	0.00	9.92	1148.4	28.274
1	21.835	117.835	0.000	279.25	0.00	9.28	1107.5	22.570
1	21.918	117.918	0.000	276.33	0.00	8.54	1062.9	17.153
1	22.001	118.001	0.000	273.53	0.00	7.76	1010.7	12.076
1	22.085	118.085	0.000	270.81	0.00	7.02	957.5	7.346
1	22.168	118.168	0.000	268.16	0.00	5.81	884.7	3.100
1	22.251	118.251	0.000	265.58	0.00	2.88	663.3	0.361
1	22.335	118.335	0.000	263.06	0.00	0.69	302.9	0.086
1	22.418	118.418	0.000	260.61	0.00	2.09	235.3	0.261
1	22.501	118.501	0.000	258.22	0.00	1.16	275.1	0.145
1	22.585	118.585	0.000	255.88	0.00	1.74	245.4	0.217
1	22.668	118.668	0.000	253.60	0.00	1.34	260.8	0.168
1	22.751	118.751	0.000	251.37	0.00	1.58	247.1	0.197
1	22.835	118.835	0.000	249.19	0.00	1.40	252.3	0.175
1	22.918	118.918	0.000	247.06	0.00	1.49	245.4	0.187
1	23.001	119.001	0.000	244.98	0.00	1.41	246.4	0.177
1	23.085	119.085	0.000	242.95	0.00	1.45	242.4	0.181
1	23.168	119.168	0.000	240.95	0.00	1.41	241.7	0.176
1	23.251	119.251	0.000	239.01	0.00	1.41	238.9	0.177
1	23.335	119.335	0.000	237.10	0.00	1.39	237.5	0.174
1	23.418	119.418	0.000	235.23	0.00	1.39	235.3	0.173
1	23.501	119.501	0.000	233.40	0.00	1.37	233.7	0.171
1	23.585	119.585	0.000	231.61	0.00	1.36	231.7	0.170
1	23.668	119.668	0.000	229.85	0.00	1.35	230.1	0.169
1	23.751	119.751	0.000	228.13	0.00	1.34	228.3	0.168
1	23.835	119.835	0.000	226.44	0.00	1.33	226.6	0.166
1	23.918	119.918	0.000	224.79	0.00	1.32	225.0	0.165
1	24.001	120.001	0.000	223.16	0.00	1.31	223.3	0.164
1	24.085	120.085	0.000	219.19	0.00	1.28	219.8	0.160
1	24.168	120.168	0.000	211.46	0.00	1.23	212.4	0.153
1	24.251	120.251	0.000	200.67	0.00	1.16	201.9	0.145
1	24.335	120.335	0.000	186.59	0.00	1.06	188.3	0.133
1	24.418	120.418	0.000	165.13	0.00	0.92	167.8	0.114
1	24.501	120.501	0.000	124.17	0.00	0.61	129.6	0.077
1	24.585	120.585	0.000	92.43	0.00	0.50	94.5	0.063
1	24.668	120.668	0.000	75.96	0.00	0.41	77.5	0.052
1	24.751	120.751	0.000	64.06	0.00	0.35	65.1	0.044
1	24.835	120.835	0.000	54.11	0.00	0.30	55.2	0.037
1	24.918	120.918	0.000	46.31	0.00	0.26	47.0	0.032
1	25.001	121.001	0.000	39.39	0.00	0.22	40.2	0.027
1	25.085	121.085	0.000	33.63	0.00	0.19	34.1	0.023
1	25.168	121.168	0.000	28.51	0.00	0.16	29.1	0.019
1	25.251	121.251	0.000	24.33	0.00	0.14	24.7	0.017
1	25.335	121.335	0.000	20.66	0.00	0.11	21.1	0.014
1	25.418	121.418	0.000	17.33	0.00	0.10	17.7	0.012
1	25.501	121.501	0.000	14.48	0.00	0.08	14.8	0.010
1	25.585	121.585	0.000	12.10	0.00	0.07	12.3	0.008
1	25.668	121.668	0.000	10.05	0.00	0.05	10.3	0.007
1	25.751	121.751	0.000	8.37	0.00	0.05	8.5	0.006
1	25.835	121.835	0.000	7.14	0.00	0.04	7.3	0.005
1	25.918	121.918	0.000	5.91	0.00	0.03	6.1	0.004
1	26.001	122.001	0.000	4.77	0.00	0.03	4.9	0.003
1	26.085	122.085	0.000	4.36	0.00	0.03	4.4	0.003
1	26.168	122.168	0.000	4.14	0.00	0.02	4.2	0.003
1	26.251	122.251	0.000	3.92	0.00	0.02	3.9	0.003
1	26.335	122.335	0.000	3.70	0.00	0.02	3.7	0.003
1	26.418	122.418	0.000	3.49	0.00	0.02	3.5	0.003
1	26.501	122.501	0.000	3.28	0.00	0.02	3.3	0.002

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 1  26.585 122.585        0.000     3.07     0.00      0.02      3.1      0.002
 1  26.668 122.668        0.000     2.86     0.00      0.02      2.9      0.002
 1  26.751 122.751        0.000     2.65     0.00      0.02      2.7      0.002
 1  26.835 122.835        0.000     2.44     0.00      0.01      2.5      0.002
 1  26.918 122.918        0.000     2.24     0.00      0.01      2.3      0.002
 1  27.001 123.001        0.000     2.03     0.00      0.01      2.1      0.001
 1  27.085 123.085        0.000     1.83     0.00      0.01      1.9      0.001
 1  27.168 123.168        0.000     1.63     0.00      0.01      1.6      0.001
 1  27.251 123.251        0.000     1.43     0.00      0.01      1.4      0.001
 1  27.335 123.335        0.000     1.23     0.00      0.01      1.3      0.001
 1  27.418 123.418        0.000     1.03     0.00      0.01      1.1      0.001
 1  27.501 123.501        0.000     0.84     0.00      0.00      0.9      0.001
 1  27.585 123.585        0.000     0.64     0.00      0.00      0.7      0.000
 1  27.668 123.668        0.000     0.45     0.00      0.00      0.5      0.000
 1  27.751 123.751        0.000     0.26     0.00      0.00      0.3      0.000
 1  27.835 123.835        0.000     0.07     0.00      0.00      0.1      0.000
 1  27.918 123.918        0.000     0.00     0.00      0.00      0.0      0.000
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
-------------------------------------------------------------------------------
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   1991.048 AF
    BASIN  STORAGE =      0.000 AF (WITH      0.000 AF INITIALLY FILLED)
    OUTFLOW VOLUME =   1991.047 AF
    LOSS    VOLUME =      0.000 AF
===============================================================================



*******************************************************************************
  FLOW PROCESS FROM NODE    780.00 TO NODE    780.00 IS CODE =  11
-------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
===============================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  4741.3 Ac. ***

            STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
        (Note: Time indicated is at END of Each Unit Intervals)
-------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      500.0    1000.0    1500.0    2000.0
-------------------------------------------------------------------------------
  96.000    524.3303     57.10  .Q        V         .         .         .
 (PEAK DAY 2, HOUR  24.000)
  96.083    524.7308     58.16  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.083)
  96.167    525.1583     62.08  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.167)
  96.250    525.6297     68.45  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.250)
  96.333    526.1621     77.30  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.333)
  96.417    526.7911     91.33  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.417)
  96.500    527.6095    118.84  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   0.500)
  96.583    528.6042    144.43  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   0.583)
  96.667    529.6842    156.81  .  Q      V         .         .         .
 (PEAK DAY 1, HOUR   0.667)
  96.750    530.8272    165.97  .  Q      V         .         .         .
 (PEAK DAY 1, HOUR   0.750)
  96.833    532.0217    173.45  .  Q      V         .         .         .
 (PEAK DAY 1, HOUR   0.833)
  96.917    533.2592    179.68  .  Q      V         .         .         .
 (PEAK DAY 1, HOUR   0.917)
  97.000    534.5334    185.01  .  Q      V         .         .         .
 (PEAK DAY 1, HOUR   1.000)
  97.083    535.8406    189.81  .  Q      V         .         .         .
 (PEAK DAY 1, HOUR   1.083)
  97.167    537.1763    193.95  .  Q      V         .         .         .
 (PEAK DAY 1, HOUR   1.167)
  97.250    538.5375    197.65  .  Q      V         .         .         .
 (PEAK DAY 1, HOUR   1.250)
  97.333    539.9207    200.83  .  Q      V         .         .         .
 (PEAK DAY 1, HOUR   1.333)
  97.417    541.3250    203.90  .  Q      V         .         .         .
 (PEAK DAY 1, HOUR   1.417)
  97.500    542.7479    206.61  .  Q      V         .         .         .
 (PEAK DAY 1, HOUR   1.500)
  97.583    544.1875    209.03  .  Q      V         .         .         .
 (PEAK DAY 1, HOUR   1.583)
  97.667    545.6420    211.20  .  Q      V         .         .         .
 (PEAK DAY 1, HOUR   1.667)
  97.750    547.1100    213.14  .  Q      V         .         .         .
 (PEAK DAY 1, HOUR   1.750)
  97.833    548.5891    214.77  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   1.833)
  97.917    550.0792    216.37  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   1.917)
  98.000    551.5803    217.96  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.000)
  98.083    553.0892    219.08  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.083)
  98.167    554.6041    219.97  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.167)
  98.250    556.1254    220.91  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.250)
  98.333    557.6531    221.82  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.333)
  98.417    559.1874    222.77  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.417)
  98.500    560.7281    223.71  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.500)
  98.583    562.2754    224.67  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.583)
  98.667    563.8293    225.63  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.667)
  98.750    565.3900    226.61  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.750)
  98.833    566.9574    227.59  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.833)
  98.917    568.5316    228.58  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.917)
  99.000    570.1127    229.58  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   3.000)
  99.083    571.7008    230.59  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   3.083)
  99.167    573.2960    231.61  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   3.167)
  99.250    574.8982    232.64  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   3.250)
  99.333    576.5076    233.69  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   3.333)
  99.417    578.1243    234.74  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   3.417)
  99.500    579.7482    235.80  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   3.500)
  99.583    581.3796    236.87  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   3.583)
  99.667    583.0184    237.95  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   3.667)
  99.750    584.6647    239.05  .  Q      .V        .         .         .
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(PEAK DAY 1, HOUR 3.750)
99.833 586.3186 240.15 . Q .V . . .
(PEAK DAY 1, HOUR 3.833)
99.917 587.9797 241.19 . Q .V . . .
(PEAK DAY 1, HOUR 3.917)
100.000 589.6475 242.18 . Q .V . . .
(PEAK DAY 1, HOUR 4.000)
100.083 591.3223 243.17 . Q .V . . .
(PEAK DAY 1, HOUR 4.083)
100.167 593.0039 244.18 . Q .V . . .
(PEAK DAY 1, HOUR 4.167)
100.250 594.6926 245.20 . Q .V . . .
(PEAK DAY 1, HOUR 4.250)
100.333 596.3883 246.23 . Q .V . . .
(PEAK DAY 1, HOUR 4.333)
100.417 598.0912 247.27 . Q . V . . .
(PEAK DAY 1, HOUR 4.417)
100.500 599.8014 248.32 . Q . V . . .
(PEAK DAY 1, HOUR 4.500)
100.583 601.5189 249.38 . Q . V . . .
(PEAK DAY 1, HOUR 4.583)
100.667 603.2438 250.46 . Q . V . . .
(PEAK DAY 1, HOUR 4.667)
100.750 604.9762 251.54 . Q . V . . .
(PEAK DAY 1, HOUR 4.750)
100.833 606.7162 252.65 . Q . V . . .
(PEAK DAY 1, HOUR 4.833)
100.917 608.4638 253.76 . Q . V . . .
(PEAK DAY 1, HOUR 4.917)
101.000 610.2192 254.88 . Q . V . . .
(PEAK DAY 1, HOUR 5.000)
101.083 611.9824 256.02 . Q . V . . .
(PEAK DAY 1, HOUR 5.083)
101.167 613.7536 257.17 . Q . V . . .
(PEAK DAY 1, HOUR 5.167)
101.250 615.5328 258.34 . Q . V . . .
(PEAK DAY 1, HOUR 5.250)
101.333 617.3201 259.52 . Q . V . . .
(PEAK DAY 1, HOUR 5.333)
101.417 619.1157 260.71 . Q . V . . .
(PEAK DAY 1, HOUR 5.417)
101.500 620.9196 261.92 . Q . V . . .
(PEAK DAY 1, HOUR 5.500)
101.583 622.7319 263.15 . Q . V . . .
(PEAK DAY 1, HOUR 5.583)
101.667 624.5527 264.38 . Q . V . . .
(PEAK DAY 1, HOUR 5.667)
101.750 626.3821 265.64 . Q . V . . .
(PEAK DAY 1, HOUR 5.750)
101.833 628.2203 266.90 . Q . V . . .
(PEAK DAY 1, HOUR 5.833)
101.917 630.0674 268.19 . Q . V . . .
(PEAK DAY 1, HOUR 5.917)
102.000 631.9234 269.49 . Q . V . . .
(PEAK DAY 1, HOUR 6.000)
102.083 633.7885 270.81 . Q . V . . .
(PEAK DAY 1, HOUR 6.083)
102.167 635.6627 272.14 . Q . V . . .
(PEAK DAY 1, HOUR 6.167)
102.250 637.5463 273.49 . Q . V . . .
(PEAK DAY 1, HOUR 6.250)
102.333 639.4393 274.86 . Q . V . . .
(PEAK DAY 1, HOUR 6.333)
102.417 641.3418 276.25 . Q . V . . .
(PEAK DAY 1, HOUR 6.417)
102.500 643.2540 277.66 . Q . V . . .
(PEAK DAY 1, HOUR 6.500)
102.583 645.1761 279.08 . Q . V . . .
(PEAK DAY 1, HOUR 6.583)
102.667 647.1081 280.52 . Q . V . . .
(PEAK DAY 1, HOUR 6.667)
102.750 649.0502 281.99 . Q . V . . .
(PEAK DAY 1, HOUR 6.750)
102.833 651.0024 283.47 . Q . V . . .
(PEAK DAY 1, HOUR 6.833)
102.917 652.9651 284.98 . Q . V . . .
(PEAK DAY 1, HOUR 6.917)
103.000 654.9382 286.50 . Q . V . . .
(PEAK DAY 1, HOUR 7.000)
103.083 656.9220 288.05 . Q . V . . .
(PEAK DAY 1, HOUR 7.083)
103.167 658.9166 289.62 . Q . V . . .
(PEAK DAY 1, HOUR 7.167)
103.250 660.9222 291.21 . Q . V . . .
(PEAK DAY 1, HOUR 7.250)
103.333 662.9388 292.82 . Q . V . . .
(PEAK DAY 1, HOUR 7.333)
103.417 664.9668 294.46 . Q . V . . .
(PEAK DAY 1, HOUR 7.417)
103.500 667.0062 296.12 . Q . V . . .
(PEAK DAY 1, HOUR 7.500)
103.583 669.0573 297.81 . Q . V . . .
(PEAK DAY 1, HOUR 7.583)
103.667 671.1201 299.52 . Q . V . . .
(PEAK DAY 1, HOUR 7.667)
103.750 673.1948 301.26 . Q . V . . .
(PEAK DAY 1, HOUR 7.750)
103.833 675.2817 303.02 . Q . V . . .
(PEAK DAY 1, HOUR 7.833)
103.917 677.3810 304.81 . Q . V . . .
(PEAK DAY 1, HOUR 7.917)
104.000 679.4928 306.63 . Q . V . . .
(PEAK DAY 1, HOUR 8.000)
104.083 681.6173 308.48 . Q . V . . .
(PEAK DAY 1, HOUR 8.083)
104.167 683.7548 310.36 . Q . V . . .
(PEAK DAY 1, HOUR 8.167)
104.250 685.9053 312.27 . Q . V . . .
(PEAK DAY 1, HOUR 8.250)
104.333 688.0693 314.21 . Q . V . . .
(PEAK DAY 1, HOUR 8.333)
104.417 690.2468 316.18 . Q . V . . .
(PEAK DAY 1, HOUR 8.417)
104.500 692.4380 318.18 . Q . V . . .
(PEAK DAY 1, HOUR 8.500)
104.583 694.6434 320.21 . Q . V . . .
(PEAK DAY 1, HOUR 8.583)
104.667 696.8630 322.29 . Q . V . . .
(PEAK DAY 1, HOUR 8.667)
104.750 699.0970 324.39 . Q . V . . .
(PEAK DAY 1, HOUR 8.750)
104.833 701.3459 326.53 . Q . V . . .
(PEAK DAY 1, HOUR 8.833)
104.917 703.6097 328.71 . Q . V . . .
(PEAK DAY 1, HOUR 8.917)
105.000 705.8889 330.93 . Q . V . . .
(PEAK DAY 1, HOUR 9.000)
105.083 708.1835 333.19 . Q . V . . .
(PEAK DAY 1, HOUR 9.083)
105.167 710.4940 335.49 . Q . V . . .
(PEAK DAY 1, HOUR 9.167)
105.250 712.8207 337.83 . Q . V . . .
(PEAK DAY 1, HOUR 9.250)
105.333 715.1638 340.21 . Q . V . . .

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 (PEAK DAY 1, HOUR   9.333)
105.417    717.5235    342.64  .     Q   .   V     .         .         .
 (PEAK DAY 1, HOUR   9.417)
105.500    719.9003    345.11  .     Q   .   V     .         .         .
 (PEAK DAY 1, HOUR   9.500)
105.583    722.2945    347.63  .     Q   .   V     .         .         .
 (PEAK DAY 1, HOUR   9.583)
105.667    724.7064    350.20  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR   9.667)
105.750    727.1362    352.82  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR   9.750)
105.833    729.5845    355.49  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR   9.833)
105.917    732.0516    358.22  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR   9.917)
106.000    734.5378    361.00  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR  10.000)
106.083    737.0435    363.84  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR  10.083)
106.167    739.5692    366.73  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR  10.167)
106.250    742.1153    369.69  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR  10.250)
106.333    744.6822    372.72  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR  10.333)
106.417    747.2703    375.80  .      Q  .    V    .         .         .
 (PEAK DAY 1, HOUR  10.417)
106.500    749.8802    378.96  .      Q  .    V    .         .         .
 (PEAK DAY 1, HOUR  10.500)
106.583    752.5123    382.18  .      Q  .    V    .         .         .
 (PEAK DAY 1, HOUR  10.583)
106.667    755.1671    385.48  .      Q  .    V    .         .         .
 (PEAK DAY 1, HOUR  10.667)
106.750    757.8452    388.85  .      Q  .    V    .         .         .
 (PEAK DAY 1, HOUR  10.750)
106.833    760.5469    392.30  .      Q  .    V    .         .         .
 (PEAK DAY 1, HOUR  10.833)
106.917    763.2730    395.83  .      Q  .    V    .         .         .
 (PEAK DAY 1, HOUR  10.917)
107.000    766.0240    399.45  .      Q  .    V    .         .         .
 (PEAK DAY 1, HOUR  11.000)
107.083    768.8006    403.15  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.083)
107.167    771.6033    406.95  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.167)
107.250    774.4327    410.84  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.250)
107.333    777.2897    414.83  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.333)
107.417    780.1748    418.92  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.417)
107.500    783.0889    423.12  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.500)
107.583    786.0326    427.43  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.583)
107.667    789.0068    431.86  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.667)
107.750    792.0124    436.41  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.750)
107.833    795.0502    441.09  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.833)
107.917    798.1212    445.90  .       Q .     V   .         .         .
 (PEAK DAY 1, HOUR  11.917)
108.000    801.2263    450.86  .        Q.     V   .         .         .
 (PEAK DAY 1, HOUR  12.000)
108.083    804.3763    457.38  .        Q.     V   .         .         .
 (PEAK DAY 1, HOUR  12.083)
108.167    807.5914    466.84  .        Q.     V   .         .         .
 (PEAK DAY 1, HOUR  12.167)
108.250    810.8890    478.82  .        Q.     V   .         .         .
 (PEAK DAY 1, HOUR  12.250)
108.333    814.2869    493.36  .        Q.     V   .         .         .
 (PEAK DAY 1, HOUR  12.333)
108.417    817.8204    513.06  .         Q     V   .         .         .
 (PEAK DAY 1, HOUR  12.417)
108.500    821.5809    546.03  .         Q     V   .         .         .
 (PEAK DAY 1, HOUR  12.500)
108.583    825.5562    577.22  .         .Q    V   .         .         .
 (PEAK DAY 1, HOUR  12.583)
108.667    829.6585    595.65  .         .Q    V   .         .         .
 (PEAK DAY 1, HOUR  12.667)
108.750    833.8672    611.10  .         . Q   V   .         .         .
 (PEAK DAY 1, HOUR  12.750)
108.833    838.1725    625.13  .         . Q   V   .         .         .
 (PEAK DAY 1, HOUR  12.833)
108.917    842.5673    638.13  .         . Q   V   .         .         .
 (PEAK DAY 1, HOUR  12.917)
109.000    847.0474    650.51  .         .  Q  V   .         .         .
 (PEAK DAY 1, HOUR  13.000)
109.083    851.6118    662.75  .         .  Q  V   .         .         .
 (PEAK DAY 1, HOUR  13.083)
109.167    856.2521    673.78  .         .  Q  V   .         .         .
 (PEAK DAY 1, HOUR  13.167)
109.250    860.9473    681.74  .         .  Q  V   .         .         .
 (PEAK DAY 1, HOUR  13.250)
109.333    865.6934    689.13  .         .  Q  V   .         .         .
 (PEAK DAY 1, HOUR  13.333)
109.417    870.5151    700.12  .         .   Q V   .         .         .
 (PEAK DAY 1, HOUR  13.417)
109.500    875.4324    713.99  .         .   Q V   .         .         .
 (PEAK DAY 1, HOUR  13.500)
109.583    880.4630    730.43  .         .   Q V   .         .         .
 (PEAK DAY 1, HOUR  13.583)
109.667    885.6216    749.04  .         .   Q V   .         .         .
 (PEAK DAY 1, HOUR  13.667)
109.750    890.9037    766.96  .         .    Q V  .         .         .
 (PEAK DAY 1, HOUR  13.750)
109.833    896.2810    780.79  .         .    Q  V .         .         .
 (PEAK DAY 1, HOUR  13.833)
109.917    901.7485    793.87  .         .    Q  V .         .         .
 (PEAK DAY 1, HOUR  13.917)
110.000    907.3276    810.09  .         .     Q V .         .         .
 (PEAK DAY 1, HOUR  14.000)
110.083    913.0432    829.90  .         .     Q V .         .         .
 (PEAK DAY 1, HOUR  14.083)
110.167    918.9082    851.59  .         .      QV .         .         .
 (PEAK DAY 1, HOUR  14.167)
110.250    924.9203    872.95  .         .      QV .         .         .
 (PEAK DAY 1, HOUR  14.250)
110.333    931.1028    897.71  .         .      QV .         .         .
 (PEAK DAY 1, HOUR  14.333)
110.417    937.4819    926.23  .         .       Q .         .         .
 (PEAK DAY 1, HOUR  14.417)
110.500    944.0632    955.60  .         .       VQ.         .         .
 (PEAK DAY 1, HOUR  14.500)
110.583    950.8769    989.35  .         .        Q.         .         .
 (PEAK DAY 1, HOUR  14.583)
110.667    957.9625   1028.83  .         .        VQ         .         .
 (PEAK DAY 1, HOUR  14.667)
110.750    965.3145   1067.51  .         .        V.Q        .         .
 (PEAK DAY 1, HOUR  14.750)
110.833    972.8962   1100.86  .         .        V. Q       .         .
 (PEAK DAY 1, HOUR  14.833)
110.917    980.6960   1132.53  .         .        V. Q       .         .
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 (PEAK DAY 1, HOUR  14.917)
111.000    988.7271   1166.12  .         .        V.  Q      .         .
 (PEAK DAY 1, HOUR  15.000)
111.083    996.9900   1199.77  .         .         V  Q      .         .
 (PEAK DAY 1, HOUR  15.083)
111.167   1005.4788   1232.57  .         .         V   Q     .         .
 (PEAK DAY 1, HOUR  15.167)
111.250   1014.1998   1266.30  .         .         V    Q    .         .
 (PEAK DAY 1, HOUR  15.250)
111.333   1023.1479   1299.26  .         .         V    Q    .         .
 (PEAK DAY 1, HOUR  15.333)
111.417   1032.2721   1324.84  .         .         V     Q   .         .
 (PEAK DAY 1, HOUR  15.417)
111.500   1041.5355   1345.04  .         .         V     Q   .         .
 (PEAK DAY 1, HOUR  15.500)
111.583   1050.9418   1365.79  .         .        .V     Q   .         .
 (PEAK DAY 1, HOUR  15.583)
111.667   1060.4930   1386.85  .         .        .V     Q   .         .
 (PEAK DAY 1, HOUR  15.667)
111.750   1070.1864   1407.48  .         .        .V      Q  .         .
 (PEAK DAY 1, HOUR  15.750)
111.833   1079.9980   1424.65  .         .        .V      Q  .         .
 (PEAK DAY 1, HOUR  15.833)
111.917   1089.9070   1438.78  .         .        .V      Q  .         .
 (PEAK DAY 1, HOUR  15.917)
112.000   1099.9232   1454.35  .         .        . V      Q.         .
 (PEAK DAY 1, HOUR  16.000)
112.083   1110.0863   1475.68  .         .        . V      Q.         .
 (PEAK DAY 1, HOUR  16.083)
112.167   1120.4622   1506.57  .         .        . V       Q         .
 (PEAK DAY 1, HOUR  16.167)
112.250   1131.1158   1546.92  .         .        . V       Q         .
 (PEAK DAY 1, HOUR  16.250)
112.333   1142.1106   1596.45  .         .        . V       .Q        .
 (PEAK DAY 1, HOUR  16.333)
112.417   1153.5234   1657.14  .         .        .  V      .  Q      .
 (PEAK DAY 1, HOUR  16.417)
112.500   1165.4645   1733.84  .         .        .  V      .   Q     .
 (PEAK DAY 1, HOUR  16.500)
112.583   1177.8326   1795.87  .         .        .  V      .    Q    .
 (PEAK DAY 1, HOUR  16.583)
112.667   1190.4066   1825.74  .         .        .  V      .     Q   .
 (PEAK DAY 1, HOUR  16.667)
112.750   1203.1184   1845.76  .         .        .   V     .     Q   .
 (PEAK DAY 1, HOUR  16.750)
112.833   1215.9452   1862.45  .         .        .   V     .      Q  .
 (PEAK DAY 1, HOUR  16.833)
112.917   1228.8745   1877.33  .         .        .   V     .      Q  .
 (PEAK DAY 1, HOUR  16.917)
113.000   1241.8970   1890.85  .         .        .   V     .      Q  .
 (PEAK DAY 1, HOUR  17.000)
113.083   1255.0012   1902.75  .         .        .    V    .       Q .
 (PEAK DAY 1, HOUR  17.083)
113.167   1268.1740   1912.68  .         .        .    V    .       Q .
 (PEAK DAY 1, HOUR  17.167)
113.250   1281.4022   1920.74  .         .        .    V    .       Q .
 (PEAK DAY 1, HOUR  17.250)
113.333   1294.6733   1926.97  .         .        .     V   .       Q .
 (PEAK DAY 1, HOUR  17.333)
113.417   1307.9760   1931.54  .         .        .     V   .       Q .
 (PEAK DAY 1, HOUR  17.417)
113.500   1321.2968   1934.19  .         .        .     V   .       Q .
 (PEAK DAY 1, HOUR  17.500)
113.583   1334.6216   1934.77  .         .        .     V   .       Q .
 (PEAK DAY 1, HOUR  17.583)
113.667   1347.9390   1933.68  .         .        .      V  .       Q .
 (PEAK DAY 1, HOUR  17.667)
113.750   1361.2399   1931.28  .         .        .      V  .       Q .
 (PEAK DAY 1, HOUR  17.750)
113.833   1374.5160   1927.68  .         .        .      V  .       Q .
 (PEAK DAY 1, HOUR  17.833)
113.917   1387.7607   1923.13  .         .        .      V  .       Q .
 (PEAK DAY 1, HOUR  17.917)
114.000   1400.9689   1917.81  .         .        .       V .       Q .
 (PEAK DAY 1, HOUR  18.000)
114.083   1414.1337   1911.53  .         .        .       V .       Q .
 (PEAK DAY 1, HOUR  18.083)
114.167   1427.2490   1904.35  .         .        .       V .       Q .
 (PEAK DAY 1, HOUR  18.167)
114.250   1440.3114   1896.66  .         .        .       V .      Q  .
 (PEAK DAY 1, HOUR  18.250)
114.333   1453.3182   1888.60  .         .        .        V.      Q  .
 (PEAK DAY 1, HOUR  18.333)
114.417   1466.2679   1880.30  .         .        .        V.      Q  .
 (PEAK DAY 1, HOUR  18.417)
114.500   1479.1604   1871.98  .         .        .        V.      Q  .
 (PEAK DAY 1, HOUR  18.500)
114.583   1491.9948   1863.55  .         .        .        V.      Q  .
 (PEAK DAY 1, HOUR  18.583)
114.667   1504.7693   1854.86  .         .        .         V      Q  .
 (PEAK DAY 1, HOUR  18.667)
114.750   1517.4825   1845.96  .         .        .         V     Q   .
 (PEAK DAY 1, HOUR  18.750)
114.833   1530.1335   1836.92  .         .        .         V     Q   .
 (PEAK DAY 1, HOUR  18.833)
114.917   1542.7225   1827.92  .         .        .         V     Q   .
 (PEAK DAY 1, HOUR  18.917)
115.000   1555.2512   1819.16  .         .        .         .V    Q   .
 (PEAK DAY 1, HOUR  19.000)
115.083   1567.7202   1810.49  .         .        .         .V    Q   .
 (PEAK DAY 1, HOUR  19.083)
115.167   1580.1290   1801.76  .         .        .         .V    Q   .
 (PEAK DAY 1, HOUR  19.167)
115.250   1592.4774   1792.98  .         .        .         .V   Q    .
 (PEAK DAY 1, HOUR  19.250)
115.333   1604.7552   1782.75  .         .        .         . V  Q    .
 (PEAK DAY 1, HOUR  19.333)
115.417   1616.9331   1768.23  .         .        .         . V  Q    .
 (PEAK DAY 1, HOUR  19.417)
115.500   1628.9916   1750.90  .         .        .         . V  Q    .
 (PEAK DAY 1, HOUR  19.500)
115.583   1640.9313   1733.65  .         .        .         . V Q     .
 (PEAK DAY 1, HOUR  19.583)
115.667   1652.7528   1716.49  .         .        .         .  VQ     .
 (PEAK DAY 1, HOUR  19.667)
115.750   1664.4558   1699.27  .         .        .         .  Q      .
 (PEAK DAY 1, HOUR  19.750)
115.833   1676.0377   1681.69  .         .        .         .  Q      .
 (PEAK DAY 1, HOUR  19.833)
115.917   1687.4962   1663.78  .         .        .         .  Q      .
 (PEAK DAY 1, HOUR  19.917)
116.000   1698.8313   1645.85  .         .        .         . Q V     .
 (PEAK DAY 1, HOUR  20.000)
116.083   1710.0433   1627.98  .         .        .         . Q V     .
 (PEAK DAY 1, HOUR  20.083)
116.167   1721.1313   1609.99  .         .        .         . Q V     .
 (PEAK DAY 1, HOUR  20.167)
116.250   1732.0909   1591.34  .         .        .         .Q  V     .
 (PEAK DAY 1, HOUR  20.250)
116.333   1742.9197   1572.33  .         .        .         .Q   V    .
 (PEAK DAY 1, HOUR  20.333)
116.417   1753.6188   1553.51  .         .        .         .Q   V    .
 (PEAK DAY 1, HOUR  20.417)
116.500   1764.1896   1534.88  .         .        .          Q   V    .
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(PEAK DAY 1, HOUR  20.500)
116.583   1774.6317   1516.19  .         .         .         Q    V    .
(PEAK DAY 1, HOUR  20.583)
116.667   1784.9415   1496.98  .         .         .        Q.    V    .
(PEAK DAY 1, HOUR  20.667)
116.750   1795.1174   1477.54  .         .         .        Q.     V   .
(PEAK DAY 1, HOUR  20.750)
116.833   1805.1610   1458.32  .         .         .        Q.     V   .
(PEAK DAY 1, HOUR  20.833)
116.917   1815.0739   1439.34  .         .         .       Q .     V   .
(PEAK DAY 1, HOUR  20.917)
117.000   1824.8540   1420.07  .         .         .       Q .     V   .
(PEAK DAY 1, HOUR  21.000)
117.083   1834.4869   1398.71  .         .         .      Q  .     V   .
(PEAK DAY 1, HOUR  21.083)
117.167   1843.9624   1375.84  .         .         .      Q  .      V  .
(PEAK DAY 1, HOUR  21.167)
117.250   1853.2832   1353.38  .         .         .      Q  .      V  .
(PEAK DAY 1, HOUR  21.250)
117.333   1862.4519   1331.30  .         .         .     Q   .      V  .
(PEAK DAY 1, HOUR  21.333)
117.417   1871.4385   1304.84  .         .         .     Q   .      V  .
(PEAK DAY 1, HOUR  21.417)
117.500   1880.1796   1269.21  .         .         .    Q    .      V  .
(PEAK DAY 1, HOUR  21.500)
117.583   1888.6487   1229.72  .         .         .   Q     .      V  .
(PEAK DAY 1, HOUR  21.583)
117.667   1896.8431   1189.84  .         .         .  Q      .       V .
(PEAK DAY 1, HOUR  21.667)
117.750   1904.7523   1148.42  .         .         . Q       .       V .
(PEAK DAY 1, HOUR  21.750)
117.833   1912.3798   1107.51  .         .         . Q       .       V .
(PEAK DAY 1, HOUR  21.833)
117.917   1919.6998   1062.88  .         .         .Q        .       V .
(PEAK DAY 1, HOUR  21.917)
118.000   1926.6606   1010.71  .         .         Q         .       V .
(PEAK DAY 1, HOUR  22.000)
118.083   1933.2552    957.53  .         .        Q.         .       V .
(PEAK DAY 1, HOUR  22.083)
118.167   1939.3485    884.75  .         .      Q  .         .       V .
(PEAK DAY 1, HOUR  22.167)
118.250   1943.9166    663.30  .         .  Q       .         .        V.
(PEAK DAY 1, HOUR  22.250)
118.333   1946.0028    302.91  .      Q  .         .         .        V.
(PEAK DAY 1, HOUR  22.333)
118.417   1947.6230    235.25  .   Q     .         .         .        V.
(PEAK DAY 1, HOUR  22.417)
118.500   1949.5173    275.05  .    Q    .         .         .        V.
(PEAK DAY 1, HOUR  22.500)
118.583   1951.2074    245.39  .   Q     .         .         .        V.
(PEAK DAY 1, HOUR  22.583)
118.667   1953.0034    260.78  .    Q    .         .         .        V.
(PEAK DAY 1, HOUR  22.667)
118.750   1954.7053    247.11  .   Q     .         .         .        V.
(PEAK DAY 1, HOUR  22.750)
118.833   1956.4431    252.33  .    Q    .         .         .        V.
(PEAK DAY 1, HOUR  22.833)
118.917   1958.1332    245.40  .   Q     .         .         .        V.
(PEAK DAY 1, HOUR  22.917)
119.000   1959.8303    246.42  .   Q     .         .         .        V.
(PEAK DAY 1, HOUR  23.000)
119.083   1961.4995    242.37  .   Q     .         .         .        V.
(PEAK DAY 1, HOUR  23.083)
119.167   1963.1639    241.68  .   Q     .         .         .        V.
(PEAK DAY 1, HOUR  23.167)
119.250   1964.8091    238.88  .   Q     .         .         .        V.
(PEAK DAY 1, HOUR  23.250)
119.333   1966.4448    237.52  .   Q     .         .         .        V.
(PEAK DAY 1, HOUR  23.333)
119.417   1968.0653    235.29  .   Q     .         .         .        V.
(PEAK DAY 1, HOUR  23.417)
119.500   1969.6747    233.68  .   Q     .         .         .        V.
(PEAK DAY 1, HOUR  23.500)
119.583   1971.2706    231.74  .   Q     .         .         .        V.
(PEAK DAY 1, HOUR  23.583)
119.667   1972.8552    230.08  .   Q     .         .         .        V.
(PEAK DAY 1, HOUR  23.667)
119.750   1974.4275    228.29  .   Q     .         .         .        V.
(PEAK DAY 1, HOUR  23.750)
119.833   1975.9884    226.64  .   Q     .         .         .        V.
(PEAK DAY 1, HOUR  23.833)
119.917   1977.5377    224.95  .   Q     .         .         .        V.
(PEAK DAY 1, HOUR  23.917)
120.000   1979.0759    223.34  .   Q     .         .         .        V.
(PEAK DAY 1, HOUR  24.000)
120.083   1980.5895    219.77  .   Q     .         .         .        V.
(PEAK DAY 1, HOUR  24.083)
120.167   1982.0526    212.45  .   Q     .         .         .        V.
(PEAK DAY 1, HOUR  24.167)
120.250   1983.4434    201.94  .   Q     .         .         .        V.
(PEAK DAY 1, HOUR  24.250)
120.333   1984.7399    188.25  .  Q      .         .         .        V.
(PEAK DAY 1, HOUR  24.333)
120.417   1985.8958    167.84  .  Q      .         .         .        V.
(PEAK DAY 1, HOUR  24.417)
120.500   1986.7886    129.64  . Q       .         .         .        V.
(PEAK DAY 1, HOUR  24.500)
120.583   1987.4393     94.49  .Q        .         .         .        V.
(PEAK DAY 1, HOUR  24.583)
120.667   1987.9734     77.54  .Q        .         .         .        V.
(PEAK DAY 1, HOUR  24.667)
120.750   1988.4220     65.14  .Q        .         .         .        V.
(PEAK DAY 1, HOUR  24.750)
120.833   1988.8019     55.16  .Q        .         .         .        V.
(PEAK DAY 1, HOUR  24.833)
120.917   1989.1256     47.01  Q         .         .         .        V.
(PEAK DAY 1, HOUR  24.917)
121.000   1989.4022     40.16  Q         .         .         .        V.
(PEAK DAY 1, HOUR  25.000)
121.083   1989.6373     34.14  Q         .         .         .        V.
(PEAK DAY 1, HOUR  25.083)
121.167   1989.8376     29.08  Q         .         .         .        V.
(PEAK DAY 1, HOUR  25.167)
121.250   1990.0078     24.70  Q         .         .         .        V.
(PEAK DAY 1, HOUR  25.250)
121.333   1990.1530     21.07  Q         .         .         .        V.
(PEAK DAY 1, HOUR  25.333)
121.417   1990.2745     17.65  Q         .         .         .        V.
(PEAK DAY 1, HOUR  25.417)
121.500   1990.3762     14.77  Q         .         .         .        V.
(PEAK DAY 1, HOUR  25.500)
121.583   1990.4612     12.33  Q         .         .         .        V.
(PEAK DAY 1, HOUR  25.583)
121.667   1990.5319     10.27  Q         .         .         .        V.
(PEAK DAY 1, HOUR  25.667)
121.750   1990.5906      8.53  Q         .         .         .        V.
(PEAK DAY 1, HOUR  25.750)
121.833   1990.6405      7.26  Q         .         .         .        V.
(PEAK DAY 1, HOUR  25.833)
121.917   1990.6823      6.06  Q         .         .         .        V.
(PEAK DAY 1, HOUR  25.917)
122.000   1990.7158      4.88  Q         .         .         .        V.
(PEAK DAY 1, HOUR  26.000)
122.083   1990.7458      4.36  Q         .         .         .        V.
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 (PEAK DAY 1, HOUR  26.083)
122.167   1990.7747      4.18  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.167)
122.250   1990.8018      3.94  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.250)
122.333   1990.8275      3.73  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.333)
122.417   1990.8517      3.51  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.417)
122.500   1990.8744      3.30  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.500)
122.583   1990.8956      3.09  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.583)
122.667   1990.9154      2.88  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.667)
122.750   1990.9338      2.67  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.750)
122.833   1990.9508      2.46  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.833)
122.917   1990.9663      2.26  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.917)
123.000   1990.9805      2.05  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.000)
123.083   1990.9932      1.85  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.083)
123.167   1991.0045      1.65  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.167)
123.250   1991.0145      1.45  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.250)
123.333   1991.0232      1.25  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.333)
123.417   1991.0304      1.05  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.417)
123.500   1991.0363      0.86  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.500)
123.583   1991.0408      0.66  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.583)
123.667   1991.0441      0.47  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.667)
123.750   1991.0460      0.28  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.750)
123.833   1991.0466      0.09  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.833)
123.917   1991.0466      0.00  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.917)
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
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  FLOW PROCESS FROM NODE    780.00 TO NODE   6311.00 IS CODE = 5.2
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  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
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         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  4741.3 Ac. ***

         THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
         TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
         INTERVALS(Reference: the National Engineering Handbook,
         Hydrology, Chapter 17, page 17-52, August,1972,
         U.S. Department of Commerce).
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         ASSUMED REGULAR CHANNEL INFORMATION:
           BASEWIDTH(FT) =   20.00     CHANNEL Z =  1.00
           UPSTREAM ELEVATION(FT) =     408.00
           DOWNSTREAM ELEVATION(FT) =     382.00
           CHANNEL LENGTH(FT) =    2533.00     MANNING'S FACTOR = 0.040
           CONSTANT LOSS RATE(CFS) =    0.00


         CHANNEL ROUTING COEFFICIENT ESTIMATED:
           MAXIMUM INFLOW(CFS) =  1934.77
           AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  1512.14
           CHANNEL NORMAL VELOCITY FOR Q =  1512.14 CFS =   9.78 FPS
           ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.852

         MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
         UNIT INTERVALS IS CSTAR = 0.906


         CONVEX METHOD CHANNEL ROUTING RESULTS:
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PEAK DAY	TIME (HRS)	CLOCK TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
2	24.000	96.000	57.10	57.45	57.45
1	0.083	96.083	58.16	57.38	57.38
1	0.167	96.167	62.08	59.02	59.02
1	0.250	96.250	68.45	63.31	63.31
1	0.333	96.333	77.30	70.09	70.09
1	0.417	96.417	91.33	79.99	79.99
1	0.500	96.500	118.84	96.85	96.85
1	0.583	96.583	144.43	122.91	122.91
1	0.667	96.667	156.81	145.38	145.38
1	0.750	96.750	165.97	157.93	157.93
1	0.833	96.833	173.45	167.00	167.00
1	0.917	96.917	179.68	174.34	174.34
1	1.000	97.000	185.01	180.45	180.45
1	1.083	97.083	189.81	185.73	185.73
1	1.167	97.167	193.95	190.42	190.42
1	1.250	97.250	197.65	194.51	194.51
1	1.333	97.333	200.83	198.11	198.11
1	1.417	97.417	203.90	201.31	201.31
1	1.500	97.500	206.61	204.31	204.31
1	1.583	97.583	209.03	206.97	206.97
1	1.667	97.667	211.20	209.35	209.35
1	1.750	97.750	213.14	211.49	211.49
1	1.833	97.833	214.77	213.38	213.38
1	1.917	97.917	216.37	215.02	215.02
1	2.000	98.000	217.96	216.62	216.62
1	2.083	98.083	219.08	218.10	218.10
1	2.167	98.167	219.97	219.20	219.20
1	2.250	98.250	220.91	220.12	220.12
1	2.333	98.333	221.82	221.05	221.05
1	2.417	98.417	222.77	221.98	221.98
1	2.500	98.500	223.71	222.92	222.92
1	2.583	98.583	224.67	223.87	223.87
1	2.667	98.667	225.63	224.82	224.82
1	2.750	98.750	226.61	225.79	225.79
1	2.833	98.833	227.59	226.76	226.76
1	2.917	98.917	228.58	227.75	227.75
1	3.000	99.000	229.58	228.74	228.74
1	3.083	99.083	230.59	229.74	229.74
1	3.167	99.167	231.61	230.76	230.76
1	3.250	99.250	232.64	231.78	231.78
1	3.333	99.333	233.69	232.81	232.81
1	3.417	99.417	234.74	233.86	233.86
1	3.500	99.500	235.80	234.91	234.91
1	3.583	99.583	236.87	235.97	235.97

1	3.667	99.667	237.95	237.04	237.04
1	3.750	99.750	239.05	238.13	238.13
1	3.833	99.833	240.15	239.22	239.22
1	3.917	99.917	241.19	240.31	240.31
1	4.000	100.000	242.18	241.34	241.34
1	4.083	100.083	243.17	242.34	242.34
1	4.167	100.167	244.18	243.33	243.33
1	4.250	100.250	245.20	244.34	244.34
1	4.333	100.333	246.23	245.36	245.36
1	4.417	100.417	247.27	246.39	246.39
1	4.500	100.500	248.32	247.44	247.44
1	4.583	100.583	249.38	248.49	248.49
1	4.667	100.667	250.46	249.55	249.55
1	4.750	100.750	251.54	250.63	250.63
1	4.833	100.833	252.65	251.72	251.72
1	4.917	100.917	253.76	252.83	252.83
1	5.000	101.000	254.88	253.94	253.94
1	5.083	101.083	256.02	255.07	255.07
1	5.167	101.167	257.17	256.21	256.21
1	5.250	101.250	258.34	257.36	257.36
1	5.333	101.333	259.52	258.53	258.53
1	5.417	101.417	260.71	259.71	259.71
1	5.500	101.500	261.92	260.91	260.91
1	5.583	101.583	263.15	262.12	262.12
1	5.667	101.667	264.38	263.35	263.35
1	5.750	101.750	265.64	264.59	264.59
1	5.833	101.833	266.90	265.84	265.84
1	5.917	101.917	268.19	267.11	267.11
1	6.000	102.000	269.49	268.40	268.40
1	6.083	102.083	270.81	269.70	269.70
1	6.167	102.167	272.14	271.02	271.02
1	6.250	102.250	273.49	272.36	272.36
1	6.333	102.333	274.86	273.71	273.71
1	6.417	102.417	276.25	275.09	275.09
1	6.500	102.500	277.66	276.48	276.48
1	6.583	102.583	279.08	277.89	277.89
1	6.667	102.667	280.52	279.31	279.31
1	6.750	102.750	281.99	280.76	280.76
1	6.833	102.833	283.47	282.23	282.23
1	6.917	102.917	284.98	283.71	283.71
1	7.000	103.000	286.50	285.22	285.22
1	7.083	103.083	288.05	286.75	286.75
1	7.167	103.167	289.62	288.30	288.30
1	7.250	103.250	291.21	289.87	289.87
1	7.333	103.333	292.82	291.47	291.47
1	7.417	103.417	294.46	293.09	293.09
1	7.500	103.500	296.12	294.73	294.73
1	7.583	103.583	297.81	296.39	296.39
1	7.667	103.667	299.52	298.08	298.08
1	7.750	103.750	301.26	299.80	299.80
1	7.833	103.833	303.02	301.54	301.54
1	7.917	103.917	304.81	303.31	303.31
1	8.000	104.000	306.63	305.11	305.11
1	8.083	104.083	308.48	306.93	306.93
1	8.167	104.167	310.36	308.79	308.79
1	8.250	104.250	312.27	310.67	310.67
1	8.333	104.333	314.21	312.58	312.58
1	8.417	104.417	316.18	314.53	314.53
1	8.500	104.500	318.18	316.50	316.50
1	8.583	104.583	320.21	318.51	318.51
1	8.667	104.667	322.29	320.55	320.55
1	8.750	104.750	324.39	322.63	322.63
1	8.833	104.833	326.53	324.74	324.74
1	8.917	104.917	328.71	326.89	326.89
1	9.000	105.000	330.93	329.07	329.07
1	9.083	105.083	333.19	331.30	331.30
1	9.167	105.167	335.49	333.56	333.56
1	9.250	105.250	337.83	335.87	335.87
1	9.333	105.333	340.21	338.21	338.21
1	9.417	105.417	342.64	340.61	340.61
1	9.500	105.500	345.11	343.04	343.04
1	9.583	105.583	347.63	345.52	345.52
1	9.667	105.667	350.20	348.05	348.05
1	9.750	105.750	352.82	350.63	350.63
1	9.833	105.833	355.49	353.26	353.26
1	9.917	105.917	358.22	355.94	355.94
1	10.000	106.000	361.00	358.67	358.67
1	10.083	106.083	363.84	361.46	361.46
1	10.167	106.167	366.73	364.31	364.31
1	10.250	106.250	369.69	367.22	367.22
1	10.333	106.333	372.72	370.18	370.18
1	10.417	106.417	375.80	373.22	373.22
1	10.500	106.500	378.96	376.32	376.32
1	10.583	106.583	382.18	379.48	379.48
1	10.667	106.667	385.48	382.72	382.72
1	10.750	106.750	388.85	386.03	386.03
1	10.833	106.833	392.30	389.41	389.41
1	10.917	106.917	395.83	392.88	392.88
1	11.000	107.000	399.45	396.42	396.42
1	11.083	107.083	403.15	400.05	400.05
1	11.167	107.167	406.95	403.77	403.77
1	11.250	107.250	410.84	407.58	407.58
1	11.333	107.333	414.83	411.49	411.49
1	11.417	107.417	418.92	415.49	415.49
1	11.500	107.500	423.12	419.60	419.60
1	11.583	107.583	427.43	423.82	423.82
1	11.667	107.667	431.86	428.15	428.15
1	11.750	107.750	436.41	432.60	432.60
1	11.833	107.833	441.09	437.17	437.17
1	11.917	107.917	445.90	441.88	441.88
1	12.000	108.000	450.86	446.71	446.71
1	12.083	108.083	457.38	452.03	452.03
1	12.167	108.167	466.84	459.14	459.14
1	12.250	108.250	478.82	468.99	468.99
1	12.333	108.333	493.36	481.38	481.38
1	12.417	108.417	513.06	496.96	496.96
1	12.500	108.500	546.03	519.45	519.45
1	12.583	108.583	577.22	551.01	551.01
1	12.667	108.667	595.65	579.18	579.18
1	12.750	108.750	611.10	597.81	597.81
1	12.833	108.833	625.13	613.22	613.22
1	12.917	108.917	638.13	627.12	627.12
1	13.000	109.000	650.51	640.06	640.06
1	13.083	109.083	662.75	652.46	652.46
1	13.167	109.167	673.78	664.42	664.42
1	13.250	109.250	681.74	674.81	674.81
1	13.333	109.333	689.13	682.86	682.86
1	13.417	109.417	700.12	691.17	691.17
1	13.500	109.500	713.99	702.61	702.61
1	13.583	109.583	730.43	716.86	716.86
1	13.667	109.667	749.04	733.62	733.62
1	13.750	109.750	766.96	751.88	751.88
1	13.833	109.833	780.79	768.86	768.86
1	13.917	109.917	793.87	782.80	782.80
1	14.000	110.000	810.09	796.72	796.72
1	14.083	110.083	829.90	813.58	813.58
1	14.167	110.167	851.59	833.57	833.57
1	14.250	110.250	872.95	855.02	855.02
1	14.333	110.333	897.71	877.20	877.20
1	14.417	110.417	926.23	902.61	902.61
1	14.500	110.500	955.60	931.05	931.05
1	14.583	110.583	989.35	961.38	961.38
1	14.667	110.667	1028.83	996.19	996.19
1	14.750	110.750	1067.51	1035.03	1035.03

1	14.833	110.833	1100.86	1072.45	1072.45
1	14.917	110.917	1132.53	1105.78	1105.78
1	15.000	111.000	1166.12	1138.07	1138.07
1	15.083	111.083	1199.77	1171.55	1171.55
1	15.167	111.167	1232.57	1204.98	1204.98
1	15.250	111.250	1266.30	1238.06	1238.06
1	15.333	111.333	1299.26	1271.54	1271.54
1	15.417	111.417	1324.84	1302.79	1302.79
1	15.500	111.500	1345.04	1327.61	1327.61
1	15.583	111.583	1365.79	1348.38	1348.38
1	15.667	111.667	1386.85	1369.20	1369.20
1	15.750	111.750	1407.48	1390.13	1390.13
1	15.833	111.833	1424.65	1409.97	1409.97
1	15.917	111.917	1438.78	1426.66	1426.66
1	16.000	112.000	1454.35	1441.38	1441.38
1	16.083	112.083	1475.68	1458.24	1458.24
1	16.167	112.167	1506.57	1481.44	1481.44
1	16.250	112.250	1546.92	1513.87	1513.87
1	16.333	112.333	1596.45	1555.68	1555.68
1	16.417	112.417	1657.14	1607.16	1607.16
1	16.500	112.500	1733.84	1670.82	1670.82
1	16.583	112.583	1795.87	1742.79	1742.79
1	16.667	112.667	1825.74	1798.04	1798.04
1	16.750	112.750	1845.76	1827.94	1827.94
1	16.833	112.833	1862.45	1848.09	1848.09
1	16.917	112.917	1877.33	1864.67	1864.67
1	17.000	113.000	1890.85	1879.38	1879.38
1	17.083	113.083	1902.75	1892.63	1892.63
1	17.167	113.167	1912.68	1904.18	1904.18
1	17.250	113.250	1920.74	1913.82	1913.82
1	17.333	113.333	1926.97	1921.58	1921.58
1	17.417	113.417	1931.54	1927.56	1927.56
1	17.500	113.500	1934.19	1931.80	1931.80
1	17.583	113.583	1934.77	1934.10	1934.10
1	17.667	113.667	1933.68	1934.44	1934.44
1	17.750	113.750	1931.28	1933.18	1933.18
1	17.833	113.833	1927.68	1930.60	1930.60
1	17.917	113.917	1923.13	1926.87	1926.87
1	18.000	114.000	1917.81	1922.21	1922.21
1	18.083	114.083	1911.53	1916.72	1916.72
1	18.167	114.167	1904.35	1910.30	1910.30
1	18.250	114.250	1896.66	1903.07	1903.07
1	18.333	114.333	1888.60	1895.33	1895.33
1	18.417	114.417	1880.30	1887.24	1887.24
1	18.500	114.500	1871.98	1878.96	1878.96
1	18.583	114.583	1863.55	1870.61	1870.61
1	18.667	114.667	1854.86	1862.13	1862.13
1	18.750	114.750	1845.96	1853.41	1853.41
1	18.833	114.833	1836.92	1844.50	1844.50
1	18.917	114.917	1827.92	1835.47	1835.47
1	19.000	115.000	1819.16	1826.53	1826.53
1	19.083	115.083	1810.49	1817.78	1817.78
1	19.167	115.167	1801.76	1809.08	1809.08
1	19.250	115.250	1792.98	1800.34	1800.34
1	19.333	115.333	1782.75	1791.22	1791.22
1	19.417	115.417	1768.23	1780.06	1780.06
1	19.500	115.500	1750.90	1765.19	1765.19
1	19.583	115.583	1733.65	1748.11	1748.11
1	19.667	115.667	1716.49	1730.90	1730.90
1	19.750	115.750	1699.27	1713.72	1713.72
1	19.833	115.833	1681.69	1696.42	1696.42
1	19.917	115.917	1663.78	1678.78	1678.78
1	20.000	116.000	1645.85	1660.89	1660.89
1	20.083	116.083	1627.98	1642.98	1642.98
1	20.167	116.167	1609.99	1625.08	1625.08
1	20.250	116.250	1591.34	1606.94	1606.94
1	20.333	116.333	1572.33	1588.25	1588.25
1	20.417	116.417	1553.51	1569.32	1569.32
1	20.500	116.500	1534.88	1550.53	1550.53
1	20.583	116.583	1516.19	1531.87	1531.87
1	20.667	116.667	1496.98	1513.06	1513.06
1	20.750	116.750	1477.54	1493.83	1493.83
1	20.833	116.833	1458.32	1474.46	1474.46
1	20.917	116.917	1439.34	1455.29	1455.29
1	21.000	117.000	1420.07	1436.22	1436.22
1	21.083	117.083	1398.71	1416.47	1416.47
1	21.167	117.167	1375.84	1394.90	1394.90
1	21.250	117.250	1353.38	1372.25	1372.25
1	21.333	117.333	1331.30	1349.86	1349.86
1	21.417	117.417	1304.84	1326.71	1326.71
1	21.500	117.500	1269.21	1298.36	1298.36
1	21.583	117.583	1229.72	1262.48	1262.48
1	21.667	117.667	1189.84	1223.24	1223.24
1	21.750	117.750	1148.42	1183.05	1183.05
1	21.833	117.833	1107.51	1141.87	1141.87
1	21.917	117.917	1062.88	1100.04	1100.04
1	22.000	118.000	1010.71	1053.87	1053.87
1	22.083	118.083	957.53	1002.02	1002.02
1	22.167	118.167	884.75	944.27	944.27
1	22.250	118.250	663.30	837.29	837.29
1	22.333	118.333	302.91	593.30	593.30
1	22.417	118.417	235.25	313.94	313.94
1	22.500	118.500	275.05	252.16	252.16
1	22.583	118.583	245.39	265.80	265.80
1	22.667	118.667	260.78	250.99	250.99
1	22.750	118.750	247.11	256.59	256.59
1	22.833	118.833	252.33	249.25	249.25
1	22.917	118.917	245.40	250.38	250.38
1	23.000	119.000	246.42	246.11	246.11
1	23.083	119.083	242.37	245.42	245.42
1	23.167	119.167	241.68	242.49	242.49
1	23.250	119.250	238.88	241.08	241.08
1	23.333	119.333	237.52	238.76	238.76
1	23.417	119.417	235.29	237.10	237.10
1	23.500	119.500	233.68	235.07	235.07
1	23.583	119.583	231.74	233.35	233.35
1	23.667	119.667	230.08	231.49	231.49
1	23.750	119.750	228.29	229.78	229.78
1	23.833	119.833	226.64	228.03	228.03
1	23.917	119.917	224.95	226.36	226.36
1	24.000	120.000	223.34	224.70	224.70
1	24.083	120.083	219.77	222.61	222.61
1	24.167	120.167	212.45	218.28	218.28
1	24.250	120.250	201.94	210.48	210.48
1	24.333	120.333	188.25	199.46	199.46
1	24.417	120.417	167.84	184.41	184.41
1	24.500	120.500	129.64	160.24	160.24
1	24.583	120.583	94.49	124.09	124.09
1	24.667	120.667	77.54	93.20	93.20
1	24.750	120.750	65.14	76.04	76.04
1	24.833	120.833	55.16	63.77	63.77
1	24.917	120.917	47.01	54.02	54.02
1	25.000	121.000	40.16	46.02	46.02
1	25.083	121.083	34.14	39.27	39.27
1	25.167	121.167	29.08	33.41	33.41
1	25.250	121.250	24.70	28.44	28.44
1	25.333	121.333	21.07	24.18	24.18
1	25.417	121.417	17.65	20.54	20.54
1	25.500	121.500	14.77	17.24	17.24
1	25.583	121.583	12.33	14.42	14.42
1	25.667	121.667	10.27	12.03	12.03
1	25.750	121.750	8.53	10.02	10.02
1	25.833	121.833	7.26	8.37	8.37
1	25.917	121.917	6.06	7.07	7.07

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  1   26.000 122.000         4.88         5.87         5.87
  1   26.083 122.083         4.36         4.85         4.85
  1   26.167 122.167         4.18         4.36         4.36
  1   26.250 122.250         3.94         4.14         4.14
  1   26.333 122.333         3.73         3.91         3.91
  1   26.417 122.417         3.51         3.70         3.70
  1   26.500 122.500         3.30         3.48         3.48
  1   26.583 122.583         3.09         3.27         3.27
  1   26.667 122.667         2.88         3.05         3.05
  1   26.750 122.750         2.67         2.85         2.85
  1   26.833 122.833         2.46         2.64         2.64
  1   26.917 122.917         2.26         2.43         2.43
  1   27.000 123.000         2.05         2.23         2.23
  1   27.083 123.083         1.85         2.02         2.02
  1   27.167 123.167         1.65         1.82         1.82
  1   27.250 123.250         1.45         1.62         1.62
  1   27.333 123.333         1.25         1.42         1.42
  1   27.417 123.417         1.05         1.22         1.22
  1   27.500 123.500         0.86         1.02         1.02
  1   27.583 123.583         0.66         0.83         0.83
  1   27.667 123.667         0.47         0.63         0.63
  1   27.750 123.750         0.28         0.44         0.44
  1   27.833 123.833         0.09         0.25         0.25
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
================================================================================
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   1991.047 AF
    OUTFLOW VOLUME =   1991.047 AF
    LOSS    VOLUME =      0.000 AF
================================================================================



********************************************************************************
  FLOW PROCESS FROM NODE   6300.00 TO NODE   6311.00 IS CODE =   1
--------------------------------------------------------------------------------

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of   299.3 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
================================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #2)

         WATERSHED AREA =     299.300 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.250 HOURS
          CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
          THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
          MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.250
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.750
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:
         +------------------+--------+--------+--------+--------+--------+
         | RAINFALL DEPTHS & |        |        |        |        |        |
         |    LOSS RATES     |  DAY 1 |  DAY 2 |  DAY 3 |  DAY 4 |  DAY 5 |
         |==================+========+========+========+========+========|
         | 5-MINUTE (INCHES) |    0.58|    0.27|    0.12|    0.06|    0.04|
         |30-MINUTE (INCHES) |    1.22|    0.56|    0.24|    0.13|    0.09|
         |   1-HOUR (INCHES) |    1.62|    0.75|    0.33|    0.17|    0.12|
         |   3-HOUR (INCHES) |    2.71|    1.25|    0.54|    0.28|    0.21|
         |   6-HOUR (INCHES) |    3.75|    1.73|    0.75|    0.39|    0.29|
         |  24-HOUR (INCHES) |    6.28|    2.89|    1.26|    0.66|    0.48|
         |==================+========+========+========+========+========|
         | LOSS RATE(IN/HR)  |   0.260|   0.260|   0.260|   0.260|   0.260|
         | LOW LOSS FRACTION |   0.500|   0.730|   0.930|   0.990|   0.990|
         +------------------+--------+--------+--------+--------+--------+
           5-MINUTE FACTOR = 0.987
          30-MINUTE FACTOR = 0.987
           1-HOUR FACTOR = 0.987
           3-HOUR FACTOR = 0.998
           6-HOUR FACTOR = 0.999
          24-HOUR FACTOR = 0.999

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  33.333


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  96.00
         MODEL TIME(HOURS) FOR END OF RESULTS = 124.00


================================================================================
                      UNIT HYDROGRAPH DETERMINATION

--------------------------------------------------------------------------------
     INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
      NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------------
         1                3.852               139.411
         2               18.445               528.231
         3               39.624               766.604
         4               55.845               587.160
         5               64.124               299.680
         6               70.038               214.036
         7               74.639               166.538
         8               78.230               130.017
         9               81.158               105.957
        10               83.587                87.936
        11               85.638                74.235
        12               87.267                58.971
        13               88.619                48.932
        14               89.699                39.084
        15               90.702                36.306
        16               91.629                33.565
        17               92.506                31.749
        18               93.325                29.632
        19               94.080                27.335
        20               94.768                24.914
        21               95.424                23.727
        22               95.971                19.796
        23               96.509                19.477
        24               97.020                18.507
        25               97.406                13.985
        26               97.766                13.021
        27               98.126                13.018
        28               98.458                12.019
        29               98.594                 4.931
        30               98.692                 3.557
        31               98.791                 3.557
        32               98.889                 3.550
        33               98.987                 3.557
        34               99.085                 3.551
        35               99.183                 3.557
        36               99.281                 3.550
        37               99.380                 3.550
        38               99.478                 3.550
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39	99.576	3.550
40	99.674	3.550
41	99.772	3.550
42	99.870	3.550
43	99.968	3.550
44	100.000	1.157

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 162.2768

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 126.0595

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5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	175.0	350.0	525.0	700.0
96.000	32.8756	3.82	Q	V	.	.	.
(PEAK DAY 2, HOUR 24.000)							
96.083	32.9046	4.22	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.083)							
96.167	32.9446	5.81	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.167)							
96.250	33.0007	8.14	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.250)							
96.333	33.0691	9.93	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.333)							
96.417	33.1439	10.86	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.417)							
96.500	33.2233	11.53	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.500)							
96.583	33.3064	12.07	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.583)							
96.667	33.3925	12.50	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.667)							
96.750	33.4810	12.85	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.750)							
96.833	33.5716	13.16	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.833)							
96.917	33.6640	13.42	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.917)							
97.000	33.7579	13.64	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.000)							
97.083	33.8532	13.83	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.083)							
97.167	33.9496	13.99	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.167)							
97.250	34.0470	14.15	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.250)							
97.333	34.1455	14.30	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.333)							
97.417	34.2449	14.44	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.417)							
97.500	34.3453	14.58	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.500)							
97.583	34.4466	14.71	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.583)							
97.667	34.5487	14.83	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.667)							
97.750	34.6517	14.96	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.750)							
97.833	34.7555	15.07	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.833)							
97.917	34.8601	15.18	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.917)							
98.000	34.9654	15.29	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.000)							
98.083	35.0714	15.39	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.083)							
98.167	35.1780	15.48	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.167)							
98.250	35.2853	15.58	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.250)							
98.333	35.3933	15.67	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.333)							
98.417	35.5017	15.75	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.417)							
98.500	35.6106	15.81	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.500)							
98.583	35.7200	15.88	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.583)							
98.667	35.8299	15.95	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.667)							
98.750	35.9403	16.03	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.750)							
98.833	36.0511	16.10	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.833)							
98.917	36.1625	16.17	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.917)							
99.000	36.2744	16.24	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.000)							
99.083	36.3867	16.32	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.083)							
99.167	36.4996	16.39	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.167)							
99.250	36.6130	16.47	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.250)							
99.333	36.7270	16.54	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.333)							
99.417	36.8414	16.62	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.417)							
99.500	36.9564	16.70	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.500)							
99.583	37.0720	16.78	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.583)							
99.667	37.1880	16.85	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.667)							
99.750	37.3045	16.92	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.750)							
99.833	37.4215	16.99	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.833)							
99.917	37.5390	17.06	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.917)							
100.000	37.6569	17.13	Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.000)							
100.083	37.7754	17.20	Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.083)							
100.167	37.8943	17.27	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.167)							
100.250	38.0138	17.35	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.250)							
100.333	38.1338	17.42	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.333)							
100.417	38.2543	17.50	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.417)							
100.500	38.3753	17.57	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.500)							
100.583	38.4969	17.65	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.583)							
100.667	38.6190	17.73	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.667)							
100.750	38.7416	17.81	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.750)							
100.833	38.8648	17.89	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.833)							
100.917	38.9885	17.97	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.917)							
101.000	39.1128	18.05	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 5.000)							
101.083	39.2377	18.13	.Q	. V	.	.	.

(PEAK DAY 1, HOUR 5.083)
101.167 39.3632 18.22 .Q . V . . .
(PEAK DAY 1, HOUR 5.167)
101.250 39.4892 18.30 .Q . V . . .
(PEAK DAY 1, HOUR 5.250)
101.333 39.6158 18.39 .Q . V . . .
(PEAK DAY 1, HOUR 5.333)
101.417 39.7430 18.47 .Q . V . . .
(PEAK DAY 1, HOUR 5.417)
101.500 39.8709 18.56 .Q . V . . .
(PEAK DAY 1, HOUR 5.500)
101.583 39.9993 18.65 .Q . V . . .
(PEAK DAY 1, HOUR 5.583)
101.667 40.1283 18.74 .Q . V . . .
(PEAK DAY 1, HOUR 5.667)
101.750 40.2580 18.83 .Q . V . . .
(PEAK DAY 1, HOUR 5.750)
101.833 40.3883 18.92 .Q . V . . .
(PEAK DAY 1, HOUR 5.833)
101.917 40.5193 19.02 .Q . V . . .
(PEAK DAY 1, HOUR 5.917)
102.000 40.6509 19.11 .Q . V . . .
(PEAK DAY 1, HOUR 6.000)
102.083 40.7832 19.21 .Q . V . . .
(PEAK DAY 1, HOUR 6.083)
102.167 40.9161 19.30 .Q . V . . .
(PEAK DAY 1, HOUR 6.167)
102.250 41.0497 19.40 .Q . V . . .
(PEAK DAY 1, HOUR 6.250)
102.333 41.1841 19.50 .Q . V . . .
(PEAK DAY 1, HOUR 6.333)
102.417 41.3191 19.60 .Q . V . . .
(PEAK DAY 1, HOUR 6.417)
102.500 41.4548 19.71 .Q . V . . .
(PEAK DAY 1, HOUR 6.500)
102.583 41.5912 19.81 .Q . V . . .
(PEAK DAY 1, HOUR 6.583)
102.667 41.7283 19.91 .Q . V . . .
(PEAK DAY 1, HOUR 6.667)
102.750 41.8662 20.02 .Q . V . . .
(PEAK DAY 1, HOUR 6.750)
102.833 42.0048 20.13 .Q . V . . .
(PEAK DAY 1, HOUR 6.833)
102.917 42.1442 20.24 .Q . V . . .
(PEAK DAY 1, HOUR 6.917)
103.000 42.2844 20.35 .Q . V . . .
(PEAK DAY 1, HOUR 7.000)
103.083 42.4253 20.46 .Q . V . . .
(PEAK DAY 1, HOUR 7.083)
103.167 42.5670 20.58 .Q . V . . .
(PEAK DAY 1, HOUR 7.167)
103.250 42.7096 20.69 .Q . V . . .
(PEAK DAY 1, HOUR 7.250)
103.333 42.8529 20.81 .Q . V . . .
(PEAK DAY 1, HOUR 7.333)
103.417 42.9970 20.93 .Q . V . . .
(PEAK DAY 1, HOUR 7.417)
103.500 43.1420 21.05 .Q . V . . .
(PEAK DAY 1, HOUR 7.500)
103.583 43.2879 21.18 .Q . V . . .
(PEAK DAY 1, HOUR 7.583)
103.667 43.4346 21.30 .Q . V . . .
(PEAK DAY 1, HOUR 7.667)
103.750 43.5822 21.43 .Q . V . . .
(PEAK DAY 1, HOUR 7.750)
103.833 43.7307 21.56 .Q . V . . .
(PEAK DAY 1, HOUR 7.833)
103.917 43.8801 21.69 .Q . V . . .
(PEAK DAY 1, HOUR 7.917)
104.000 44.0304 21.82 .Q . V . . .
(PEAK DAY 1, HOUR 8.000)
104.083 44.1816 21.96 .Q . V . . .
(PEAK DAY 1, HOUR 8.083)
104.167 44.3338 22.10 .Q . V . . .
(PEAK DAY 1, HOUR 8.167)
104.250 44.4869 22.24 .Q . V . . .
(PEAK DAY 1, HOUR 8.250)
104.333 44.6411 22.38 .Q . V . . .
(PEAK DAY 1, HOUR 8.333)
104.417 44.7962 22.52 .Q . V . . .
(PEAK DAY 1, HOUR 8.417)
104.500 44.9523 22.67 .Q . V . . .
(PEAK DAY 1, HOUR 8.500)
104.583 45.1095 22.82 .Q . V . . .
(PEAK DAY 1, HOUR 8.583)
104.667 45.2677 22.97 .Q . V . . .
(PEAK DAY 1, HOUR 8.667)
104.750 45.4270 23.13 .Q . V . . .
(PEAK DAY 1, HOUR 8.750)
104.833 45.5874 23.29 .Q . V . . .
(PEAK DAY 1, HOUR 8.833)
104.917 45.7489 23.45 .Q . V . . .
(PEAK DAY 1, HOUR 8.917)
105.000 45.9115 23.61 .Q . V . . .
(PEAK DAY 1, HOUR 9.000)
105.083 46.0752 23.78 .Q . V . . .
(PEAK DAY 1, HOUR 9.083)
105.167 46.2402 23.95 .Q . V . . .
(PEAK DAY 1, HOUR 9.167)
105.250 46.4063 24.12 .Q . V . . .
(PEAK DAY 1, HOUR 9.250)
105.333 46.5736 24.30 .Q . V . . .
(PEAK DAY 1, HOUR 9.333)
105.417 46.7422 24.48 .Q . V . . .
(PEAK DAY 1, HOUR 9.417)
105.500 46.9120 24.66 .Q . V . . .
(PEAK DAY 1, HOUR 9.500)
105.583 47.0831 24.85 .Q . V . . .
(PEAK DAY 1, HOUR 9.583)
105.667 47.2556 25.04 .Q . V . . .
(PEAK DAY 1, HOUR 9.667)
105.750 47.4293 25.23 .Q . V . . .
(PEAK DAY 1, HOUR 9.750)
105.833 47.6045 25.43 .Q . V . . .
(PEAK DAY 1, HOUR 9.833)
105.917 47.7810 25.63 .Q . V . . .
(PEAK DAY 1, HOUR 9.917)
106.000 47.9590 25.84 .Q . V . . .
(PEAK DAY 1, HOUR 10.000)
106.083 48.1383 26.05 .Q . V . . .
(PEAK DAY 1, HOUR 10.083)
106.167 48.3192 26.26 .Q . V . . .
(PEAK DAY 1, HOUR 10.167)
106.250 48.5016 26.48 .Q . V . . .
(PEAK DAY 1, HOUR 10.250)
106.333 48.6856 26.71 .Q . V . . .
(PEAK DAY 1, HOUR 10.333)
106.417 48.8711 26.94 .Q . V . . .
(PEAK DAY 1, HOUR 10.417)
106.500 49.0583 27.18 .Q . V . . .
(PEAK DAY 1, HOUR 10.500)
106.583 49.2471 27.42 .Q . V . . .
(PEAK DAY 1, HOUR 10.583)
106.667 49.4376 27.66 .Q . V . . .

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 (PEAK DAY 1, HOUR  10.667)
106.750     49.6299     27.91  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.750)
106.833     49.8239     28.17  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.833)
106.917     50.0198     28.44  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.917)
107.000     50.2175     28.71  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.000)
107.083     50.4171     28.99  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.083)
107.167     50.6187     29.27  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.167)
107.250     50.8223     29.57  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.250)
107.333     51.0280     29.87  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.333)
107.417     51.2359     30.17  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.417)
107.500     51.4459     30.49  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.500)
107.583     51.6581     30.82  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.583)
107.667     51.8727     31.15  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.667)
107.750     52.0896     31.50  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.750)
107.833     52.3090     31.85  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.833)
107.917     52.5309     32.22  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.917)
108.000     52.7554     32.60  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  12.000)
108.083     52.9850     33.34  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  12.083)
108.167     53.2266     35.09  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.167)
108.250     53.4846     37.46  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.250)
108.333     53.7559     39.39  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.333)
108.417     54.0356     40.62  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.417)
108.500     54.3224     41.64  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.500)
108.583     54.6155     42.56  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.583)
108.667     54.9144     43.40  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.667)
108.750     55.2188     44.20  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.750)
108.833     55.5286     44.98  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.833)
108.917     55.8436     45.74  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.917)
109.000     56.1638     46.49  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.000)
109.083     56.4890     47.23  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.083)
109.167     56.8194     47.97  . Q       .       V .         .         .
 (PEAK DAY 1, HOUR  13.167)
109.250     57.1551     48.73  . Q       .       V .         .         .
 (PEAK DAY 1, HOUR  13.250)
109.333     57.4961     49.52  . Q       .       V .         .         .
 (PEAK DAY 1, HOUR  13.333)
109.417     57.8427     50.33  . Q       .       V .         .         .
 (PEAK DAY 1, HOUR  13.417)
109.500     58.1951     51.16  . Q       .       V .         .         .
 (PEAK DAY 1, HOUR  13.500)
109.583     58.5534     52.03  . Q       .       V .         .         .
 (PEAK DAY 1, HOUR  13.583)
109.667     58.9178     52.92  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.667)
109.750     59.2887     53.85  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.750)
109.833     59.6663     54.82  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.833)
109.917     60.0508     55.83  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  13.917)
110.000     60.4427     56.90  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  14.000)
110.083     60.8424     58.05  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  14.083)
110.167     61.2514     59.39  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  14.167)
110.250     61.6706     60.87  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  14.250)
110.333     62.1002     62.37  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  14.333)
110.417     62.5398     63.84  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  14.417)
110.500     62.9900     65.37  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  14.500)
110.583     63.4513     66.98  .  Q      .         V         .         .
 (PEAK DAY 1, HOUR  14.583)
110.667     63.9245     68.71  .  Q      .         V         .         .
 (PEAK DAY 1, HOUR  14.667)
110.750     64.4112     70.66  .   Q     .         V         .         .
 (PEAK DAY 1, HOUR  14.750)
110.833     64.9150     73.15  .   Q     .         V         .         .
 (PEAK DAY 1, HOUR  14.833)
110.917     65.4407     76.34  .   Q     .         V         .         .
 (PEAK DAY 1, HOUR  14.917)
111.000     65.9935     80.25  .   Q     .         V         .         .
 (PEAK DAY 1, HOUR  15.000)
111.083     66.5774     84.78  .   Q     .         .V        .         .
 (PEAK DAY 1, HOUR  15.083)
111.167     67.1973     90.01  .    Q    .         .V        .         .
 (PEAK DAY 1, HOUR  15.167)
111.250     67.8580     95.94  .    Q    .         .V        .         .
 (PEAK DAY 1, HOUR  15.250)
111.333     68.5659    102.79  .    Q    .         .V        .         .
 (PEAK DAY 1, HOUR  15.333)
111.417     69.3190    109.35  .     Q   .         .V        .         .
 (PEAK DAY 1, HOUR  15.417)
111.500     70.1017    113.65  .     Q   .         . V       .         .
 (PEAK DAY 1, HOUR  15.500)
111.583     70.9099    117.35  .     Q   .         . V       .         .
 (PEAK DAY 1, HOUR  15.583)
111.667     71.7709    125.02  .      Q  .         . V       .         .
 (PEAK DAY 1, HOUR  15.667)
111.750     72.7266    138.77  .      Q  .         .  V      .         .
 (PEAK DAY 1, HOUR  15.750)
111.833     73.8217    159.00  .        Q.         .  V      .         .
 (PEAK DAY 1, HOUR  15.833)
111.917     75.1262    189.42  .         Q         .  V      .         .
 (PEAK DAY 1, HOUR  15.917)
112.000     76.7812    240.31  .          . Q      .   V     .         .
 (PEAK DAY 1, HOUR  16.000)
112.083     79.3056    366.54  .          .        Q   V     .         .
 (PEAK DAY 1, HOUR  16.083)
112.167     83.2784    576.85  .          .         .    V   . Q       .
 (PEAK DAY 1, HOUR  16.167)
112.250     87.9056    671.87  .          .         .     V  .       Q .
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(PEAK DAY 1, HOUR 16.250)
112.333 91.7172 553.44 . . . V.Q .
(PEAK DAY 1, HOUR 16.333)
112.417 94.3714 385.40 . . . Q V. .
(PEAK DAY 1, HOUR 16.417)
112.500 96.5294 313.35 . . Q . V .
(PEAK DAY 1, HOUR 16.500)
112.583 98.3808 268.82 . . Q . .V .
(PEAK DAY 1, HOUR 16.583)
112.667 99.9869 233.20 . . Q . .V .
(PEAK DAY 1, HOUR 16.667)
112.750 101.3946 204.39 . .Q . . V .
(PEAK DAY 1, HOUR 16.750)
112.833 102.6383 180.59 . Q . . V .
(PEAK DAY 1, HOUR 16.833)
112.917 103.7472 161.01 . Q. . . V .
(PEAK DAY 1, HOUR 16.917)
113.000 104.7342 143.32 . Q . . . V .
(PEAK DAY 1, HOUR 17.000)
113.083 105.6298 130.03 . Q . . . V .
(PEAK DAY 1, HOUR 17.083)
113.167 106.4471 118.67 . Q . . . V .
(PEAK DAY 1, HOUR 17.167)
113.250 107.2151 111.51 . Q . . . V .
(PEAK DAY 1, HOUR 17.250)
113.333 107.9404 105.32 . Q . . . V .
(PEAK DAY 1, HOUR 17.333)
113.417 108.6304 100.18 . Q . . . V .
(PEAK DAY 1, HOUR 17.417)
113.500 109.2865 95.26 . Q . . . V .
(PEAK DAY 1, HOUR 17.500)
113.583 109.9104 90.59 . Q . . . V .
(PEAK DAY 1, HOUR 17.583)
113.667 110.5035 86.13 . Q . . . V .
(PEAK DAY 1, HOUR 17.667)
113.750 111.0709 82.38 . Q . . . V .
(PEAK DAY 1, HOUR 17.750)
113.833 111.6069 77.82 . Q . . . V .
(PEAK DAY 1, HOUR 17.833)
113.917 112.1224 74.86 . Q . . . V .
(PEAK DAY 1, HOUR 17.917)
114.000 112.6157 71.63 . Q . . . V .
(PEAK DAY 1, HOUR 18.000)
114.083 113.0756 66.78 . Q . . . V .
(PEAK DAY 1, HOUR 18.083)
114.167 113.5071 62.65 . Q . . . V .
(PEAK DAY 1, HOUR 18.167)
114.250 113.9085 58.29 . Q . . . V .
(PEAK DAY 1, HOUR 18.250)
114.333 114.2791 53.80 . Q . . . V .
(PEAK DAY 1, HOUR 18.333)
114.417 114.6084 47.83 . Q . . . V .
(PEAK DAY 1, HOUR 18.417)
114.500 114.9178 44.92 . Q . . . V .
(PEAK DAY 1, HOUR 18.500)
114.583 115.2148 43.12 . Q . . . V .
(PEAK DAY 1, HOUR 18.583)
114.667 115.5015 41.63 . Q . . . V .
(PEAK DAY 1, HOUR 18.667)
114.750 115.7791 40.30 . Q . . . V .
(PEAK DAY 1, HOUR 18.750)
114.833 116.0483 39.09 . Q . . . V .
(PEAK DAY 1, HOUR 18.833)
114.917 116.3100 38.00 . Q . . . V .
(PEAK DAY 1, HOUR 18.917)
115.000 116.5650 37.02 . Q . . . V .
(PEAK DAY 1, HOUR 19.000)
115.083 116.8138 36.13 . Q . . . V .
(PEAK DAY 1, HOUR 19.083)
115.167 117.0569 35.29 . Q . . . V .
(PEAK DAY 1, HOUR 19.167)
115.250 117.2943 34.47 .Q . . . V .
(PEAK DAY 1, HOUR 19.250)
115.333 117.5261 33.65 .Q . . . V .
(PEAK DAY 1, HOUR 19.333)
115.417 117.7521 32.82 .Q . . . V .
(PEAK DAY 1, HOUR 19.417)
115.500 117.9719 31.91 .Q . . . V .
(PEAK DAY 1, HOUR 19.500)
115.583 118.1844 30.86 .Q . . . V .
(PEAK DAY 1, HOUR 19.583)
115.667 118.3832 28.87 .Q . . . V .
(PEAK DAY 1, HOUR 19.667)
115.750 118.5730 27.55 .Q . . . V .
(PEAK DAY 1, HOUR 19.750)
115.833 118.7582 26.88 .Q . . . V .
(PEAK DAY 1, HOUR 19.833)
115.917 118.9394 26.31 .Q . . . V .
(PEAK DAY 1, HOUR 19.917)
116.000 119.1169 25.78 .Q . . . V .
(PEAK DAY 1, HOUR 20.000)
116.083 119.2911 25.29 .Q . . . V .
(PEAK DAY 1, HOUR 20.083)
116.167 119.4621 24.83 .Q . . . V .
(PEAK DAY 1, HOUR 20.167)
116.250 119.6301 24.40 .Q . . . V .
(PEAK DAY 1, HOUR 20.250)
116.333 119.7954 24.00 .Q . . . V .
(PEAK DAY 1, HOUR 20.333)
116.417 119.9582 23.64 .Q . . . V .
(PEAK DAY 1, HOUR 20.417)
116.500 120.1186 23.29 .Q . . . V .
(PEAK DAY 1, HOUR 20.500)
116.583 120.2767 22.96 .Q . . . V .
(PEAK DAY 1, HOUR 20.583)
116.667 120.4326 22.64 .Q . . . V .
(PEAK DAY 1, HOUR 20.667)
116.750 120.5864 22.33 .Q . . . V .
(PEAK DAY 1, HOUR 20.750)
116.833 120.7382 22.03 .Q . . . V .
(PEAK DAY 1, HOUR 20.833)
116.917 120.8879 21.75 .Q . . . V .
(PEAK DAY 1, HOUR 20.917)
117.000 121.0358 21.47 .Q . . . V .
(PEAK DAY 1, HOUR 21.000)
117.083 121.1818 21.20 .Q . . . V .
(PEAK DAY 1, HOUR 21.083)
117.167 121.3261 20.94 .Q . . . V .
(PEAK DAY 1, HOUR 21.167)
117.250 121.4686 20.69 .Q . . . V .
(PEAK DAY 1, HOUR 21.250)
117.333 121.6094 20.45 .Q . . . V .
(PEAK DAY 1, HOUR 21.333)
117.417 121.7486 20.21 .Q . . . V .
(PEAK DAY 1, HOUR 21.417)
117.500 121.8862 19.98 .Q . . . V .
(PEAK DAY 1, HOUR 21.500)
117.583 122.0223 19.76 .Q . . . V .
(PEAK DAY 1, HOUR 21.583)
117.667 122.1569 19.55 .Q . . . V .
(PEAK DAY 1, HOUR 21.667)
117.750 122.2902 19.34 .Q . . . V .
(PEAK DAY 1, HOUR 21.750)
117.833 122.4220 19.15 .Q . . . V .

(PEAK DAY 1, HOUR 21.833)
117.917 122.5526 18.96 .Q . . . V .
(PEAK DAY 1, HOUR 21.917)
118.000 122.6818 18.77 .Q . . . V .
(PEAK DAY 1, HOUR 22.000)
118.083 122.8099 18.59 .Q . . . V .
(PEAK DAY 1, HOUR 22.083)
118.167 122.9367 18.41 .Q . . . V.
(PEAK DAY 1, HOUR 22.167)
118.250 123.0623 18.24 .Q . . . V.
(PEAK DAY 1, HOUR 22.250)
118.333 123.1867 18.07 .Q . . . V.
(PEAK DAY 1, HOUR 22.333)
118.417 123.3100 17.90 .Q . . . V.
(PEAK DAY 1, HOUR 22.417)
118.500 123.4322 17.74 .Q . . . V.
(PEAK DAY 1, HOUR 22.500)
118.583 123.5533 17.59 .Q . . . V.
(PEAK DAY 1, HOUR 22.583)
118.667 123.6734 17.43 Q . . . V.
(PEAK DAY 1, HOUR 22.667)
118.750 123.7924 17.28 Q . . . V.
(PEAK DAY 1, HOUR 22.750)
118.833 123.9104 17.14 Q . . . V.
(PEAK DAY 1, HOUR 22.833)
118.917 124.0275 16.99 Q . . . V.
(PEAK DAY 1, HOUR 22.917)
119.000 124.1436 16.85 Q . . . V.
(PEAK DAY 1, HOUR 23.000)
119.083 124.2587 16.72 Q . . . V.
(PEAK DAY 1, HOUR 23.083)
119.167 124.3729 16.58 Q . . . V.
(PEAK DAY 1, HOUR 23.167)
119.250 124.4862 16.45 Q . . . V.
(PEAK DAY 1, HOUR 23.250)
119.333 124.5986 16.32 Q . . . V.
(PEAK DAY 1, HOUR 23.333)
119.417 124.7101 16.20 Q . . . V.
(PEAK DAY 1, HOUR 23.417)
119.500 124.8208 16.07 Q . . . V.
(PEAK DAY 1, HOUR 23.500)
119.583 124.9307 15.95 Q . . . V.
(PEAK DAY 1, HOUR 23.583)
119.667 125.0397 15.83 Q . . . V.
(PEAK DAY 1, HOUR 23.667)
119.750 125.1480 15.72 Q . . . V.
(PEAK DAY 1, HOUR 23.750)
119.833 125.2554 15.60 Q . . . V.
(PEAK DAY 1, HOUR 23.833)
119.917 125.3621 15.49 Q . . . V.
(PEAK DAY 1, HOUR 23.917)
120.000 125.4680 15.38 Q . . . V.
(PEAK DAY 1, HOUR 24.000)
120.083 125.5693 14.71 Q . . . V.
(PEAK DAY 1, HOUR 24.083)
120.167 125.6552 12.46 Q . . . V.
(PEAK DAY 1, HOUR 24.167)
120.250 125.7190 9.27 Q . . . V.
(PEAK DAY 1, HOUR 24.250)
120.333 125.7661 6.83 Q . . . V.
(PEAK DAY 1, HOUR 24.333)
120.417 125.8044 5.57 Q . . . V.
(PEAK DAY 1, HOUR 24.417)
120.500 125.8365 4.66 Q . . . V.
(PEAK DAY 1, HOUR 24.500)
120.583 125.8637 3.95 Q . . . V.
(PEAK DAY 1, HOUR 24.583)
120.667 125.8871 3.40 Q . . . V.
(PEAK DAY 1, HOUR 24.667)
120.750 125.9073 2.94 Q . . . V.
(PEAK DAY 1, HOUR 24.750)
120.833 125.9250 2.56 Q . . . V.
(PEAK DAY 1, HOUR 24.833)
120.917 125.9405 2.25 Q . . . V.
(PEAK DAY 1, HOUR 24.917)
121.000 125.9542 1.99 Q . . . V.
(PEAK DAY 1, HOUR 25.000)
121.083 125.9664 1.78 Q . . . V.
(PEAK DAY 1, HOUR 25.083)
121.167 125.9775 1.61 Q . . . V.
(PEAK DAY 1, HOUR 25.167)
121.250 125.9874 1.45 Q . . . V.
(PEAK DAY 1, HOUR 25.250)
121.333 125.9964 1.30 Q . . . V.
(PEAK DAY 1, HOUR 25.333)
121.417 126.0044 1.16 Q . . . V.
(PEAK DAY 1, HOUR 25.417)
121.500 126.0116 1.04 Q . . . V.
(PEAK DAY 1, HOUR 25.500)
121.583 126.0179 0.92 Q . . . V.
(PEAK DAY 1, HOUR 25.583)
121.667 126.0234 0.81 Q . . . V.
(PEAK DAY 1, HOUR 25.667)
121.750 126.0283 0.71 Q . . . V.
(PEAK DAY 1, HOUR 25.750)
121.833 126.0326 0.62 Q . . . V.
(PEAK DAY 1, HOUR 25.833)
121.917 126.0363 0.54 Q . . . V.
(PEAK DAY 1, HOUR 25.917)
122.000 126.0395 0.46 Q . . . V.
(PEAK DAY 1, HOUR 26.000)
122.083 126.0423 0.40 Q . . . V.
(PEAK DAY 1, HOUR 26.083)
122.167 126.0446 0.35 Q . . . V.
(PEAK DAY 1, HOUR 26.167)
122.250 126.0466 0.29 Q . . . V.
(PEAK DAY 1, HOUR 26.250)
122.333 126.0483 0.24 Q . . . V.
(PEAK DAY 1, HOUR 26.333)
122.417 126.0498 0.22 Q . . . V.
(PEAK DAY 1, HOUR 26.417)
122.500 126.0512 0.20 Q . . . V.
(PEAK DAY 1, HOUR 26.500)
122.583 126.0524 0.19 Q . . . V.
(PEAK DAY 1, HOUR 26.583)
122.667 126.0536 0.17 Q . . . V.
(PEAK DAY 1, HOUR 26.667)
122.750 126.0547 0.15 Q . . . V.
(PEAK DAY 1, HOUR 26.750)
122.833 126.0556 0.14 Q . . . V.
(PEAK DAY 1, HOUR 26.833)
122.917 126.0565 0.12 Q . . . V.
(PEAK DAY 1, HOUR 26.917)
123.000 126.0572 0.11 Q . . . V.
(PEAK DAY 1, HOUR 27.000)
123.083 126.0579 0.09 Q . . . V.
(PEAK DAY 1, HOUR 27.083)
123.167 126.0584 0.08 Q . . . V.
(PEAK DAY 1, HOUR 27.167)
123.250 126.0588 0.06 Q . . . V.
(PEAK DAY 1, HOUR 27.250)
123.333 126.0592 0.05 Q . . . V.
(PEAK DAY 1, HOUR 27.333)
123.417 126.0594 0.03 Q . . . V.

```
 (PEAK DAY 1, HOUR  27.417)
 123.500    126.0595      0.02  Q          .          .          .          V
 (PEAK DAY 1, HOUR  27.500)
 123.583    126.0596      0.00  Q          .          .          .          V
 (PEAK DAY 1, HOUR  27.583)
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6311.00 TO NODE   6311.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  5040.6 Ac. ***
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6311.00 TO NODE   6311.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  5040.6 Ac. ***

            STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
         (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      550.0    1100.0    1650.0    2200.0
--------------------------------------------------------------------------------
  96.000    556.8755     61.27  .Q         V          .          .          .
 (PEAK DAY 2, HOUR  24.000)
  96.083    557.2997     61.61  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.083)
  96.167    557.7462     64.83  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.167)
  96.250    558.2383     71.45  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.250)
  96.333    558.7894     80.02  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.333)
  96.417    559.4150     90.85  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.417)
  96.500    560.1615    108.39  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.500)
  96.583    561.0911    134.97  . Q        V          .          .          .
 (PEAK DAY 1, HOUR   0.583)
  96.667    562.1783    157.88  . Q        V          .          .          .
 (PEAK DAY 1, HOUR   0.667)
  96.750    563.3546    170.78  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   0.750)
  96.833    564.5953    180.16  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   0.833)
  96.917    565.8884    187.76  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   0.917)
  97.000    567.2252    194.09  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   1.000)
  97.083    568.5995    199.57  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   1.083)
  97.167    570.0073    204.41  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   1.167)
  97.250    571.4443    208.65  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   1.250)
  97.333    572.9072    212.41  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   1.333)
  97.417    574.3931    215.75  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   1.417)
  97.500    575.9006    218.88  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   1.500)
  97.583    577.4273    221.68  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   1.583)
  97.667    578.9713    224.19  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   1.667)
  97.750    580.5309    226.45  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   1.750)
  97.833    582.1042    228.45  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   1.833)
  97.917    583.6896    230.21  .  Q      .V          .          .          .
 (PEAK DAY 1, HOUR   1.917)
  98.000    585.2869    231.91  .  Q      .V          .          .          .
 (PEAK DAY 1, HOUR   2.000)
  98.083    586.8950    233.49  .  Q      .V          .          .          .
 (PEAK DAY 1, HOUR   2.083)
  98.167    588.5112    234.69  .  Q      .V          .          .          .
 (PEAK DAY 1, HOUR   2.167)
  98.250    590.1345    235.70  .  Q      .V          .          .          .
 (PEAK DAY 1, HOUR   2.250)
  98.333    591.7648    236.72  .  Q      .V          .          .          .
 (PEAK DAY 1, HOUR   2.333)
  98.417    593.4020    237.72  .  Q      .V          .          .          .
 (PEAK DAY 1, HOUR   2.417)
  98.500    595.0462    238.74  .  Q      .V          .          .          .
 (PEAK DAY 1, HOUR   2.500)
  98.583    596.6974    239.75  .  Q      .V          .          .          .
 (PEAK DAY 1, HOUR   2.583)
  98.667    598.3557    240.78  .  Q      .V          .          .          .
 (PEAK DAY 1, HOUR   2.667)
  98.750    600.0211    241.81  .  Q      .V          .          .          .
 (PEAK DAY 1, HOUR   2.750)
  98.833    601.6937    242.86  .  Q      .V          .          .          .
 (PEAK DAY 1, HOUR   2.833)
  98.917    603.3735    243.92  .  Q      .V          .          .          .
 (PEAK DAY 1, HOUR   2.917)
  99.000    605.0607    244.98  .  Q      .V          .          .          .
 (PEAK DAY 1, HOUR   3.000)
  99.083    606.7554    246.06  .  Q      .V          .          .          .
 (PEAK DAY 1, HOUR   3.083)
  99.167    608.4575    247.15  .  Q      .V          .          .          .
 (PEAK DAY 1, HOUR   3.167)
  99.250    610.1672    248.25  .  Q      .V          .          .          .
 (PEAK DAY 1, HOUR   3.250)
  99.333    611.8846    249.36  .  Q      .V          .          .          .
 (PEAK DAY 1, HOUR   3.333)
  99.417    613.6096    250.48  .  Q      .V          .          .          .
 (PEAK DAY 1, HOUR   3.417)
  99.500    615.3425    251.61  .  Q      .V          .          .          .
 (PEAK DAY 1, HOUR   3.500)
  99.583    617.0831    252.75  .  Q      .V          .          .          .
 (PEAK DAY 1, HOUR   3.583)
  99.667    618.8317    253.89  .  Q      .V          .          .          .
 (PEAK DAY 1, HOUR   3.667)
  99.750    620.5882    255.05  .  Q      .V          .          .          .
 (PEAK DAY 1, HOUR   3.750)
  99.833    622.3527    256.21  .  Q      .V          .          .          .
 (PEAK DAY 1, HOUR   3.833)
  99.917    624.1252    257.37  .  Q      .V          .          .          .
 (PEAK DAY 1, HOUR   3.917)
 100.000    625.9053    258.47  .  Q      .V          .          .          .
 (PEAK DAY 1, HOUR   4.000)
 100.083    627.6927    259.54  .  Q      .V          .          .          .
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(PEAK DAY 1, HOUR 4.083)									
100.167	629.4875	260.61	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR 4.167)									
100.250	631.2898	261.69	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR 4.250)									
100.333	633.0996	262.78	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR 4.333)									
100.417	634.9171	263.89	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR 4.417)									
100.500	636.7422	265.01	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 4.500)									
100.583	638.5751	266.14	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 4.583)									
100.667	640.4158	267.28	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 4.667)									
100.750	642.2646	268.44	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 4.750)									
100.833	644.1214	269.61	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 4.833)									
100.917	645.9864	270.79	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 4.917)									
101.000	647.8596	271.99	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.000)									
101.083	649.7411	273.20	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.083)									
101.167	651.6311	274.42	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.167)									
101.250	653.5296	275.66	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.250)									
101.333	655.4368	276.92	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.333)									
101.417	657.3527	278.19	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.417)									
101.500	659.2774	279.47	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.500)									
101.583	661.2111	280.77	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.583)									
101.667	663.1538	282.08	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.667)									
101.750	665.1057	283.42	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.750)									
101.833	667.0669	284.76	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.833)									
101.917	669.0375	286.13	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.917)									
102.000	671.0176	287.51	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.000)									
102.083	673.0073	288.91	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.083)									
102.167	675.0068	290.33	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.167)									
102.250	677.0162	291.76	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.250)									
102.333	679.0356	293.22	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.333)									
102.417	681.0652	294.69	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.417)									
102.500	683.1050	296.18	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.500)									
102.583	685.1552	297.69	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.583)									
102.667	687.2160	299.23	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.667)									
102.750	689.2875	300.78	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.750)									
102.833	691.3698	302.36	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.833)									
102.917	693.4631	303.95	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.917)									
103.000	695.5676	305.57	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.000)									
103.083	697.6834	307.21	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.083)									
103.167	699.8107	308.88	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.167)									
103.250	701.9496	310.57	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.250)									
103.333	704.1003	312.28	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.333)									
103.417	706.2629	314.02	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.417)									
103.500	708.4377	315.78	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.500)									
103.583	710.6249	317.57	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.583)									
103.667	712.8245	319.39	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.667)									
103.750	715.0369	321.23	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.750)									
103.833	717.2621	323.10	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.833)									
103.917	719.5004	325.00	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.917)									
104.000	721.7520	326.93	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.000)									
104.083	724.0170	328.89	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.083)									
104.167	726.2958	330.88	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.167)									
104.250	728.5886	332.91	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.250)									
104.333	730.8954	334.96	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.333)									
104.417	733.2167	337.05	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.417)									
104.500	735.5526	339.17	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.500)									
104.583	737.9034	341.33	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.583)									
104.667	740.2693	343.53	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.667)									
104.750	742.6505	345.76	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.750)									
104.833	745.0474	348.03	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.833)									
104.917	747.4601	350.33	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.917)									
105.000	749.8891	352.68	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.000)									
105.083	752.3345	355.07	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.083)									
105.167	754.7967	357.51	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.167)									
105.250	757.2759	359.99	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.250)									
105.333	759.7726	362.51	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.333)									
105.417	762.2869	365.08	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.417)									
105.500	764.8193	367.70	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.500)									
105.583	767.3700	370.37	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.583)									
105.667	769.9395	373.09	.	Q	. V	.	.	.	

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 (PEAK DAY 1, HOUR   9.667)
105.750    772.5280    375.86  .     Q   .   V     .         .         .
 (PEAK DAY 1, HOUR   9.750)
105.833    775.1360    378.68  .     Q   .   V     .         .         .
 (PEAK DAY 1, HOUR   9.833)
105.917    777.7639    381.57  .     Q   .   V     .         .         .
 (PEAK DAY 1, HOUR   9.917)
106.000    780.4120    384.51  .     Q   .   V     .         .         .
 (PEAK DAY 1, HOUR  10.000)
106.083    783.0809    387.51  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR  10.083)
106.167    785.7708    390.57  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR  10.167)
106.250    788.4822    393.70  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR  10.250)
106.333    791.2156    396.89  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR  10.333)
106.417    793.9716    400.16  .      Q  .    V    .         .         .
 (PEAK DAY 1, HOUR  10.417)
106.500    796.7504    403.49  .      Q  .    V    .         .         .
 (PEAK DAY 1, HOUR  10.500)
106.583    799.5527    406.90  .      Q  .    V    .         .         .
 (PEAK DAY 1, HOUR  10.583)
106.667    802.3790    410.38  .      Q  .    V    .         .         .
 (PEAK DAY 1, HOUR  10.667)
106.750    805.2299    413.94  .      Q  .    V    .         .         .
 (PEAK DAY 1, HOUR  10.750)
106.833    808.1058    417.58  .      Q  .    V    .         .         .
 (PEAK DAY 1, HOUR  10.833)
106.917    811.0074    421.31  .      Q  .    V    .         .         .
 (PEAK DAY 1, HOUR  10.917)
107.000    813.9353    425.13  .      Q  .    V    .         .         .
 (PEAK DAY 1, HOUR  11.000)
107.083    816.8901    429.04  .      Q  .    V    .         .         .
 (PEAK DAY 1, HOUR  11.083)
107.167    819.8725    433.04  .      Q  .    V    .         .         .
 (PEAK DAY 1, HOUR  11.167)
107.250    822.8832    437.15  .      Q  .    V    .         .         .
 (PEAK DAY 1, HOUR  11.250)
107.333    825.9228    441.35  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.333)
107.417    828.9921    445.67  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.417)
107.500    832.0920    450.10  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.500)
107.583    835.2231    454.64  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.583)
107.667    838.3864    459.31  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.667)
107.750    841.5827    464.10  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.750)
107.833    844.8129    469.03  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.833)
107.917    848.0781    474.10  .       Q .     V   .         .         .
 (PEAK DAY 1, HOUR  11.917)
108.000    851.3791    479.31  .       Q .     V   .         .         .
 (PEAK DAY 1, HOUR  12.000)
108.083    854.7219    485.37  .       Q .     V   .         .         .
 (PEAK DAY 1, HOUR  12.083)
108.167    858.1257    494.23  .       Q .     V   .         .         .
 (PEAK DAY 1, HOUR  12.167)
108.250    861.6136    506.44  .        Q.     V   .         .         .
 (PEAK DAY 1, HOUR  12.250)
108.333    865.2002    520.77  .        Q.     V   .         .         .
 (PEAK DAY 1, HOUR  12.333)
108.417    868.9025    537.57  .        Q.     V   .         .         .
 (PEAK DAY 1, HOUR  12.417)
108.500    872.7667    561.09  .        Q      V   .         .         .
 (PEAK DAY 1, HOUR  12.500)
108.583    876.8546    593.56  .        Q      V   .         .         .
 (PEAK DAY 1, HOUR  12.583)
108.667    881.1423    622.58  .        .Q     V   .         .         .
 (PEAK DAY 1, HOUR  12.667)
108.750    885.5639    642.01  .        .Q     V   .         .         .
 (PEAK DAY 1, HOUR  12.750)
108.833    890.0969    658.20  .        .Q     V   .         .         .
 (PEAK DAY 1, HOUR  12.833)
108.917    894.7310    672.86  .        . Q    V   .         .         .
 (PEAK DAY 1, HOUR  12.917)
109.000    899.4593    686.55  .        . Q    V   .         .         .
 (PEAK DAY 1, HOUR  13.000)
109.083    904.2781    699.69  .        . Q     V  .         .         .
 (PEAK DAY 1, HOUR  13.083)
109.167    909.1844    712.40  .        . Q     V  .         .         .
 (PEAK DAY 1, HOUR  13.167)
109.250    914.1675    723.54  .        .  Q    V  .         .         .
 (PEAK DAY 1, HOUR  13.250)
109.333    919.2114    732.38  .        .  Q    V  .         .         .
 (PEAK DAY 1, HOUR  13.333)
109.417    924.3182    741.50  .        .  Q    V  .         .         .
 (PEAK DAY 1, HOUR  13.417)
109.500    929.5094    753.77  .        .  Q    V  .         .         .
 (PEAK DAY 1, HOUR  13.500)
109.583    934.8047    768.89  .        .  Q    V  .         .         .
 (PEAK DAY 1, HOUR  13.583)
109.667    940.2217    786.54  .        .   Q   V  .         .         .
 (PEAK DAY 1, HOUR  13.667)
109.750    945.7708    805.74  .        .   Q   V  .         .         .
 (PEAK DAY 1, HOUR  13.750)
109.833    951.4435    823.68  .        .   Q   V  .         .         .
 (PEAK DAY 1, HOUR  13.833)
109.917    957.2193    838.64  .        .    Q  V  .         .         .
 (PEAK DAY 1, HOUR  13.917)
110.000    963.0982    853.62  .        .    Q  V  .         .         .
 (PEAK DAY 1, HOUR  14.000)
110.083    969.1011    871.63  .        .    Q  V  .         .         .
 (PEAK DAY 1, HOUR  14.083)
110.167    975.2510    892.96  .        .     Q V  .         .         .
 (PEAK DAY 1, HOUR  14.167)
110.250    981.5587    915.89  .        .     Q V  .         .         .
 (PEAK DAY 1, HOUR  14.250)
110.333    988.0295    939.57  .        .      QV  .         .         .
 (PEAK DAY 1, HOUR  14.333)
110.417    994.6855    966.45  .        .      QV  .         .         .
 (PEAK DAY 1, HOUR  14.417)
110.500   1001.5480    996.42  .        .       Q  .         .         .
 (PEAK DAY 1, HOUR  14.500)
110.583   1008.6304   1028.37  .        .       QV.          .         .
 (PEAK DAY 1, HOUR  14.583)
110.667   1015.9644   1064.89  .        .        Q.          .         .
 (PEAK DAY 1, HOUR  14.667)
110.750   1023.5793   1105.69  .        .        VQ          .         .
 (PEAK DAY 1, HOUR  14.750)
110.833   1031.4691   1145.60  .        .        VQ          .         .
 (PEAK DAY 1, HOUR  14.833)
110.917   1039.6105   1182.12  .        .        V.Q         .         .
 (PEAK DAY 1, HOUR  14.917)
111.000   1048.0011   1218.32  .        .        V. Q        .         .
 (PEAK DAY 1, HOUR  15.000)
111.083   1056.6536   1256.33  .        .        V. Q        .         .
 (PEAK DAY 1, HOUR  15.083)
111.167   1065.5721   1294.98  .        .         V  Q       .         .
 (PEAK DAY 1, HOUR  15.167)
111.250   1074.7595   1334.00  .        .         V   Q      .         .
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 (PEAK DAY 1, HOUR  15.250)
111.333   1084.2246   1374.33  .         .         V   Q     .         .
 (PEAK DAY 1, HOUR  15.333)
111.417   1093.9501   1412.14  .         .         V    Q    .         .
 (PEAK DAY 1, HOUR  15.417)
111.500   1103.8761   1441.26  .         .         V     Q   .         .
 (PEAK DAY 1, HOUR  15.500)
111.583   1113.9706   1465.73  .         .         .V    Q   .         .
 (PEAK DAY 1, HOUR  15.583)
111.667   1124.2614   1494.22  .         .         .V     Q  .         .
 (PEAK DAY 1, HOUR  15.667)
111.750   1134.7910   1528.90  .         .         .V     Q  .         .
 (PEAK DAY 1, HOUR  15.750)
111.833   1145.5966   1568.97  .         .         .V      Q .         .
 (PEAK DAY 1, HOUR  15.833)
111.917   1156.7266   1616.08  .         .         .V       Q.         .
 (PEAK DAY 1, HOUR  15.917)
112.000   1168.3085   1681.69  .         .         . V       Q         .
 (PEAK DAY 1, HOUR  16.000)
112.083   1180.8759   1824.78  .         .         . V       .  Q      .
 (PEAK DAY 1, HOUR  16.083)
112.167   1195.0514   2058.29  .         .         . V       .     Q   .
 (PEAK DAY 1, HOUR  16.167)
112.250   1210.1047   2185.75  .         .         . V       .       Q.
 (PEAK DAY 1, HOUR  16.250)
112.333   1224.6304   2109.12  .         .         .  V      .      Q  .
 (PEAK DAY 1, HOUR  16.333)
112.417   1238.3531   1992.56  .         .         .  V      .    Q    .
 (PEAK DAY 1, HOUR  16.417)
112.500   1252.0182   1984.17  .         .         .  V      .    Q    .
 (PEAK DAY 1, HOUR  16.500)
112.583   1265.8722   2011.61  .         .         .  V      .    Q    .
 (PEAK DAY 1, HOUR  16.583)
112.667   1279.8615   2031.25  .         .         .   V     .    Q    .
 (PEAK DAY 1, HOUR  16.667)
112.750   1293.8583   2032.33  .         .         .   V     .    Q    .
 (PEAK DAY 1, HOUR  16.750)
112.833   1307.8298   2028.67  .         .         .   V     .    Q    .
 (PEAK DAY 1, HOUR  16.833)
112.917   1321.7808   2025.68  .         .         .   V     .    Q    .
 (PEAK DAY 1, HOUR  16.917)
113.000   1335.7112   2022.71  .         .         .    V    .    Q    .
 (PEAK DAY 1, HOUR  17.000)
113.083   1349.6414   2022.66  .         .         .    V    .    Q    .
 (PEAK DAY 1, HOUR  17.083)
113.167   1363.5728   2022.85  .         .         .    V    .    Q    .
 (PEAK DAY 1, HOUR  17.167)
113.250   1377.5214   2025.33  .         .         .     V   .    Q    .
 (PEAK DAY 1, HOUR  17.250)
113.333   1391.4807   2026.91  .         .         .     V   .    Q    .
 (PEAK DAY 1, HOUR  17.333)
113.417   1405.4459   2027.74  .         .         .     V   .    Q    .
 (PEAK DAY 1, HOUR  17.417)
113.500   1419.4064   2027.06  .         .         .     V   .    Q    .
 (PEAK DAY 1, HOUR  17.500)
113.583   1433.3506   2024.69  .         .         .      V  .    Q    .
 (PEAK DAY 1, HOUR  17.583)
113.667   1447.2664   2020.58  .         .         .      V  .    Q    .
 (PEAK DAY 1, HOUR  17.667)
113.750   1461.1476   2015.56  .         .         .      V  .    Q    .
 (PEAK DAY 1, HOUR  17.750)
113.833   1474.9797   2008.42  .         .         .      V  .    Q    .
 (PEAK DAY 1, HOUR  17.833)
113.917   1488.7657   2001.73  .         .         .       V .    Q    .
 (PEAK DAY 1, HOUR  17.917)
114.000   1502.4974   1993.84  .         .         .       V .    Q    .
 (PEAK DAY 1, HOUR  18.000)
114.083   1516.1580   1983.50  .         .         .       V .     Q   .
 (PEAK DAY 1, HOUR  18.083)
114.167   1529.7457   1972.95  .         .         .       V .    Q    .
 (PEAK DAY 1, HOUR  18.167)
114.250   1543.2537   1961.36  .         .         .        V.    Q    .
 (PEAK DAY 1, HOUR  18.250)
114.333   1556.6774   1949.13  .         .         .        V.    Q    .
 (PEAK DAY 1, HOUR  18.333)
114.417   1570.0043   1935.07  .         .         .        V.    Q    .
 (PEAK DAY 1, HOUR  18.417)
114.500   1583.2542   1923.88  .         .         .        V.   Q     .
 (PEAK DAY 1, HOUR  18.500)
114.583   1596.4341   1913.73  .         .         .         V   Q     .
 (PEAK DAY 1, HOUR  18.583)
114.667   1609.5454   1903.77  .         .         .         V   Q     .
 (PEAK DAY 1, HOUR  18.667)
114.750   1622.5874   1893.70  .         .         .         V   Q     .
 (PEAK DAY 1, HOUR  18.750)
114.833   1635.5597   1883.58  .         .         .         V   Q     .
 (PEAK DAY 1, HOUR  18.833)
114.917   1648.4624   1873.47  .         .         .        .V  Q     .
 (PEAK DAY 1, HOUR  18.917)
115.000   1661.2969   1863.56  .         .         .        .V Q      .
 (PEAK DAY 1, HOUR  19.000)
115.083   1674.0648   1853.91  .         .         .        .V Q      .
 (PEAK DAY 1, HOUR  19.083)
115.167   1686.7671   1844.37  .         .         .        .V Q      .
 (PEAK DAY 1, HOUR  19.167)
115.250   1699.4036   1834.82  .         .         .        . VQ      .
 (PEAK DAY 1, HOUR  19.250)
115.333   1711.9716   1824.87  .         .         .        . VQ      .
 (PEAK DAY 1, HOUR  19.333)
115.417   1724.4570   1812.88  .         .         .        . Q       .
 (PEAK DAY 1, HOUR  19.417)
115.500   1736.8337   1797.10  .         .         .        . Q       .
 (PEAK DAY 1, HOUR  19.500)
115.583   1749.0856   1778.97  .         .         .        . QV      .
 (PEAK DAY 1, HOUR  19.583)
115.667   1761.2052   1759.77  .         .         .        .Q V      .
 (PEAK DAY 1, HOUR  19.667)
115.750   1773.1974   1741.27  .         .         .        .Q V      .
 (PEAK DAY 1, HOUR  19.750)
115.833   1785.0658   1723.30  .         .         .        .Q V      .
 (PEAK DAY 1, HOUR  19.833)
115.917   1796.8088   1705.09  .         .         .        .Q V      .
 (PEAK DAY 1, HOUR  19.917)
116.000   1808.4250   1686.67  .         .         .         Q  V      .
 (PEAK DAY 1, HOUR  20.000)
116.083   1819.9144   1668.26  .         .         .         Q  V      .
 (PEAK DAY 1, HOUR  20.083)
116.167   1831.2775   1649.91  .         .         .        Q.  V      .
 (PEAK DAY 1, HOUR  20.167)
116.250   1842.5126   1631.34  .         .         .        Q.  V      .
 (PEAK DAY 1, HOUR  20.250)
116.333   1853.6162   1612.25  .         .         .        Q.   V     .
 (PEAK DAY 1, HOUR  20.333)
116.417   1864.5869   1592.95  .         .         .        Q .  V     .
 (PEAK DAY 1, HOUR  20.417)
116.500   1875.4259   1573.82  .         .         .        Q .  V     .
 (PEAK DAY 1, HOUR  20.500)
116.583   1886.1342   1554.83  .         .         .        Q .  V     .
 (PEAK DAY 1, HOUR  20.583)
116.667   1896.7106   1535.70  .         .         .       Q .  V     .
 (PEAK DAY 1, HOUR  20.667)
116.750   1907.1525   1516.16  .         .         .       Q .   V    .
 (PEAK DAY 1, HOUR  20.750)
116.833   1917.4589   1496.50  .         .         .       Q .   V    .
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(PEAK DAY 1, HOUR 20.833)
116.917 1927.6312 1477.03 . . . Q . V .
(PEAK DAY 1, HOUR 20.917)
117.000 1937.6704 1457.69 . . . Q . V .
(PEAK DAY 1, HOUR 21.000)
117.083 1947.5718 1437.67 . . . Q . V .
(PEAK DAY 1, HOUR 21.083)
117.167 1957.3228 1415.84 . . . Q . V .
(PEAK DAY 1, HOUR 21.167)
117.250 1966.9160 1392.94 . . . Q . V .
(PEAK DAY 1, HOUR 21.250)
117.333 1976.3534 1370.31 . . . Q . V .
(PEAK DAY 1, HOUR 21.333)
117.417 1985.6296 1346.92 . . . Q . V .
(PEAK DAY 1, HOUR 21.417)
117.500 1994.7091 1318.34 . . . Q . V .
(PEAK DAY 1, HOUR 21.500)
117.583 2003.5399 1282.24 . . . Q . V .
(PEAK DAY 1, HOUR 21.583)
117.667 2012.0990 1242.79 . . . Q . V .
(PEAK DAY 1, HOUR 21.667)
117.750 2020.3800 1202.39 . . .Q . V .
(PEAK DAY 1, HOUR 21.750)
117.833 2028.3760 1161.02 . . .Q . V .
(PEAK DAY 1, HOUR 21.833)
117.917 2036.0826 1119.00 . . Q . V .
(PEAK DAY 1, HOUR 21.917)
118.000 2043.4700 1072.64 . . Q. . V .
(PEAK DAY 1, HOUR 22.000)
118.083 2050.4990 1020.61 . . Q . . V .
(PEAK DAY 1, HOUR 22.083)
118.167 2057.1292 962.68 . . Q . . V .
(PEAK DAY 1, HOUR 22.167)
118.250 2063.0212 855.53 . . Q . . V .
(PEAK DAY 1, HOUR 22.250)
118.333 2067.2317 611.37 . .Q . . V.
(PEAK DAY 1, HOUR 22.333)
118.417 2069.5171 331.84 . Q . . . V.
(PEAK DAY 1, HOUR 22.417)
118.500 2071.3760 269.90 . Q . . . V.
(PEAK DAY 1, HOUR 22.500)
118.583 2073.3276 283.39 . Q . . . V.
(PEAK DAY 1, HOUR 22.583)
118.667 2075.1763 268.43 . Q . . . V.
(PEAK DAY 1, HOUR 22.667)
118.750 2077.0625 273.87 . Q . . . V.
(PEAK DAY 1, HOUR 22.750)
118.833 2078.8972 266.39 . Q . . . V.
(PEAK DAY 1, HOUR 22.833)
118.917 2080.7388 267.38 . Q . . . V.
(PEAK DAY 1, HOUR 22.917)
119.000 2082.5498 262.97 . Q . . . V.
(PEAK DAY 1, HOUR 23.000)
119.083 2084.3552 262.14 . Q . . . V.
(PEAK DAY 1, HOUR 23.083)
119.167 2086.1394 259.07 . Q . . . V.
(PEAK DAY 1, HOUR 23.167)
119.250 2087.9131 257.54 . Q . . . V.
(PEAK DAY 1, HOUR 23.250)
119.333 2089.6699 255.08 . Q . . . V.
(PEAK DAY 1, HOUR 23.333)
119.417 2091.4143 253.30 . Q . . . V.
(PEAK DAY 1, HOUR 23.417)
119.500 2093.1440 251.15 . Q . . . V.
(PEAK DAY 1, HOUR 23.500)
119.583 2094.8611 249.30 . Q . . . V.
(PEAK DAY 1, HOUR 23.583)
119.667 2096.5645 247.33 . Q . . . V.
(PEAK DAY 1, HOUR 23.667)
119.750 2098.2551 245.50 . Q . . . V.
(PEAK DAY 1, HOUR 23.750)
119.833 2099.9331 243.63 . Q . . . V.
(PEAK DAY 1, HOUR 23.833)
119.917 2101.5989 241.85 . Q . . . V.
(PEAK DAY 1, HOUR 23.917)
120.000 2103.2522 240.08 . Q . . . V.
(PEAK DAY 1, HOUR 24.000)
120.083 2104.8867 237.32 . Q . . . V.
(PEAK DAY 1, HOUR 24.083)
120.167 2106.4758 230.75 . Q . . . V.
(PEAK DAY 1, HOUR 24.167)
120.250 2107.9893 219.75 . Q . . . V.
(PEAK DAY 1, HOUR 24.250)
120.333 2109.4099 206.29 . Q . . . V.
(PEAK DAY 1, HOUR 24.333)
120.417 2110.7183 189.98 . Q . . . V.
(PEAK DAY 1, HOUR 24.417)
120.500 2111.8540 164.90 . Q . . . V.
(PEAK DAY 1, HOUR 24.500)
120.583 2112.7358 128.04 . Q . . . V.
(PEAK DAY 1, HOUR 24.583)
120.667 2113.4011 96.60 .Q . . . V.
(PEAK DAY 1, HOUR 24.667)
120.750 2113.9451 78.98 .Q . . . V.
(PEAK DAY 1, HOUR 24.750)
120.833 2114.4019 66.34 .Q . . . V.
(PEAK DAY 1, HOUR 24.833)
120.917 2114.7893 56.26 .Q . . . V.
(PEAK DAY 1, HOUR 24.917)
121.000 2115.1199 48.01 Q . . . V.
(PEAK DAY 1, HOUR 25.000)
121.083 2115.4026 41.05 Q . . . V.
(PEAK DAY 1, HOUR 25.083)
121.167 2115.6438 35.02 Q . . . V.
(PEAK DAY 1, HOUR 25.167)
121.250 2115.8496 29.89 Q . . . V.
(PEAK DAY 1, HOUR 25.250)
121.333 2116.0251 25.49 Q . . . V.
(PEAK DAY 1, HOUR 25.333)
121.417 2116.1746 21.71 Q . . . V.
(PEAK DAY 1, HOUR 25.417)
121.500 2116.3003 18.27 Q . . . V.
(PEAK DAY 1, HOUR 25.500)
121.583 2116.4060 15.34 Q . . . V.
(PEAK DAY 1, HOUR 25.583)
121.667 2116.4944 12.84 Q . . . V.
(PEAK DAY 1, HOUR 25.667)
121.750 2116.5684 10.72 Q . . . V.
(PEAK DAY 1, HOUR 25.750)
121.833 2116.6304 8.99 Q . . . V.
(PEAK DAY 1, HOUR 25.833)
121.917 2116.6829 7.61 Q . . . V.
(PEAK DAY 1, HOUR 25.917)
122.000 2116.7266 6.33 Q . . . V.
(PEAK DAY 1, HOUR 26.000)
122.083 2116.7627 5.25 Q . . . V.
(PEAK DAY 1, HOUR 26.083)
122.167 2116.7952 4.71 Q . . . V.
(PEAK DAY 1, HOUR 26.167)
122.250 2116.8257 4.43 Q . . . V.
(PEAK DAY 1, HOUR 26.250)
122.333 2116.8542 4.15 Q . . . V.
(PEAK DAY 1, HOUR 26.333)
122.417 2116.8811 3.91 Q . . . V.

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 (PEAK DAY 1, HOUR  26.417)
122.500   2116.9065      3.68  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.500)
122.583   2116.9302      3.45  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.583)
122.667   2116.9524      3.22  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.667)
122.750   2116.9731      3.00  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.750)
122.833   2116.9922      2.78  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.833)
122.917   2117.0098      2.55  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.917)
123.000   2117.0259      2.33  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.000)
123.083   2117.0405      2.11  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.083)
123.167   2117.0537      1.90  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.167)
123.250   2117.0652      1.68  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.250)
123.333   2117.0752      1.47  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.333)
123.417   2117.0837      1.25  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.417)
123.500   2117.0908      1.04  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.500)
123.583   2117.0964      0.83  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.583)
123.667   2117.1008      0.63  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.667)
123.750   2117.1038      0.44  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.750)
123.833   2117.1055      0.25  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.833)
123.917   2117.1060      0.08  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.917)
124.000   2117.1060      0.00  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  28.000)
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
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  FLOW PROCESS FROM NODE   6311.00 TO NODE   6330.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
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         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  5040.6 Ac. ***

         THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
         TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
         INTERVALS(Reference: the National Engineering Handbook,
         Hydrology, Chapter 17, page 17-52, August,1972,
         U.S. Department of Commerce).


         ASSUMED REGULAR CHANNEL INFORMATION:
           BASEWIDTH(FT) =   20.00     CHANNEL Z =  1.00
           UPSTREAM ELEVATION(FT) =     382.00
           DOWNSTREAM ELEVATION(FT) =     375.00
           CHANNEL LENGTH(FT) =    1141.00     MANNING'S FACTOR = 0.040
           CONSTANT LOSS RATE(CFS) =    0.00

         CHANNEL ROUTING COEFFICIENT ESTIMATED:
           MAXIMUM INFLOW(CFS) =  2185.75
           AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  1615.71
           CHANNEL NORMAL VELOCITY FOR Q =  1615.71 CFS =   8.33 FPS
           ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.830

         MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
         UNIT INTERVALS IS CSTAR = 0.976


         CONVEX METHOD CHANNEL ROUTING RESULTS:
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PEAK DAY	TIME (HRS)	CLOCK TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
2	24.000	96.000	61.27	61.45	61.45
1	0.083	96.083	61.61	61.48	61.48
1	0.167	96.167	64.83	63.56	63.56
1	0.250	96.250	71.45	68.81	68.81
1	0.333	96.333	80.02	76.57	76.57
1	0.417	96.417	90.85	86.49	86.49
1	0.500	96.500	108.39	101.36	101.36
1	0.583	96.583	134.97	124.31	124.31
1	0.667	96.667	157.88	148.58	148.58
1	0.750	96.750	170.78	165.46	165.46
1	0.833	96.833	180.16	176.33	176.33
1	0.917	96.917	187.76	184.66	184.66
1	1.000	97.000	194.09	191.52	191.52
1	1.083	97.083	199.57	197.34	197.34
1	1.167	97.167	204.41	202.44	202.44
1	1.250	97.250	208.65	206.93	206.93
1	1.333	97.333	212.41	210.88	210.88
1	1.417	97.417	215.75	214.40	214.40
1	1.500	97.500	218.88	217.61	217.61
1	1.583	97.583	221.68	220.55	220.55
1	1.667	97.667	224.19	223.17	223.17
1	1.750	97.750	226.45	225.53	225.53
1	1.833	97.833	228.45	227.64	227.64
1	1.917	97.917	230.21	229.49	229.49
1	2.000	98.000	231.91	231.22	231.22
1	2.083	98.083	233.49	232.85	232.85
1	2.167	98.167	234.69	234.20	234.20
1	2.250	98.250	235.70	235.29	235.29
1	2.333	98.333	236.72	236.31	236.31
1	2.417	98.417	237.72	237.32	237.32
1	2.500	98.500	238.74	238.33	238.33
1	2.583	98.583	239.75	239.34	239.34
1	2.667	98.667	240.78	240.36	240.36
1	2.750	98.750	241.81	241.40	241.40
1	2.833	98.833	242.86	242.44	242.44
1	2.917	98.917	243.92	243.49	243.49
1	3.000	99.000	244.98	244.55	244.55
1	3.083	99.083	246.06	245.63	245.63
1	3.167	99.167	247.15	246.71	246.71
1	3.250	99.250	248.25	247.80	247.80
1	3.333	99.333	249.36	248.91	248.91
1	3.417	99.417	250.48	250.02	250.02
1	3.500	99.500	251.61	251.15	251.15
1	3.583	99.583	252.75	252.28	252.28
1	3.667	99.667	253.89	253.43	253.43
1	3.750	99.750	255.05	254.58	254.58
1	3.833	99.833	256.21	255.74	255.74
1	3.917	99.917	257.37	256.90	256.90
1	4.000	100.000	258.47	258.03	258.03
1	4.083	100.083	259.54	259.11	259.11

1	4.167	100.167	260.61	260.17	260.17
1	4.250	100.250	261.69	261.25	261.25
1	4.333	100.333	262.78	262.34	262.34
1	4.417	100.417	263.89	263.44	263.44
1	4.500	100.500	265.01	264.56	264.56
1	4.583	100.583	266.14	265.68	265.68
1	4.667	100.667	267.28	266.82	266.82
1	4.750	100.750	268.44	267.97	267.97
1	4.833	100.833	269.61	269.14	269.14
1	4.917	100.917	270.79	270.31	270.31
1	5.000	101.000	271.99	271.51	271.51
1	5.083	101.083	273.20	272.71	272.71
1	5.167	101.167	274.42	273.93	273.93
1	5.250	101.250	275.66	275.16	275.16
1	5.333	101.333	276.92	276.41	276.41
1	5.417	101.417	278.19	277.67	277.67
1	5.500	101.500	279.47	278.95	278.95
1	5.583	101.583	280.77	280.24	280.24
1	5.667	101.667	282.08	281.55	281.55
1	5.750	101.750	283.42	282.88	282.88
1	5.833	101.833	284.76	284.22	284.22
1	5.917	101.917	286.13	285.58	285.58
1	6.000	102.000	287.51	286.95	286.95
1	6.083	102.083	288.91	288.34	288.34
1	6.167	102.167	290.33	289.75	289.75
1	6.250	102.250	291.76	291.18	291.18
1	6.333	102.333	293.22	292.63	292.63
1	6.417	102.417	294.69	294.09	294.09
1	6.500	102.500	296.18	295.58	295.58
1	6.583	102.583	297.69	297.08	297.08
1	6.667	102.667	299.23	298.61	298.61
1	6.750	102.750	300.78	300.15	300.15
1	6.833	102.833	302.36	301.72	301.72
1	6.917	102.917	303.95	303.31	303.31
1	7.000	103.000	305.57	304.92	304.92
1	7.083	103.083	307.21	306.55	306.55
1	7.167	103.167	308.88	308.21	308.21
1	7.250	103.250	310.57	309.89	309.89
1	7.333	103.333	312.28	311.59	311.59
1	7.417	103.417	314.02	313.32	313.32
1	7.500	103.500	315.78	315.07	315.07
1	7.583	103.583	317.57	316.85	316.85
1	7.667	103.667	319.39	318.65	318.65
1	7.750	103.750	321.23	320.48	320.48
1	7.833	103.833	323.10	322.34	322.34
1	7.917	103.917	325.00	324.23	324.23
1	8.000	104.000	326.93	326.15	326.15
1	8.083	104.083	328.89	328.10	328.10
1	8.167	104.167	330.88	330.08	330.08
1	8.250	104.250	332.91	332.09	332.09
1	8.333	104.333	334.96	334.13	334.13
1	8.417	104.417	337.05	336.21	336.21
1	8.500	104.500	339.17	338.31	338.31
1	8.583	104.583	341.33	340.46	340.46
1	8.667	104.667	343.53	342.64	342.64
1	8.750	104.750	345.76	344.85	344.85
1	8.833	104.833	348.03	347.11	347.11
1	8.917	104.917	350.33	349.40	349.40
1	9.000	105.000	352.68	351.73	351.73
1	9.083	105.083	355.07	354.11	354.11
1	9.167	105.167	357.51	356.52	356.52
1	9.250	105.250	359.99	358.98	358.98
1	9.333	105.333	362.51	361.49	361.49
1	9.417	105.417	365.08	364.04	364.04
1	9.500	105.500	367.70	366.64	366.64
1	9.583	105.583	370.37	369.29	369.29
1	9.667	105.667	373.09	371.99	371.99
1	9.750	105.750	375.86	374.74	374.74
1	9.833	105.833	378.68	377.54	377.54
1	9.917	105.917	381.57	380.40	380.40
1	10.000	106.000	384.51	383.32	383.32
1	10.083	106.083	387.51	386.30	386.30
1	10.167	106.167	390.57	389.33	389.33
1	10.250	106.250	393.70	392.44	392.44
1	10.333	106.333	396.89	395.60	395.60
1	10.417	106.417	400.16	398.84	398.84
1	10.500	106.500	403.49	402.14	402.14
1	10.583	106.583	406.90	405.52	405.52
1	10.667	106.667	410.38	408.97	408.97
1	10.750	106.750	413.94	412.50	412.50
1	10.833	106.833	417.58	416.11	416.11
1	10.917	106.917	421.31	419.81	419.81
1	11.000	107.000	425.13	423.59	423.59
1	11.083	107.083	429.04	427.46	427.46
1	11.167	107.167	433.04	431.42	431.42
1	11.250	107.250	437.15	435.49	435.49
1	11.333	107.333	441.35	439.65	439.65
1	11.417	107.417	445.67	443.92	443.92
1	11.500	107.500	450.10	448.31	448.31
1	11.583	107.583	454.64	452.80	452.80
1	11.667	107.667	459.31	457.42	457.42
1	11.750	107.750	464.10	462.16	462.16
1	11.833	107.833	469.03	467.04	467.04
1	11.917	107.917	474.10	472.05	472.05
1	12.000	108.000	479.31	477.20	477.20
1	12.083	108.083	485.37	482.93	482.93
1	12.167	108.167	494.23	490.68	490.68
1	12.250	108.250	506.44	501.54	501.54
1	12.333	108.333	520.77	515.00	515.00
1	12.417	108.417	537.57	530.80	530.80
1	12.500	108.500	561.09	551.64	551.64
1	12.583	108.583	593.56	580.52	580.52
1	12.667	108.667	622.58	610.81	610.81
1	12.750	108.750	642.01	634.06	634.06
1	12.833	108.833	658.20	651.61	651.61
1	12.917	108.917	672.86	666.92	666.92
1	13.000	109.000	686.55	681.00	681.00
1	13.083	109.083	699.69	694.37	694.37
1	13.167	109.167	712.40	707.25	707.25
1	13.250	109.250	723.54	719.02	719.02
1	13.333	109.333	732.38	728.78	728.78
1	13.417	109.417	741.50	737.81	737.81
1	13.500	109.500	753.77	748.84	748.84
1	13.583	109.583	768.89	762.80	762.80
1	13.667	109.667	786.54	779.42	779.42
1	13.750	109.750	805.74	797.99	797.99
1	13.833	109.833	823.68	816.41	816.41
1	13.917	109.917	838.64	832.56	832.56
1	14.000	110.000	853.62	847.56	847.56
1	14.083	110.083	871.63	864.37	864.37
1	14.167	110.167	892.96	884.36	884.36
1	14.250	110.250	915.89	906.63	906.63
1	14.333	110.333	939.57	930.00	930.00
1	14.417	110.417	966.45	955.61	955.61
1	14.500	110.500	996.42	984.33	984.33
1	14.583	110.583	1028.37	1015.47	1015.47
1	14.667	110.667	1064.89	1050.17	1050.17
1	14.750	110.750	1105.69	1089.23	1089.23
1	14.833	110.833	1145.60	1129.45	1129.45
1	14.917	110.917	1182.12	1167.32	1167.32
1	15.000	111.000	1218.32	1203.68	1203.68
1	15.083	111.083	1256.33	1240.98	1240.98
1	15.167	111.167	1294.98	1279.36	1279.36
1	15.250	111.250	1334.00	1318.22	1318.22

1	15.333	111.333	1374.33	1358.03	1358.03
1	15.417	111.417	1412.14	1396.82	1396.82
1	15.500	111.500	1441.26	1429.39	1429.39
1	15.583	111.583	1465.73	1455.78	1455.78
1	15.667	111.667	1494.22	1482.73	1482.73
1	15.750	111.750	1528.90	1514.94	1514.94
1	15.833	111.833	1568.97	1552.82	1552.82
1	15.917	111.917	1616.08	1597.09	1597.09
1	16.000	112.000	1681.69	1655.33	1655.33
1	16.083	112.083	1824.78	1767.67	1767.67
1	16.167	112.167	2058.29	1964.75	1964.75
1	16.250	112.250	2185.75	2133.16	2133.16
1	16.333	112.333	2109.12	2138.07	2138.07
1	16.417	112.417	1992.56	2039.26	2039.26
1	16.500	112.500	1984.17	1988.62	1988.62
1	16.583	112.583	2011.61	2000.89	2000.89
1	16.667	112.667	2031.25	2023.23	2023.23
1	16.750	112.750	2032.33	2031.71	2031.71
1	16.833	112.833	2028.67	2030.10	2030.10
1	16.917	112.917	2025.68	2026.89	2026.89
1	17.000	113.000	2022.71	2023.91	2023.91
1	17.083	113.083	2022.66	2022.71	2022.71
1	17.167	113.167	2022.85	2022.77	2022.77
1	17.250	113.250	2025.33	2024.35	2024.35
1	17.333	113.333	2026.91	2026.26	2026.26
1	17.417	113.417	2027.74	2027.40	2027.40
1	17.500	113.500	2027.06	2027.32	2027.32
1	17.583	113.583	2024.69	2025.63	2025.63
1	17.667	113.667	2020.58	2022.22	2022.22
1	17.750	113.750	2015.56	2017.58	2017.58
1	17.833	113.833	2008.42	2011.29	2011.29
1	17.917	113.917	2001.73	2004.44	2004.44
1	18.000	114.000	1993.84	1997.02	1997.02
1	18.083	114.083	1983.50	1987.66	1987.66
1	18.167	114.167	1972.95	1977.21	1977.21
1	18.250	114.250	1961.36	1966.03	1966.03
1	18.333	114.333	1949.13	1954.07	1954.07
1	18.417	114.417	1935.07	1940.74	1940.74
1	18.500	114.500	1923.88	1928.43	1928.43
1	18.583	114.583	1913.73	1917.85	1917.85
1	18.667	114.667	1903.77	1907.80	1907.80
1	18.750	114.750	1893.70	1897.77	1897.77
1	18.833	114.833	1883.58	1887.68	1887.68
1	18.917	114.917	1873.47	1877.56	1877.56
1	19.000	115.000	1863.56	1867.57	1867.57
1	19.083	115.083	1853.91	1857.82	1857.82
1	19.167	115.167	1844.37	1848.23	1848.23
1	19.250	115.250	1834.82	1838.68	1838.68
1	19.333	115.333	1824.87	1828.89	1828.89
1	19.417	115.417	1812.88	1817.71	1817.71
1	19.500	115.500	1797.10	1803.45	1803.45
1	19.583	115.583	1778.97	1786.28	1786.28
1	19.667	115.667	1759.77	1767.52	1767.52
1	19.750	115.750	1741.27	1748.76	1748.76
1	19.833	115.833	1723.30	1730.57	1730.57
1	19.917	115.917	1705.09	1712.45	1712.45
1	20.000	116.000	1686.67	1694.12	1694.12
1	20.083	116.083	1668.26	1675.71	1675.71
1	20.167	116.167	1649.91	1657.33	1657.33
1	20.250	116.250	1631.34	1638.85	1638.85
1	20.333	116.333	1612.25	1619.97	1619.97
1	20.417	116.417	1592.95	1600.76	1600.76
1	20.500	116.500	1573.82	1581.56	1581.56
1	20.583	116.583	1554.83	1562.51	1562.51
1	20.667	116.667	1535.70	1543.44	1543.44
1	20.750	116.750	1516.16	1524.06	1524.06
1	20.833	116.833	1496.50	1504.45	1504.45
1	20.917	116.917	1477.03	1484.91	1484.91
1	21.000	117.000	1457.69	1465.52	1465.52
1	21.083	117.083	1437.67	1445.76	1445.76
1	21.167	117.167	1415.84	1424.65	1424.65
1	21.250	117.250	1392.94	1402.19	1402.19
1	21.333	117.333	1370.31	1379.47	1379.47
1	21.417	117.417	1346.92	1356.37	1356.37
1	21.500	117.500	1318.34	1329.85	1329.85
1	21.583	117.583	1282.24	1296.77	1296.77
1	21.667	117.667	1242.79	1258.71	1258.71
1	21.750	117.750	1202.39	1218.72	1218.72
1	21.833	117.833	1161.02	1177.74	1177.74
1	21.917	117.917	1119.00	1135.99	1135.99
1	22.000	118.000	1072.64	1091.35	1091.35
1	22.083	118.083	1020.61	1041.59	1041.59
1	22.167	118.167	962.68	986.05	986.05
1	22.250	118.250	855.53	898.38	898.38
1	22.333	118.333	611.37	708.76	708.76
1	22.417	118.417	331.84	444.52	444.52
1	22.500	118.500	269.90	297.10	297.10
1	22.583	118.583	283.39	278.73	278.73
1	22.667	118.667	268.43	274.22	274.22
1	22.750	118.750	273.87	271.87	271.87
1	22.833	118.833	266.39	269.29	269.29
1	22.917	118.917	267.38	267.06	267.06
1	23.000	119.000	262.97	264.70	264.70
1	23.083	119.083	262.14	262.51	262.51
1	23.167	119.167	259.07	260.29	260.29
1	23.250	119.250	257.54	258.17	258.17
1	23.333	119.333	255.08	256.07	256.07
1	23.417	119.417	253.30	254.03	254.03
1	23.500	119.500	251.15	252.01	252.01
1	23.583	119.583	249.30	250.05	250.05
1	23.667	119.667	247.33	248.12	248.12
1	23.750	119.750	245.50	246.24	246.24
1	23.833	119.833	243.63	244.39	244.39
1	23.917	119.917	241.85	242.58	242.58
1	24.000	120.000	240.08	240.80	240.80
1	24.083	120.083	237.32	238.43	238.43
1	24.167	120.167	230.75	233.37	233.37
1	24.250	120.250	219.75	224.15	224.15
1	24.333	120.333	206.29	211.71	211.71
1	24.417	120.417	189.98	196.55	196.55
1	24.500	120.500	164.90	174.96	174.96
1	24.583	120.583	128.04	142.83	142.83
1	24.667	120.667	96.60	109.37	109.37
1	24.750	120.750	78.98	86.24	86.24
1	24.833	120.833	66.34	71.50	71.50
1	24.917	120.917	56.26	60.36	60.36
1	25.000	121.000	48.01	51.37	51.37
1	25.083	121.083	41.05	43.88	43.88
1	25.167	121.167	35.02	37.46	37.46
1	25.250	121.250	29.89	31.97	31.97
1	25.333	121.333	25.49	27.27	27.27
1	25.417	121.417	21.71	23.24	23.24
1	25.500	121.500	18.27	19.66	19.66
1	25.583	121.583	15.34	16.53	16.53
1	25.667	121.667	12.84	13.86	13.86
1	25.750	121.750	10.72	11.58	11.58
1	25.833	121.833	8.99	9.69	9.69
1	25.917	121.917	7.61	8.17	8.17
1	26.000	122.000	6.33	6.85	6.85
1	26.083	122.083	5.25	5.69	5.69
1	26.167	122.167	4.71	4.93	4.93
1	26.250	122.250	4.43	4.54	4.54
1	26.333	122.333	4.15	4.26	4.26
1	26.417	122.417	3.91	4.01	4.01

```
  1   26.500 122.500         3.68        3.77        3.77
  1   26.583 122.583         3.45        3.54        3.54
  1   26.667 122.667         3.22        3.32        3.32
  1   26.750 122.750         3.00        3.09        3.09
  1   26.833 122.833         2.78        2.87        2.87
  1   26.917 122.917         2.55        2.64        2.64
  1   27.000 123.000         2.33        2.42        2.42
  1   27.083 123.083         2.11        2.20        2.20
  1   27.167 123.167         1.90        1.99        1.99
  1   27.250 123.250         1.68        1.77        1.77
  1   27.333 123.333         1.47        1.55        1.55
  1   27.417 123.417         1.25        1.34        1.34
  1   27.500 123.500         1.04        1.13        1.13
  1   27.583 123.583         0.83        0.92        0.92
  1   27.667 123.667         0.63        0.71        0.71
  1   27.750 123.750         0.44        0.52        0.52
  1   27.833 123.833         0.25        0.33        0.33
  1   27.917 123.917         0.08        0.15        0.15
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
================================================================================
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   2117.106 AF
    OUTFLOW VOLUME =   2117.107 AF
    LOSS    VOLUME =      0.000 AF
================================================================================



********************************************************************************
  FLOW PROCESS FROM NODE   6320.00 TO NODE   6330.00 IS CODE =   1
--------------------------------------------------------------------------------

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of   300.7 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
================================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #2)

         WATERSHED AREA =     300.700 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.290 HOURS
          CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
          THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
          MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.250
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.750
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:
         +------------------+--------+--------+--------+--------+--------+
         | RAINFALL DEPTHS & |        |        |        |        |        |
         |    LOSS RATES     |  DAY 1 |  DAY 2 |  DAY 3 |  DAY 4 |  DAY 5 |
         |==================+========+========+========+========+========|
         | 5-MINUTE (INCHES) |    0.58|    0.27|    0.12|    0.06|    0.04|
         |30-MINUTE (INCHES) |    1.22|    0.56|    0.24|    0.13|    0.09|
         |   1-HOUR (INCHES) |    1.62|    0.75|    0.33|    0.17|    0.12|
         |   3-HOUR (INCHES) |    2.71|    1.25|    0.54|    0.28|    0.21|
         |   6-HOUR (INCHES) |    3.75|    1.73|    0.75|    0.39|    0.29|
         |  24-HOUR (INCHES) |    6.28|    2.89|    1.26|    0.66|    0.48|
         |==================+========+========+========+========+========|
         | LOSS RATE(IN/HR)  |   0.240|   0.240|   0.240|   0.240|   0.240|
         | LOW LOSS FRACTION |   0.430|   0.670|   0.900|   0.990|   0.990|
         +------------------+--------+--------+--------+--------+--------+
           5-MINUTE FACTOR = 0.987
          30-MINUTE FACTOR = 0.987
           1-HOUR FACTOR = 0.987
           3-HOUR FACTOR = 0.998
           6-HOUR FACTOR = 0.999
          24-HOUR FACTOR = 0.999

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  28.736


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  96.00
         MODEL TIME(HOURS) FOR END OF RESULTS = 124.00


================================================================================
                        UNIT HYDROGRAPH DETERMINATION

--------------------------------------------------------------------------------
     INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
      NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------------
         1                3.181               115.682
         2               14.148               398.807
         3               32.649               672.813
         4               49.391               608.859
         5               59.445               365.623
         6               65.754               229.414
         7               70.572               175.227
         8               74.508               143.109
         9               77.679               115.331
        10               80.307                95.584
        11               82.561                81.961
        12               84.486                69.998
        13               86.124                59.571
        14               87.475                49.137
        15               88.623                41.748
        16               89.558                33.981
        17               90.435                31.907
        18               91.248                29.581
        19               92.036                28.658
        20               92.761                26.336
        21               93.465                25.630
        22               94.104                23.223
        23               94.697                21.573
        24               95.280                21.195
        25               95.767                17.699
        26               96.231                16.876
        27               96.695                16.868
        28               97.112                15.192
        29               97.431                11.595
        30               97.741                11.275
        31               98.051                11.279
        32               98.361                11.271
        33               98.547                 6.740
        34               98.632                 3.085
        35               98.716                 3.070
        36               98.801                 3.077
        37               98.885                 3.077
        38               98.970                 3.077
        39               99.054                 3.077
        40               99.139                 3.077
        41               99.224                 3.085
        42               99.308                 3.070
        43               99.393                 3.070
```

44	99.477	3.070
45	99.562	3.070
46	99.646	3.070
47	99.730	3.070
48	99.815	3.070
49	99.899	3.070
50	99.984	3.070
51	100.000	0.594

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 150.1466
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 139.5311

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5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	175.0	350.0	525.0	700.0
96.000	37.7332	4.73	Q	V	.	.	.
(PEAK DAY 2, HOUR 24.000)							
96.083	37.7682	5.09	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.083)							
96.167	37.8124	6.41	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.167)							
96.250	37.8721	8.68	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.250)							
96.333	37.9461	10.74	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.333)							
96.417	38.0287	11.99	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.417)							
96.500	38.1168	12.79	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.500)							
96.583	38.2091	13.41	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.583)							
96.667	38.3050	13.93	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.667)							
96.750	38.4039	14.35	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.750)							
96.833	38.5052	14.71	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.833)							
96.917	38.6087	15.03	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.917)							
97.000	38.7141	15.31	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.000)							
97.083	38.8213	15.56	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.083)							
97.167	38.9299	15.77	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.167)							
97.250	39.0398	15.96	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.250)							
97.333	39.1508	16.12	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.333)							
97.417	39.2630	16.28	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.417)							
97.500	39.3762	16.44	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.500)							
97.583	39.4904	16.59	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.583)							
97.667	39.6056	16.73	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.667)							
97.750	39.7218	16.87	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.750)							
97.833	39.8390	17.01	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.833)							
97.917	39.9570	17.14	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.917)							
98.000	40.0760	17.27	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.000)							
98.083	40.1957	17.39	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.083)							
98.167	40.3163	17.51	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.167)							
98.250	40.4377	17.63	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.250)							
98.333	40.5599	17.74	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.333)							
98.417	40.6829	17.85	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.417)							
98.500	40.8065	17.95	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.500)							
98.583	40.9308	18.06	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.583)							
98.667	41.0559	18.16	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.667)							
98.750	41.1816	18.25	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.750)							
98.833	41.3079	18.33	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.833)							
98.917	41.4347	18.41	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.917)							
99.000	41.5620	18.49	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.000)							
99.083	41.6899	18.57	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.083)							
99.167	41.8184	18.66	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.167)							
99.250	41.9475	18.74	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.250)							
99.333	42.0771	18.82	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.333)							
99.417	42.2074	18.91	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.417)							
99.500	42.3382	18.99	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.500)							
99.583	42.4696	19.08	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.583)							
99.667	42.6016	19.17	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.667)							
99.750	42.7342	19.26	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.750)							
99.833	42.8675	19.35	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.833)							
99.917	43.0013	19.44	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.917)							
100.000	43.1358	19.53	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.000)							
100.083	43.2709	19.62	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.083)							
100.167	43.4067	19.71	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.167)							
100.250	43.5431	19.80	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.250)							
100.333	43.6800	19.88	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.333)							
100.417	43.8175	19.97	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.417)							
100.500	43.9556	20.06	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.500)							
100.583	44.0944	20.14	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.583)							
100.667	44.2337	20.23	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.667)							
100.750	44.3737	20.32	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.750)							
100.833	44.5142	20.41	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.833)							
100.917	44.6554	20.50	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.917)							
101.000	44.7973	20.60	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 5.000)							
101.083	44.9398	20.69	.Q	. V	.	.	.

(PEAK DAY 1, HOUR 5.083)
101.167 45.0829 20.78 .Q . V . . .
(PEAK DAY 1, HOUR 5.167)
101.250 45.2267 20.88 .Q . V . . .
(PEAK DAY 1, HOUR 5.250)
101.333 45.3712 20.98 .Q . V . . .
(PEAK DAY 1, HOUR 5.333)
101.417 45.5163 21.08 .Q . V . . .
(PEAK DAY 1, HOUR 5.417)
101.500 45.6622 21.18 .Q . V . . .
(PEAK DAY 1, HOUR 5.500)
101.583 45.8087 21.28 .Q . V . . .
(PEAK DAY 1, HOUR 5.583)
101.667 45.9559 21.38 .Q . V . . .
(PEAK DAY 1, HOUR 5.667)
101.750 46.1039 21.48 .Q . V . . .
(PEAK DAY 1, HOUR 5.750)
101.833 46.2525 21.59 .Q . V . . .
(PEAK DAY 1, HOUR 5.833)
101.917 46.4019 21.69 .Q . V . . .
(PEAK DAY 1, HOUR 5.917)
102.000 46.5520 21.80 .Q . V . . .
(PEAK DAY 1, HOUR 6.000)
102.083 46.7029 21.91 .Q . V . . .
(PEAK DAY 1, HOUR 6.083)
102.167 46.8546 22.02 .Q . V . . .
(PEAK DAY 1, HOUR 6.167)
102.250 47.0070 22.13 .Q . V . . .
(PEAK DAY 1, HOUR 6.250)
102.333 47.1602 22.24 .Q . V . . .
(PEAK DAY 1, HOUR 6.333)
102.417 47.3141 22.36 .Q . V . . .
(PEAK DAY 1, HOUR 6.417)
102.500 47.4689 22.47 .Q . V . . .
(PEAK DAY 1, HOUR 6.500)
102.583 47.6245 22.59 .Q . V . . .
(PEAK DAY 1, HOUR 6.583)
102.667 47.7809 22.71 .Q . V . . .
(PEAK DAY 1, HOUR 6.667)
102.750 47.9381 22.83 .Q . V . . .
(PEAK DAY 1, HOUR 6.750)
102.833 48.0962 22.95 .Q . V . . .
(PEAK DAY 1, HOUR 6.833)
102.917 48.2552 23.08 .Q . V . . .
(PEAK DAY 1, HOUR 6.917)
103.000 48.4150 23.20 .Q . V . . .
(PEAK DAY 1, HOUR 7.000)
103.083 48.5757 23.33 .Q . V . . .
(PEAK DAY 1, HOUR 7.083)
103.167 48.7373 23.46 .Q . V . . .
(PEAK DAY 1, HOUR 7.167)
103.250 48.8998 23.59 .Q . V . . .
(PEAK DAY 1, HOUR 7.250)
103.333 49.0632 23.73 .Q . V . . .
(PEAK DAY 1, HOUR 7.333)
103.417 49.2275 23.86 .Q . V . . .
(PEAK DAY 1, HOUR 7.417)
103.500 49.3928 24.00 .Q . V . . .
(PEAK DAY 1, HOUR 7.500)
103.583 49.5591 24.14 .Q . V . . .
(PEAK DAY 1, HOUR 7.583)
103.667 49.7263 24.28 .Q . V . . .
(PEAK DAY 1, HOUR 7.667)
103.750 49.8946 24.43 .Q . V . . .
(PEAK DAY 1, HOUR 7.750)
103.833 50.0638 24.57 .Q . V . . .
(PEAK DAY 1, HOUR 7.833)
103.917 50.2341 24.72 .Q . V . . .
(PEAK DAY 1, HOUR 7.917)
104.000 50.4054 24.87 .Q . V . . .
(PEAK DAY 1, HOUR 8.000)
104.083 50.5777 25.03 .Q . V . . .
(PEAK DAY 1, HOUR 8.083)
104.167 50.7512 25.18 .Q . V . . .
(PEAK DAY 1, HOUR 8.167)
104.250 50.9257 25.34 .Q . V . . .
(PEAK DAY 1, HOUR 8.250)
104.333 51.1013 25.50 .Q . V . . .
(PEAK DAY 1, HOUR 8.333)
104.417 51.2781 25.67 .Q . V . . .
(PEAK DAY 1, HOUR 8.417)
104.500 51.4560 25.83 .Q . V . . .
(PEAK DAY 1, HOUR 8.500)
104.583 51.6351 26.00 .Q . V . . .
(PEAK DAY 1, HOUR 8.583)
104.667 51.8154 26.17 .Q . V . . .
(PEAK DAY 1, HOUR 8.667)
104.750 51.9968 26.35 .Q . V . . .
(PEAK DAY 1, HOUR 8.750)
104.833 52.1795 26.53 .Q . V . . .
(PEAK DAY 1, HOUR 8.833)
104.917 52.3635 26.71 .Q . V . . .
(PEAK DAY 1, HOUR 8.917)
105.000 52.5487 26.90 .Q . V . . .
(PEAK DAY 1, HOUR 9.000)
105.083 52.7353 27.08 .Q . V . . .
(PEAK DAY 1, HOUR 9.083)
105.167 52.9231 27.28 .Q . V . . .
(PEAK DAY 1, HOUR 9.167)
105.250 53.1123 27.47 .Q . V . . .
(PEAK DAY 1, HOUR 9.250)
105.333 53.3029 27.67 .Q . V . . .
(PEAK DAY 1, HOUR 9.333)
105.417 53.4948 27.87 .Q . V . . .
(PEAK DAY 1, HOUR 9.417)
105.500 53.6882 28.08 .Q . V . . .
(PEAK DAY 1, HOUR 9.500)
105.583 53.8830 28.29 .Q . V . . .
(PEAK DAY 1, HOUR 9.583)
105.667 54.0794 28.51 .Q . V . . .
(PEAK DAY 1, HOUR 9.667)
105.750 54.2772 28.72 .Q . V . . .
(PEAK DAY 1, HOUR 9.750)
105.833 54.4766 28.95 .Q . V . . .
(PEAK DAY 1, HOUR 9.833)
105.917 54.6775 29.18 .Q . V . . .
(PEAK DAY 1, HOUR 9.917)
106.000 54.8800 29.41 .Q . V . . .
(PEAK DAY 1, HOUR 10.000)
106.083 55.0842 29.65 .Q . V . . .
(PEAK DAY 1, HOUR 10.083)
106.167 55.2901 29.89 .Q . V . . .
(PEAK DAY 1, HOUR 10.167)
106.250 55.4977 30.14 .Q . V . . .
(PEAK DAY 1, HOUR 10.250)
106.333 55.7070 30.39 .Q . V . . .
(PEAK DAY 1, HOUR 10.333)
106.417 55.9181 30.65 .Q . V . . .
(PEAK DAY 1, HOUR 10.417)
106.500 56.1310 30.92 .Q . V . . .
(PEAK DAY 1, HOUR 10.500)
106.583 56.3458 31.19 .Q . V . . .
(PEAK DAY 1, HOUR 10.583)
106.667 56.5625 31.47 .Q . V . . .

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(PEAK DAY 1, HOUR  10.667)
106.750     56.7812     31.75  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.750)
106.833     57.0019     32.04  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.833)
106.917     57.2246     32.34  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.917)
107.000     57.4494     32.65  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.000)
107.083     57.6764     32.96  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.083)
107.167     57.9056     33.28  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.167)
107.250     58.1371     33.61  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.250)
107.333     58.3709     33.95  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.333)
107.417     58.6071     34.29  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.417)
107.500     58.8457     34.65  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.500)
107.583     59.0869     35.02  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  11.583)
107.667     59.3307     35.39  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.667)
107.750     59.5771     35.78  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.750)
107.833     59.8263     36.18  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.833)
107.917     60.0783     36.59  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.917)
108.000     60.3332     37.01  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.000)
108.083     60.5935     37.79  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.083)
108.167     60.8648     39.40  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.167)
108.250     61.1528     41.82  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.250)
108.333     61.4563     44.08  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.333)
108.417     61.7707     45.65  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.417)
108.500     62.0934     46.85  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.500)
108.583     62.4233     47.91  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.583)
108.667     62.7601     48.90  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.667)
108.750     63.1033     49.83  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  12.750)
108.833     63.4526     50.72  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  12.833)
108.917     63.8080     51.60  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  12.917)
109.000     64.1694     52.47  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  13.000)
109.083     64.5367     53.33  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.083)
109.167     64.9099     54.19  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.167)
109.250     65.2892     55.06  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.250)
109.333     65.6744     55.94  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.333)
109.417     66.0659     56.85  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.417)
109.500     66.4638     57.78  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.500)
109.583     66.8684     58.75  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.583)
109.667     67.2799     59.75  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.667)
109.750     67.6986     60.80  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.750)
109.833     68.1248     61.88  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.833)
109.917     68.5588     63.01  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.917)
110.000     69.0009     64.20  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  14.000)
110.083     69.4519     65.49  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  14.083)
110.167     69.9129     66.94  .  Q      .        V          .         .
(PEAK DAY 1, HOUR  14.167)
110.250     70.3852     68.57  .  Q      .        V          .         .
(PEAK DAY 1, HOUR  14.250)
110.333     70.8690     70.25  .   Q     .        V          .         .
(PEAK DAY 1, HOUR  14.333)
110.417     71.3644     71.93  .   Q     .        V          .         .
(PEAK DAY 1, HOUR  14.417)
110.500     71.8716     73.65  .   Q     .        V          .         .
(PEAK DAY 1, HOUR  14.500)
110.583     72.3913     75.46  .   Q     .        V          .         .
(PEAK DAY 1, HOUR  14.583)
110.667     72.9242     77.39  .   Q     .        V          .         .
(PEAK DAY 1, HOUR  14.667)
110.750     73.4713     79.44  .   Q     .        .V         .         .
(PEAK DAY 1, HOUR  14.750)
110.833     74.0334     81.62  .   Q     .        .V         .         .
(PEAK DAY 1, HOUR  14.833)
110.917     74.6125     84.08  .   Q     .        .V         .         .
(PEAK DAY 1, HOUR  14.917)
111.000     75.2118     87.01  .   Q     .        .V         .         .
(PEAK DAY 1, HOUR  15.000)
111.083     75.8365     90.71  .    Q    .        .V         .         .
(PEAK DAY 1, HOUR  15.083)
111.167     76.4923     95.22  .    Q    .        .V         .         .
(PEAK DAY 1, HOUR  15.167)
111.250     77.1851    100.60  .    Q    .        . V        .         .
(PEAK DAY 1, HOUR  15.250)
111.333     77.9209    106.84  .     Q   .        . V        .         .
(PEAK DAY 1, HOUR  15.333)
111.417     78.6996    113.06  .     Q   .        . V        .         .
(PEAK DAY 1, HOUR  15.417)
111.500     79.5111    117.83  .     Q   .        . V        .         .
(PEAK DAY 1, HOUR  15.500)
111.583     80.3491    121.68  .     Q   .        .  V       .         .
(PEAK DAY 1, HOUR  15.583)
111.667     81.2314    128.10  .      Q  .        .  V       .         .
(PEAK DAY 1, HOUR  15.667)
111.750     82.1957    140.01  .       Q .        .  V       .         .
(PEAK DAY 1, HOUR  15.750)
111.833     83.2834    157.93  .        Q.        .  V       .         .
(PEAK DAY 1, HOUR  15.833)
111.917     84.5593    185.26  .         Q        .   V      .         .
(PEAK DAY 1, HOUR  15.917)
112.000     86.1399    229.51  .          . Q     .   V      .         .
(PEAK DAY 1, HOUR  16.000)
112.083     88.4661    337.76  .          .       Q.   V     .         .
(PEAK DAY 1, HOUR  16.083)
112.167     91.9571    506.90  .          .        .    V Q  .         .
(PEAK DAY 1, HOUR  16.167)
112.250     96.3002    630.61  .          .        .     V   .     Q   .
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(PEAK DAY 1, HOUR  16.250)
112.333    100.2459    572.92  .         .         .       V . Q       .
(PEAK DAY 1, HOUR  16.333)
112.417    103.1874    427.11  .         .         .   Q    V.         .
(PEAK DAY 1, HOUR  16.417)
112.500    105.4805    332.96  .         .        Q.         V         .
(PEAK DAY 1, HOUR  16.500)
112.583    107.4393    284.42  .         .     Q   .         V         .
(PEAK DAY 1, HOUR  16.583)
112.667    109.1666    250.80  .         .   Q     .         .V        .
(PEAK DAY 1, HOUR  16.667)
112.750    110.6897    221.16  .         . Q       .         .V        .
(PEAK DAY 1, HOUR  16.750)
112.833    112.0484    197.28  .         .Q        .         . V       .
(PEAK DAY 1, HOUR  16.833)
112.917    113.2786    178.63  .         Q         .         . V       .
(PEAK DAY 1, HOUR  16.917)
113.000    114.3999    162.81  .        Q.         .         . V       .
(PEAK DAY 1, HOUR  17.000)
113.083    115.4265    149.07  .       Q .         .         .  V      .
(PEAK DAY 1, HOUR  17.083)
113.167    116.3665    136.48  .      Q  .         .         .  V      .
(PEAK DAY 1, HOUR  17.167)
113.250    117.2360    126.24  .      Q  .         .         .  V      .
(PEAK DAY 1, HOUR  17.250)
113.333    118.0425    117.11  .     Q   .         .         .  V      .
(PEAK DAY 1, HOUR  17.333)
113.417    118.8097    111.40  .     Q   .         .         .   V     .
(PEAK DAY 1, HOUR  17.417)
113.500    119.5417    106.29  .     Q   .         .         .   V     .
(PEAK DAY 1, HOUR  17.500)
113.583    120.2453    102.15  .    Q    .         .         .   V     .
(PEAK DAY 1, HOUR  17.583)
113.667    120.9185     97.75  .    Q    .         .         .   V     .
(PEAK DAY 1, HOUR  17.667)
113.750    121.5674     94.22  .    Q    .         .         .   V     .
(PEAK DAY 1, HOUR  17.750)
113.833    122.1886     90.20  .    Q    .         .         .    V    .
(PEAK DAY 1, HOUR  17.833)
113.917    122.7854     86.66  .   Q     .         .         .    V    .
(PEAK DAY 1, HOUR  17.917)
114.000    123.3617     83.68  .   Q     .         .         .    V    .
(PEAK DAY 1, HOUR  18.000)
114.083    123.9081     79.33  .   Q     .         .         .    V    .
(PEAK DAY 1, HOUR  18.083)
114.167    124.4278     75.48  .   Q     .         .         .    V    .
(PEAK DAY 1, HOUR  18.167)
114.250    124.9180     71.17  .   Q     .         .         .    V    .
(PEAK DAY 1, HOUR  18.250)
114.333    125.3749     66.35  .  Q      .         .         .    V    .
(PEAK DAY 1, HOUR  18.333)
114.417    125.7995     61.64  .  Q      .         .         .     V   .
(PEAK DAY 1, HOUR  18.417)
114.500    126.2051     58.90  .  Q      .         .         .     V   .
(PEAK DAY 1, HOUR  18.500)
114.583    126.5940     56.47  .  Q      .         .         .     V   .
(PEAK DAY 1, HOUR  18.583)
114.667    126.9651     53.89  .  Q      .         .         .     V   .
(PEAK DAY 1, HOUR  18.667)
114.750    127.3064     49.55  . Q       .         .         .     V   .
(PEAK DAY 1, HOUR  18.750)
114.833    127.6234     46.02  . Q       .         .         .     V   .
(PEAK DAY 1, HOUR  18.833)
114.917    127.9294     44.44  . Q       .         .         .     V   .
(PEAK DAY 1, HOUR  18.917)
115.000    128.2266     43.15  . Q       .         .         .     V   .
(PEAK DAY 1, HOUR  19.000)
115.083    128.5158     41.99  . Q       .         .         .     V   .
(PEAK DAY 1, HOUR  19.083)
115.167    128.7977     40.93  . Q       .         .         .     V   .
(PEAK DAY 1, HOUR  19.167)
115.250    129.0729     39.96  . Q       .         .         .      V  .
(PEAK DAY 1, HOUR  19.250)
115.333    129.3420     39.07  . Q       .         .         .      V  .
(PEAK DAY 1, HOUR  19.333)
115.417    129.6053     38.24  . Q       .         .         .      V  .
(PEAK DAY 1, HOUR  19.417)
115.500    129.8631     37.43  . Q       .         .         .      V  .
(PEAK DAY 1, HOUR  19.500)
115.583    130.1157     36.68  . Q       .         .         .      V  .
(PEAK DAY 1, HOUR  19.583)
115.667    130.3634     35.96  . Q       .         .         .      V  .
(PEAK DAY 1, HOUR  19.667)
115.750    130.6062     35.25  . Q       .         .         .      V  .
(PEAK DAY 1, HOUR  19.750)
115.833    130.8441     34.56  .Q        .         .         .      V  .
(PEAK DAY 1, HOUR  19.833)
115.917    131.0773     33.85  .Q        .         .         .      V  .
(PEAK DAY 1, HOUR  19.917)
116.000    131.3054     33.13  .Q        .         .         .      V  .
(PEAK DAY 1, HOUR  20.000)
116.083    131.5281     32.33  .Q        .         .         .      V  .
(PEAK DAY 1, HOUR  20.083)
116.167    131.7443     31.40  .Q        .         .         .      V  .
(PEAK DAY 1, HOUR  20.167)
116.250    131.9476     29.51  .Q        .         .         .      V  .
(PEAK DAY 1, HOUR  20.250)
116.333    132.1442     28.55  .Q        .         .         .      V  .
(PEAK DAY 1, HOUR  20.333)
116.417    132.3369     27.98  .Q        .         .         .      V  .
(PEAK DAY 1, HOUR  20.417)
116.500    132.5261     27.48  .Q        .         .         .      V  .
(PEAK DAY 1, HOUR  20.500)
116.583    132.7121     27.00  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  20.583)
116.667    132.8950     26.56  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  20.667)
116.750    133.0751     26.15  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  20.750)
116.833    133.2526     25.78  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  20.833)
116.917    133.4277     25.42  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  20.917)
117.000    133.6004     25.08  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  21.000)
117.083    133.7708     24.75  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  21.083)
117.167    133.9391     24.43  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  21.167)
117.250    134.1053     24.13  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  21.250)
117.333    134.2694     23.83  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  21.333)
117.417    134.4316     23.55  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  21.417)
117.500    134.5918     23.27  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  21.500)
117.583    134.7503     23.00  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  21.583)
117.667    134.9069     22.74  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  21.667)
117.750    135.0618     22.49  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  21.750)
117.833    135.2150     22.25  .Q        .         .         .       V .
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(PEAK DAY 1, HOUR 21.833)
117.917 135.3666 22.01 .Q . . . V .
(PEAK DAY 1, HOUR 21.917)
118.000 135.5165 21.77 .Q . . . V .
(PEAK DAY 1, HOUR 22.000)
118.083 135.6649 21.55 .Q . . . V .
(PEAK DAY 1, HOUR 22.083)
118.167 135.8118 21.33 .Q . . . V .
(PEAK DAY 1, HOUR 22.167)
118.250 135.9573 21.12 .Q . . . V .
(PEAK DAY 1, HOUR 22.250)
118.333 136.1014 20.92 .Q . . . V.
(PEAK DAY 1, HOUR 22.333)
118.417 136.2441 20.73 .Q . . . V.
(PEAK DAY 1, HOUR 22.417)
118.500 136.3856 20.54 .Q . . . V.
(PEAK DAY 1, HOUR 22.500)
118.583 136.5257 20.35 .Q . . . V.
(PEAK DAY 1, HOUR 22.583)
118.667 136.6646 20.17 .Q . . . V.
(PEAK DAY 1, HOUR 22.667)
118.750 136.8023 19.99 .Q . . . V.
(PEAK DAY 1, HOUR 22.750)
118.833 136.9388 19.82 .Q . . . V.
(PEAK DAY 1, HOUR 22.833)
118.917 137.0741 19.65 .Q . . . V.
(PEAK DAY 1, HOUR 22.917)
119.000 137.2083 19.48 .Q . . . V.
(PEAK DAY 1, HOUR 23.000)
119.083 137.3414 19.32 .Q . . . V.
(PEAK DAY 1, HOUR 23.083)
119.167 137.4734 19.16 .Q . . . V.
(PEAK DAY 1, HOUR 23.167)
119.250 137.6043 19.01 .Q . . . V.
(PEAK DAY 1, HOUR 23.250)
119.333 137.7341 18.86 .Q . . . V.
(PEAK DAY 1, HOUR 23.333)
119.417 137.8630 18.71 .Q . . . V.
(PEAK DAY 1, HOUR 23.417)
119.500 137.9908 18.56 .Q . . . V.
(PEAK DAY 1, HOUR 23.500)
119.583 138.1177 18.42 .Q . . . V.
(PEAK DAY 1, HOUR 23.583)
119.667 138.2436 18.28 .Q . . . V.
(PEAK DAY 1, HOUR 23.667)
119.750 138.3686 18.15 .Q . . . V.
(PEAK DAY 1, HOUR 23.750)
119.833 138.4927 18.01 .Q . . . V.
(PEAK DAY 1, HOUR 23.833)
119.917 138.6158 17.88 .Q . . . V.
(PEAK DAY 1, HOUR 23.917)
120.000 138.7381 17.75 .Q . . . V.
(PEAK DAY 1, HOUR 24.000)
120.083 138.8558 17.09 Q . . . V.
(PEAK DAY 1, HOUR 24.083)
120.167 138.9599 15.13 Q . . . V.
(PEAK DAY 1, HOUR 24.167)
120.250 139.0420 11.91 Q . . . V.
(PEAK DAY 1, HOUR 24.250)
120.333 139.1041 9.02 Q . . . V.
(PEAK DAY 1, HOUR 24.333)
120.417 139.1541 7.26 Q . . . V.
(PEAK DAY 1, HOUR 24.417)
120.500 139.1965 6.15 Q . . . V.
(PEAK DAY 1, HOUR 24.500)
120.583 139.2330 5.30 Q . . . V.
(PEAK DAY 1, HOUR 24.583)
120.667 139.2646 4.60 Q . . . V.
(PEAK DAY 1, HOUR 24.667)
120.750 139.2924 4.03 Q . . . V.
(PEAK DAY 1, HOUR 24.750)
120.833 139.3169 3.56 Q . . . V.
(PEAK DAY 1, HOUR 24.833)
120.917 139.3386 3.15 Q . . . V.
(PEAK DAY 1, HOUR 24.917)
121.000 139.3580 2.81 Q . . . V.
(PEAK DAY 1, HOUR 25.000)
121.083 139.3753 2.51 Q . . . V.
(PEAK DAY 1, HOUR 25.083)
121.167 139.3909 2.27 Q . . . V.
(PEAK DAY 1, HOUR 25.167)
121.250 139.4051 2.06 Q . . . V.
(PEAK DAY 1, HOUR 25.250)
121.333 139.4180 1.89 Q . . . V.
(PEAK DAY 1, HOUR 25.333)
121.417 139.4299 1.72 Q . . . V.
(PEAK DAY 1, HOUR 25.417)
121.500 139.4408 1.58 Q . . . V.
(PEAK DAY 1, HOUR 25.500)
121.583 139.4506 1.43 Q . . . V.
(PEAK DAY 1, HOUR 25.583)
121.667 139.4596 1.30 Q . . . V.
(PEAK DAY 1, HOUR 25.667)
121.750 139.4676 1.17 Q . . . V.
(PEAK DAY 1, HOUR 25.750)
121.833 139.4749 1.06 Q . . . V.
(PEAK DAY 1, HOUR 25.833)
121.917 139.4814 0.95 Q . . . V.
(PEAK DAY 1, HOUR 25.917)
122.000 139.4873 0.84 Q . . . V.
(PEAK DAY 1, HOUR 26.000)
122.083 139.4925 0.76 Q . . . V.
(PEAK DAY 1, HOUR 26.083)
122.167 139.4971 0.67 Q . . . V.
(PEAK DAY 1, HOUR 26.167)
122.250 139.5012 0.59 Q . . . V.
(PEAK DAY 1, HOUR 26.250)
122.333 139.5047 0.52 Q . . . V.
(PEAK DAY 1, HOUR 26.333)
122.417 139.5079 0.46 Q . . . V.
(PEAK DAY 1, HOUR 26.417)
122.500 139.5107 0.40 Q . . . V.
(PEAK DAY 1, HOUR 26.500)
122.583 139.5130 0.35 Q . . . V.
(PEAK DAY 1, HOUR 26.583)
122.667 139.5151 0.29 Q . . . V.
(PEAK DAY 1, HOUR 26.667)
122.750 139.5168 0.26 Q . . . V.
(PEAK DAY 1, HOUR 26.750)
122.833 139.5185 0.24 Q . . . V.
(PEAK DAY 1, HOUR 26.833)
122.917 139.5201 0.23 Q . . . V.
(PEAK DAY 1, HOUR 26.917)
123.000 139.5216 0.21 Q . . . V.
(PEAK DAY 1, HOUR 27.000)
123.083 139.5229 0.20 Q . . . V.
(PEAK DAY 1, HOUR 27.083)
123.167 139.5242 0.18 Q . . . V.
(PEAK DAY 1, HOUR 27.167)
123.250 139.5253 0.17 Q . . . V.
(PEAK DAY 1, HOUR 27.250)
123.333 139.5264 0.15 Q . . . V.
(PEAK DAY 1, HOUR 27.333)
123.417 139.5273 0.13 Q . . . V.

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 (PEAK DAY 1, HOUR  27.417)
 123.500    139.5281      0.12  Q          .          .          .        V.
 (PEAK DAY 1, HOUR  27.500)
 123.583    139.5288      0.10  Q          .          .          .        V.
 (PEAK DAY 1, HOUR  27.583)
 123.667    139.5294      0.09  Q          .          .          .        V.
 (PEAK DAY 1, HOUR  27.667)
 123.750    139.5300      0.08  Q          .          .          .        V.
 (PEAK DAY 1, HOUR  27.750)
 123.833    139.5304      0.06  Q          .          .          .        V.
 (PEAK DAY 1, HOUR  27.833)
 123.917    139.5307      0.05  Q          .          .          .        V.
 (PEAK DAY 1, HOUR  27.917)
 124.000    139.5309      0.03  Q          .          .          .        V.
 (PEAK DAY 1, HOUR  28.000)
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6330.00 TO NODE   6330.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  5341.3 Ac. ***
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6330.00 TO NODE   6330.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  5341.3 Ac. ***

           STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
         (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)    Q(CFS) 0.      700.0    1400.0    2100.0    2800.0
--------------------------------------------------------------------------------
  96.000    594.4378     66.18  Q          V          .          .          .
 (PEAK DAY 2, HOUR  24.000)
  96.083    594.8962     66.57  Q          V          .          .          .
 (PEAK DAY 1, HOUR   0.083)
  96.167    595.3781     69.97  Q          V          .          .          .
 (PEAK DAY 1, HOUR   0.167)
  96.250    595.9117     77.48  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.250)
  96.333    596.5131     87.31  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.333)
  96.417    597.1913     98.48  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.417)
  96.500    597.9774    114.15  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.500)
  96.583    598.9259    137.72  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.583)
  96.667    600.0450    162.50  . Q        V          .          .          .
 (PEAK DAY 1, HOUR   0.667)
  96.750    601.2834    179.81  . Q        V          .          .          .
 (PEAK DAY 1, HOUR   0.750)
  96.833    602.5992    191.04  . Q        V          .          .          .
 (PEAK DAY 1, HOUR   0.833)
  96.917    603.9745    199.69  . Q        V          .          .          .
 (PEAK DAY 1, HOUR   0.917)
  97.000    605.3989    206.83  . Q        V          .          .          .
 (PEAK DAY 1, HOUR   1.000)
  97.083    606.8652    212.90  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   1.083)
  97.167    608.3680    218.21  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   1.167)
  97.250    609.9031    222.89  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   1.250)
  97.333    611.4665    227.01  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   1.333)
  97.417    613.0552    230.68  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   1.417)
  97.500    614.6671    234.05  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   1.500)
  97.583    616.3002    237.13  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   1.583)
  97.667    617.9525    239.90  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   1.667)
  97.750    619.6219    242.40  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   1.750)
  97.833    621.3068    244.64  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   1.833)
  97.917    623.0053    246.63  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   1.917)
  98.000    624.7167    248.49  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   2.000)
  98.083    626.4401    250.24  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   2.083)
  98.167    628.1736    251.71  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   2.167)
  98.250    629.9155    252.92  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   2.250)
  98.333    631.6652    254.05  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   2.333)
  98.417    633.4225    255.17  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   2.417)
  98.500    635.1875    256.28  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   2.500)
  98.583    636.9602    257.40  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   2.583)
  98.667    638.7407    258.52  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   2.667)
  98.750    640.5289    259.65  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   2.750)
  98.833    642.3248    260.77  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   2.833)
  98.917    644.1285    261.90  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   2.917)
  99.000    645.9401    263.04  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   3.000)
  99.083    647.7597    264.20  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   3.083)
  99.167    649.5873    265.37  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   3.167)
  99.250    651.4230    266.54  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   3.250)
  99.333    653.2668    267.73  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   3.333)
  99.417    655.1190    268.93  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   3.417)
  99.500    656.9795    270.14  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   3.500)
  99.583    658.8484    271.37  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   3.583)
  99.667    660.7258    272.60  .  Q       .V         .          .          .
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(PEAK DAY 1, HOUR 3.667)
99.750 662.6117 273.84 . Q .V . . .
(PEAK DAY 1, HOUR 3.750)
99.833 664.5062 275.09 . Q .V . . .
(PEAK DAY 1, HOUR 3.833)
99.917 666.4094 276.34 . Q .V . . .
(PEAK DAY 1, HOUR 3.917)
100.000 668.3209 277.55 . Q .V . . .
(PEAK DAY 1, HOUR 4.000)
100.083 670.2405 278.73 . Q .V . . .
(PEAK DAY 1, HOUR 4.083)
100.167 672.1681 279.89 . Q .V . . .
(PEAK DAY 1, HOUR 4.167)
100.250 674.1037 281.05 . Q .V . . .
(PEAK DAY 1, HOUR 4.250)
100.333 676.0474 282.22 . Q .V . . .
(PEAK DAY 1, HOUR 4.333)
100.417 677.9993 283.41 . Q . V . . .
(PEAK DAY 1, HOUR 4.417)
100.500 679.9594 284.61 . Q . V . . .
(PEAK DAY 1, HOUR 4.500)
100.583 681.9279 285.82 . Q . V . . .
(PEAK DAY 1, HOUR 4.583)
100.667 683.9048 287.05 . Q . V . . .
(PEAK DAY 1, HOUR 4.667)
100.750 685.8903 288.29 . Q . V . . .
(PEAK DAY 1, HOUR 4.750)
100.833 687.8845 289.55 . Q . V . . .
(PEAK DAY 1, HOUR 4.833)
100.917 689.8873 290.82 . Q . V . . .
(PEAK DAY 1, HOUR 4.917)
101.000 691.8990 292.10 . Q . V . . .
(PEAK DAY 1, HOUR 5.000)
101.083 693.9197 293.40 . Q . V . . .
(PEAK DAY 1, HOUR 5.083)
101.167 695.9494 294.71 . Q . V . . .
(PEAK DAY 1, HOUR 5.167)
101.250 697.9883 296.04 . Q . V . . .
(PEAK DAY 1, HOUR 5.250)
101.333 700.0364 297.39 . Q . V . . .
(PEAK DAY 1, HOUR 5.333)
101.417 702.0939 298.75 . Q . V . . .
(PEAK DAY 1, HOUR 5.417)
101.500 704.1608 300.13 . Q . V . . .
(PEAK DAY 1, HOUR 5.500)
101.583 706.2374 301.52 . Q . V . . .
(PEAK DAY 1, HOUR 5.583)
101.667 708.3237 302.93 . Q . V . . .
(PEAK DAY 1, HOUR 5.667)
101.750 710.4199 304.36 . Q . V . . .
(PEAK DAY 1, HOUR 5.750)
101.833 712.5259 305.80 . Q . V . . .
(PEAK DAY 1, HOUR 5.833)
101.917 714.6421 307.27 . Q . V . . .
(PEAK DAY 1, HOUR 5.917)
102.000 716.7685 308.75 . Q . V . . .
(PEAK DAY 1, HOUR 6.000)
102.083 718.9052 310.25 . Q . V . . .
(PEAK DAY 1, HOUR 6.083)
102.167 721.0524 311.77 . Q . V . . .
(PEAK DAY 1, HOUR 6.167)
102.250 723.2101 313.31 . Q . V . . .
(PEAK DAY 1, HOUR 6.250)
102.333 725.3787 314.87 . Q . V . . .
(PEAK DAY 1, HOUR 6.333)
102.417 727.5580 316.45 . Q . V . . .
(PEAK DAY 1, HOUR 6.417)
102.500 729.7485 318.05 . Q . V . . .
(PEAK DAY 1, HOUR 6.500)
102.583 731.9501 319.67 . Q . V . . .
(PEAK DAY 1, HOUR 6.583)
102.667 734.1630 321.32 . Q . V . . .
(PEAK DAY 1, HOUR 6.667)
102.750 736.3875 322.98 . Q . V . . .
(PEAK DAY 1, HOUR 6.750)
102.833 738.6235 324.67 . Q . V . . .
(PEAK DAY 1, HOUR 6.833)
102.917 740.8713 326.39 . Q . V . . .
(PEAK DAY 1, HOUR 6.917)
103.000 743.1312 328.12 . Q . V . . .
(PEAK DAY 1, HOUR 7.000)
103.083 745.4031 329.88 . Q . V . . .
(PEAK DAY 1, HOUR 7.083)
103.167 747.6873 331.67 . Q . V . . .
(PEAK DAY 1, HOUR 7.167)
103.250 749.9840 333.48 . Q . V . . .
(PEAK DAY 1, HOUR 7.250)
103.333 752.2933 335.32 . Q . V . . .
(PEAK DAY 1, HOUR 7.333)
103.417 754.6155 337.18 . Q . V . . .
(PEAK DAY 1, HOUR 7.417)
103.500 756.9507 339.07 . Q . V . . .
(PEAK DAY 1, HOUR 7.500)
103.583 759.2991 340.99 . Q . V . . .
(PEAK DAY 1, HOUR 7.583)
103.667 761.6609 342.94 . Q . V . . .
(PEAK DAY 1, HOUR 7.667)
103.750 764.0363 344.91 . Q . V . . .
(PEAK DAY 1, HOUR 7.750)
103.833 766.4255 346.92 . Q . V . . .
(PEAK DAY 1, HOUR 7.833)
103.917 768.8288 348.96 . Q . V . . .
(PEAK DAY 1, HOUR 7.917)
104.000 771.2463 351.03 . Q . V . . .
(PEAK DAY 1, HOUR 8.000)
104.083 773.6783 353.13 . Q . V . . .
(PEAK DAY 1, HOUR 8.083)
104.167 776.1251 355.26 . Q . V . . .
(PEAK DAY 1, HOUR 8.167)
104.250 778.5867 357.43 . Q . V . . .
(PEAK DAY 1, HOUR 8.250)
104.333 781.0635 359.63 . Q . V . . .
(PEAK DAY 1, HOUR 8.333)
104.417 783.5558 361.87 . Q . V . . .
(PEAK DAY 1, HOUR 8.417)
104.500 786.0637 364.15 . Q . V . . .
(PEAK DAY 1, HOUR 8.500)
104.583 788.5875 366.46 . Q . V . . .
(PEAK DAY 1, HOUR 8.583)
104.667 791.1275 368.81 . Q . V . . .
(PEAK DAY 1, HOUR 8.667)
104.750 793.6840 371.21 . Q . V . . .
(PEAK DAY 1, HOUR 8.750)
104.833 796.2573 373.64 . Q . V . . .
(PEAK DAY 1, HOUR 8.833)
104.917 798.8475 376.11 . Q . V . . .
(PEAK DAY 1, HOUR 8.917)
105.000 801.4552 378.63 . Q . V . . .
(PEAK DAY 1, HOUR 9.000)
105.083 804.0805 381.19 . Q . V . . .
(PEAK DAY 1, HOUR 9.083)
105.167 806.7238 383.80 . Q . V . . .
(PEAK DAY 1, HOUR 9.167)
105.250 809.3853 386.46 . Q . V . . .

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 (PEAK DAY 1, HOUR   9.250)
105.333    812.0655    389.16  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR   9.333)
105.417    814.7646    391.92  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR   9.417)
105.500    817.4831    394.72  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR   9.500)
105.583    820.2213    397.58  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR   9.583)
105.667    822.9795    400.49  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR   9.667)
105.750    825.7582    403.46  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR   9.750)
105.833    828.5577    406.49  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR   9.833)
105.917    831.3785    409.58  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR   9.917)
106.000    834.2209    412.73  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR  10.000)
106.083    837.0856    415.94  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR  10.083)
106.167    839.9728    419.22  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR  10.167)
106.250    842.8831    422.57  .     Q   .   V     .         .         .
 (PEAK DAY 1, HOUR  10.250)
106.333    845.8169    426.00  .     Q   .   V     .         .         .
 (PEAK DAY 1, HOUR  10.333)
106.417    848.7748    429.49  .     Q   .    V    .         .         .
 (PEAK DAY 1, HOUR  10.417)
106.500    851.7573    433.06  .     Q   .    V    .         .         .
 (PEAK DAY 1, HOUR  10.500)
106.583    854.7650    436.71  .     Q   .    V    .         .         .
 (PEAK DAY 1, HOUR  10.583)
106.667    857.7983    440.44  .     Q   .    V    .         .         .
 (PEAK DAY 1, HOUR  10.667)
106.750    860.8578    444.25  .     Q   .    V    .         .         .
 (PEAK DAY 1, HOUR  10.750)
106.833    863.9443    448.15  .     Q   .    V    .         .         .
 (PEAK DAY 1, HOUR  10.833)
106.917    867.0583    452.15  .     Q   .    V    .         .         .
 (PEAK DAY 1, HOUR  10.917)
107.000    870.2004    456.23  .     Q   .    V    .         .         .
 (PEAK DAY 1, HOUR  11.000)
107.083    873.3713    460.42  .     Q   .    V    .         .         .
 (PEAK DAY 1, HOUR  11.083)
107.167    876.5717    464.70  .     Q   .    V    .         .         .
 (PEAK DAY 1, HOUR  11.167)
107.250    879.8024    469.10  .     Q   .    V    .         .         .
 (PEAK DAY 1, HOUR  11.250)
107.333    883.0641    473.60  .     Q   .    V    .         .         .
 (PEAK DAY 1, HOUR  11.333)
107.417    886.3577    478.22  .     Q   .    V    .         .         .
 (PEAK DAY 1, HOUR  11.417)
107.500    889.6838    482.96  .     Q   .    V    .         .         .
 (PEAK DAY 1, HOUR  11.500)
107.583    893.0435    487.82  .     Q   .    V    .         .         .
 (PEAK DAY 1, HOUR  11.583)
107.667    896.4376    492.82  .      Q  .    V    .         .         .
 (PEAK DAY 1, HOUR  11.667)
107.750    899.8669    497.95  .      Q  .    V    .         .         .
 (PEAK DAY 1, HOUR  11.750)
107.833    903.3326    503.22  .      Q  .     V   .         .         .
 (PEAK DAY 1, HOUR  11.833)
107.917    906.8357    508.64  .      Q  .     V   .         .         .
 (PEAK DAY 1, HOUR  11.917)
108.000    910.3771    514.22  .      Q  .     V   .         .         .
 (PEAK DAY 1, HOUR  12.000)
108.083    913.9633    520.71  .      Q  .     V   .         .         .
 (PEAK DAY 1, HOUR  12.083)
108.167    917.6140    530.07  .      Q  .     V   .         .         .
 (PEAK DAY 1, HOUR  12.167)
108.250    921.3561    543.36  .      Q  .     V   .         .         .
 (PEAK DAY 1, HOUR  12.250)
108.333    925.2064    559.07  .      Q  .     V   .         .         .
 (PEAK DAY 1, HOUR  12.333)
108.417    929.1765    576.45  .       Q .     V   .         .         .
 (PEAK DAY 1, HOUR  12.417)
108.500    933.2983    598.49  .       Q .     V   .         .         .
 (PEAK DAY 1, HOUR  12.500)
108.583    937.6263    628.43  .       Q .     V   .         .         .
 (PEAK DAY 1, HOUR  12.583)
108.667    942.1697    659.71  .        Q.     V   .         .         .
 (PEAK DAY 1, HOUR  12.667)
108.750    946.8797    683.89  .        Q.     V   .         .         .
 (PEAK DAY 1, HOUR  12.750)
108.833    951.7167    702.34  .         Q     V   .         .         .
 (PEAK DAY 1, HOUR  12.833)
108.917    956.6652    718.52  .         Q     V   .         .         .
 (PEAK DAY 1, HOUR  12.917)
109.000    961.7167    733.47  .         Q      V  .         .         .
 (PEAK DAY 1, HOUR  13.000)
109.083    966.8661    747.70  .         Q      V  .         .         .
 (PEAK DAY 1, HOUR  13.083)
109.167    972.1103    761.45  .         Q      V  .         .         .
 (PEAK DAY 1, HOUR  13.167)
109.250    977.4415    774.08  .         .Q     V  .         .         .
 (PEAK DAY 1, HOUR  13.250)
109.333    982.8459    784.72  .         .Q     V  .         .         .
 (PEAK DAY 1, HOUR  13.333)
109.417    988.3187    794.66  .         .Q     V  .         .         .
 (PEAK DAY 1, HOUR  13.417)
109.500    993.8739    806.61  .         .Q     V  .         .         .
 (PEAK DAY 1, HOUR  13.500)
109.583    999.5319    821.55  .         .Q     V  .         .         .
 (PEAK DAY 1, HOUR  13.583)
109.667   1005.3113    839.17  .         .Q     V  .         .         .
 (PEAK DAY 1, HOUR  13.667)
109.750   1011.2258    858.78  .         . Q    V  .         .         .
 (PEAK DAY 1, HOUR  13.750)
109.833   1017.2747    878.29  .         . Q     V .         .         .
 (PEAK DAY 1, HOUR  13.833)
109.917   1023.4425    895.57  .         . Q     V .         .         .
 (PEAK DAY 1, HOUR  13.917)
110.000   1029.7218    911.76  .         .  Q    V .         .         .
 (PEAK DAY 1, HOUR  14.000)
110.083   1036.1257    929.86  .         .  Q    V .         .         .
 (PEAK DAY 1, HOUR  14.083)
110.167   1042.6774    951.30  .         .  Q    V .         .         .
 (PEAK DAY 1, HOUR  14.167)
110.250   1049.3936    975.20  .         .  Q    V .         .         .
 (PEAK DAY 1, HOUR  14.250)
110.333   1056.2823   1000.25  .         .   Q   V .         .         .
 (PEAK DAY 1, HOUR  14.333)
110.417   1063.3590   1027.54  .         .   Q   V .         .         .
 (PEAK DAY 1, HOUR  14.417)
110.500   1070.6454   1057.98  .         .    Q  V .         .         .
 (PEAK DAY 1, HOUR  14.500)
110.583   1078.1587   1090.93  .         .    Q   V.         .         .
 (PEAK DAY 1, HOUR  14.583)
110.667   1085.9242   1127.55  .         .     Q  V.         .         .
 (PEAK DAY 1, HOUR  14.667)
110.750   1093.9729   1168.67  .         .     Q  V.         .         .
 (PEAK DAY 1, HOUR  14.750)
110.833   1102.3136   1211.07  .         .      Q V.         .         .
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 (PEAK DAY 1, HOUR  14.833)
110.917   1110.9320   1251.40  .         .      Q V.         .         .
 (PEAK DAY 1, HOUR  14.917)
111.000   1119.8210   1290.69  .         .       QV.         .         .
 (PEAK DAY 1, HOUR  15.000)
111.083   1128.9924   1331.69  .         .        QV         .         .
 (PEAK DAY 1, HOUR  15.083)
111.167   1138.4592   1374.57  .         .        QV         .         .
 (PEAK DAY 1, HOUR  15.167)
111.250   1148.2307   1418.82  .         .         Q         .         .
 (PEAK DAY 1, HOUR  15.250)
111.333   1158.3193   1464.87  .         .         Q         .         .
 (PEAK DAY 1, HOUR  15.333)
111.417   1168.7180   1509.88  .         .        VQ         .         .
 (PEAK DAY 1, HOUR  15.417)
111.500   1179.3739   1547.23  .         .        V Q        .         .
 (PEAK DAY 1, HOUR  15.500)
111.583   1190.2379   1577.46  .         .        .VQ        .         .
 (PEAK DAY 1, HOUR  15.583)
111.667   1201.3318   1610.84  .         .        .V Q       .         .
 (PEAK DAY 1, HOUR  15.667)
111.750   1212.7295   1654.95  .         .        .V Q       .         .
 (PEAK DAY 1, HOUR  15.750)
111.833   1224.5115   1710.75  .         .        .V  Q      .         .
 (PEAK DAY 1, HOUR  15.833)
111.917   1236.7866   1782.35  .         .        .V   Q     .         .
 (PEAK DAY 1, HOUR  15.917)
112.000   1249.7677   1884.85  .         .        . V   Q    .         .
 (PEAK DAY 1, HOUR  16.000)
112.083   1264.2679   2105.44  .         .        . V       Q         .
 (PEAK DAY 1, HOUR  16.083)
112.167   1281.2903   2471.65  .         .        . V       .    Q    .
 (PEAK DAY 1, HOUR  16.167)
112.250   1300.3246   2763.77  .         .        .  V      .        Q.
 (PEAK DAY 1, HOUR  16.250)
112.333   1318.9952   2710.98  .         .        .  V      .       Q .
 (PEAK DAY 1, HOUR  16.333)
112.417   1335.9812   2466.36  .         .        .  V      .    Q    .
 (PEAK DAY 1, HOUR  16.417)
112.500   1351.9701   2321.59  .         .        .  V      .  Q      .
 (PEAK DAY 1, HOUR  16.500)
112.583   1367.7091   2285.31  .         .        .   V     . Q       .
 (PEAK DAY 1, HOUR  16.583)
112.667   1383.3705   2274.04  .         .        .   V     . Q       .
 (PEAK DAY 1, HOUR  16.667)
112.750   1398.8861   2252.87  .         .        .   V     . Q       .
 (PEAK DAY 1, HOUR  16.750)
112.833   1414.2262   2227.38  .         .        .    V    .Q        .
 (PEAK DAY 1, HOUR  16.833)
112.917   1429.4158   2205.52  .         .        .    V    .Q        .
 (PEAK DAY 1, HOUR  16.917)
113.000   1444.4758   2186.71  .         .        .    V    .Q        .
 (PEAK DAY 1, HOUR  17.000)
113.083   1459.4330   2171.78  .         .        .    V    .Q        .
 (PEAK DAY 1, HOUR  17.083)
113.167   1474.3040   2159.26  .         .        .     V   Q         .
 (PEAK DAY 1, HOUR  17.167)
113.250   1489.1152   2150.59  .         .        .     V   Q         .
 (PEAK DAY 1, HOUR  17.250)
113.333   1503.8767   2143.37  .         .        .     V   Q         .
 (PEAK DAY 1, HOUR  17.333)
113.417   1518.6067   2138.79  .         .        .     V   Q         .
 (PEAK DAY 1, HOUR  17.417)
113.500   1533.3010   2133.61  .         .        .      V  Q         .
 (PEAK DAY 1, HOUR  17.500)
113.583   1547.9552   2127.79  .         .        .      V  Q         .
 (PEAK DAY 1, HOUR  17.583)
113.667   1562.5555   2119.98  .         .        .      V  Q         .
 (PEAK DAY 1, HOUR  17.667)
113.750   1577.0996   2111.80  .         .        .      V  Q         .
 (PEAK DAY 1, HOUR  17.750)
113.833   1591.5726   2101.49  .         .        .       V Q         .
 (PEAK DAY 1, HOUR  17.833)
113.917   1605.9741   2091.10  .         .        .       VQ.         .
 (PEAK DAY 1, HOUR  17.917)
114.000   1620.3040   2080.70  .         .        .       VQ.         .
 (PEAK DAY 1, HOUR  18.000)
114.083   1634.5394   2066.98  .         .        .       VQ.         .
 (PEAK DAY 1, HOUR  18.083)
114.167   1648.6764   2052.69  .         .        .        Q.         .
 (PEAK DAY 1, HOUR  18.167)
114.250   1662.7067   2037.20  .         .        .        Q.         .
 (PEAK DAY 1, HOUR  18.250)
114.333   1676.6215   2020.42  .         .        .       QV.         .
 (PEAK DAY 1, HOUR  18.333)
114.417   1690.4119   2002.38  .         .        .       QV.         .
 (PEAK DAY 1, HOUR  18.417)
114.500   1704.0988   1987.33  .         .        .       Q V         .
 (PEAK DAY 1, HOUR  18.500)
114.583   1717.6960   1974.32  .         .        .       Q V         .
 (PEAK DAY 1, HOUR  18.583)
114.667   1731.2063   1961.69  .         .        .       Q V         .
 (PEAK DAY 1, HOUR  18.667)
114.750   1744.6176   1947.32  .         .        .      Q  V         .
 (PEAK DAY 1, HOUR  18.750)
114.833   1757.9351   1933.70  .         .        .      Q  .V        .
 (PEAK DAY 1, HOUR  18.833)
114.917   1771.1720   1922.00  .         .        .      Q  .V        .
 (PEAK DAY 1, HOUR  18.917)
115.000   1784.3312   1910.72  .         .        .      Q  .V        .
 (PEAK DAY 1, HOUR  19.000)
115.083   1797.4153   1899.81  .         .        .      Q  .V        .
 (PEAK DAY 1, HOUR  19.083)
115.167   1810.4260   1889.16  .         .        .     Q   . V       .
 (PEAK DAY 1, HOUR  19.167)
115.250   1823.3644   1878.64  .         .        .     Q   . V       .
 (PEAK DAY 1, HOUR  19.250)
115.333   1836.2291   1867.96  .         .        .     Q   . V       .
 (PEAK DAY 1, HOUR  19.333)
115.417   1849.0111   1855.95  .         .        .     Q   . V       .
 (PEAK DAY 1, HOUR  19.417)
115.500   1861.6893   1840.88  .         .        .     Q   . V       .
 (PEAK DAY 1, HOUR  19.500)
115.583   1874.2441   1822.96  .         .        .     Q   .  V      .
 (PEAK DAY 1, HOUR  19.583)
115.667   1886.6648   1803.48  .         .        .    Q    .  V      .
 (PEAK DAY 1, HOUR  19.667)
115.750   1898.9514   1784.01  .         .        .    Q    .  V      .
 (PEAK DAY 1, HOUR  19.750)
115.833   1911.1079   1765.13  .         .        .    Q    .  V      .
 (PEAK DAY 1, HOUR  19.833)
115.917   1923.1348   1746.30  .         .        .  Q     .   V      .
 (PEAK DAY 1, HOUR  19.917)
116.000   1935.0304   1727.25  .         .        .  Q     .   V      .
 (PEAK DAY 1, HOUR  20.000)
116.083   1946.7937   1708.04  .         .        .  Q     .   V      .
 (PEAK DAY 1, HOUR  20.083)
116.167   1958.4241   1688.73  .         .        .  Q     .   V      .
 (PEAK DAY 1, HOUR  20.167)
116.250   1969.9142   1668.36  .         .        . Q      .   V      .
 (PEAK DAY 1, HOUR  20.250)
116.333   1981.2676   1648.52  .         .        . Q      .    V     .
 (PEAK DAY 1, HOUR  20.333)
116.417   1992.4847   1628.73  .         .        . Q      .    V     .
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 (PEAK DAY 1, HOUR  20.417)
116.500   2003.5663   1609.04  .         .         . Q       .    V    .
 (PEAK DAY 1, HOUR  20.500)
116.583   2014.5133   1589.52  .         .         . Q       .    V    .
 (PEAK DAY 1, HOUR  20.583)
116.667   2025.3259   1569.99  .         .         . Q       .    V    .
 (PEAK DAY 1, HOUR  20.667)
116.750   2036.0023   1550.21  .         .         . Q       .     V   .
 (PEAK DAY 1, HOUR  20.750)
116.833   2046.5410   1530.23  .         .         .Q        .     V   .
 (PEAK DAY 1, HOUR  20.833)
116.917   2056.9426   1510.33  .         .         .Q        .     V   .
 (PEAK DAY 1, HOUR  20.917)
117.000   2067.2085   1490.60  .         .         .Q        .     V   .
 (PEAK DAY 1, HOUR  21.000)
117.083   2077.3359   1470.51  .         .         .Q        .     V   .
 (PEAK DAY 1, HOUR  21.083)
117.167   2087.3159   1449.09  .         .         Q         .     V   .
 (PEAK DAY 1, HOUR  21.167)
117.250   2097.1392   1426.32  .         .         Q         .      V  .
 (PEAK DAY 1, HOUR  21.250)
117.333   2106.8037   1403.30  .         .         Q         .      V  .
 (PEAK DAY 1, HOUR  21.333)
117.417   2116.3074   1379.92  .         .        Q.         .      V  .
 (PEAK DAY 1, HOUR  21.417)
117.500   2125.6265   1353.12  .         .        Q.         .      V  .
 (PEAK DAY 1, HOUR  21.500)
117.583   2134.7158   1319.77  .         .       Q .         .      V  .
 (PEAK DAY 1, HOUR  21.583)
117.667   2143.5413   1281.45  .         .       Q .         .      V  .
 (PEAK DAY 1, HOUR  21.667)
117.750   2152.0896   1241.21  .         .      Q  .         .       V .
 (PEAK DAY 1, HOUR  21.750)
117.833   2160.3540   1199.99  .         .      Q  .         .       V .
 (PEAK DAY 1, HOUR  21.833)
117.917   2168.3291   1158.00  .         .     Q   .         .       V .
 (PEAK DAY 1, HOUR  21.917)
118.000   2175.9951   1113.12  .         .    Q    .         .       V .
 (PEAK DAY 1, HOUR  22.000)
118.083   2183.3171   1063.14  .         .    Q    .         .       V .
 (PEAK DAY 1, HOUR  22.083)
118.167   2190.2551   1007.38  .         .   Q     .         .       V .
 (PEAK DAY 1, HOUR  22.167)
118.250   2196.5879    919.50  .         .  Q      .         .       V .
 (PEAK DAY 1, HOUR  22.250)
118.333   2201.6133    729.68  .         Q         .         .        V.
 (PEAK DAY 1, HOUR  22.333)
118.417   2204.8174    465.25  .     Q   .         .         .        V.
 (PEAK DAY 1, HOUR  22.417)
118.500   2207.0049    317.64  .   Q     .         .         .        V.
 (PEAK DAY 1, HOUR  22.500)
118.583   2209.0647    299.08  .   Q     .         .         .        V.
 (PEAK DAY 1, HOUR  22.583)
118.667   2211.0920    294.38  .   Q     .         .         .        V.
 (PEAK DAY 1, HOUR  22.667)
118.750   2213.1021    291.86  .   Q     .         .         .        V.
 (PEAK DAY 1, HOUR  22.750)
118.833   2215.0933    289.11  .   Q     .         .         .        V.
 (PEAK DAY 1, HOUR  22.833)
118.917   2217.0679    286.71  .   Q     .         .         .        V.
 (PEAK DAY 1, HOUR  22.917)
119.000   2219.0251    284.18  .   Q     .         .         .        V.
 (PEAK DAY 1, HOUR  23.000)
119.083   2220.9661    281.83  .   Q     .         .         .        V.
 (PEAK DAY 1, HOUR  23.083)
119.167   2222.8906    279.46  .  Q      .         .         .        V.
 (PEAK DAY 1, HOUR  23.167)
119.250   2224.7996    277.18  .  Q      .         .         .        V.
 (PEAK DAY 1, HOUR  23.250)
119.333   2226.6929    274.92  .  Q      .         .         .        V.
 (PEAK DAY 1, HOUR  23.333)
119.417   2228.5713    272.73  .  Q      .         .         .        V.
 (PEAK DAY 1, HOUR  23.417)
119.500   2230.4348    270.58  .  Q      .         .         .        V.
 (PEAK DAY 1, HOUR  23.500)
119.583   2232.2837    268.47  .  Q      .         .         .        V.
 (PEAK DAY 1, HOUR  23.583)
119.667   2234.1184    266.41  .  Q      .         .         .        V.
 (PEAK DAY 1, HOUR  23.667)
119.750   2235.9392    264.38  .  Q      .         .         .        V.
 (PEAK DAY 1, HOUR  23.750)
119.833   2237.7463    262.40  .  Q      .         .         .        V.
 (PEAK DAY 1, HOUR  23.833)
119.917   2239.5400    260.46  .  Q      .         .         .        V.
 (PEAK DAY 1, HOUR  23.917)
120.000   2241.3206    258.55  .  Q      .         .         .        V.
 (PEAK DAY 1, HOUR  24.000)
120.083   2243.0803    255.52  .  Q      .         .         .        V.
 (PEAK DAY 1, HOUR  24.083)
120.167   2244.7917    248.50  .  Q      .         .         .        V.
 (PEAK DAY 1, HOUR  24.167)
120.250   2246.4175    236.07  .  Q      .         .         .        V.
 (PEAK DAY 1, HOUR  24.250)
120.333   2247.9377    220.73  .  Q      .         .         .        V.
 (PEAK DAY 1, HOUR  24.333)
120.417   2249.3413    203.81  . Q       .         .         .        V.
 (PEAK DAY 1, HOUR  24.417)
120.500   2250.5886    181.11  . Q       .         .         .        V.
 (PEAK DAY 1, HOUR  24.500)
120.583   2251.6089    148.13  . Q       .         .         .        V.
 (PEAK DAY 1, HOUR  24.583)
120.667   2252.3938    113.96  .Q        .         .         .        V.
 (PEAK DAY 1, HOUR  24.667)
120.750   2253.0156     90.27  .Q        .         .         .        V.
 (PEAK DAY 1, HOUR  24.750)
120.833   2253.5325     75.06  .Q        .         .         .        V.
 (PEAK DAY 1, HOUR  24.833)
120.917   2253.9700     63.52  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  24.917)
121.000   2254.3430     54.18  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  25.000)
121.083   2254.6626     46.39  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  25.083)
121.167   2254.9363     39.73  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  25.167)
121.250   2255.1707     34.03  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  25.250)
121.333   2255.3716     29.16  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  25.333)
121.417   2255.5435     24.97  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  25.417)
121.500   2255.6897     21.24  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  25.500)
121.583   2255.8135     17.96  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  25.583)
121.667   2255.9180     15.16  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  25.667)
121.750   2256.0059     12.76  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  25.750)
121.833   2256.0798     10.75  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  25.833)
121.917   2256.1426      9.12  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  25.917)
122.000   2256.1956      7.69  Q         .         .         .        V.
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 (PEAK DAY 1, HOUR  26.000)
 122.083   2256.2400      6.44  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.083)
 122.167   2256.2786      5.61  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.167)
 122.250   2256.3140      5.13  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.250)
 122.333   2256.3469      4.78  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.333)
 122.417   2256.3777      4.47  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.417)
 122.500   2256.4065      4.18  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.500)
 122.583   2256.4333      3.89  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.583)
 122.667   2256.4583      3.61  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.667)
 122.750   2256.4814      3.35  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.750)
 122.833   2256.5029      3.11  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.833)
 122.917   2256.5227      2.87  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.917)
 123.000   2256.5408      2.64  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.000)
 123.083   2256.5574      2.40  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.083)
 123.167   2256.5723      2.17  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.167)
 123.250   2256.5857      1.93  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.250)
 123.333   2256.5974      1.70  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.333)
 123.417   2256.6077      1.47  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.417)
 123.500   2256.6162      1.25  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.500)
 123.583   2256.6233      1.02  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.583)
 123.667   2256.6289      0.80  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.667)
 123.750   2256.6331      0.59  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.750)
 123.833   2256.6357      0.39  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.833)
 123.917   2256.6372      0.20  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.917)
 124.000   2256.6377      0.06  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  28.000)
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
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  FLOW PROCESS FROM NODE   6330.00 TO NODE   6355.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
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         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  5341.3 Ac. ***

         THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
         TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
         INTERVALS(Reference: the National Engineering Handbook,
         Hydrology, Chapter 17, page 17-52, August,1972,
         U.S. Department of Commerce).


         ASSUMED REGULAR CHANNEL INFORMATION:
           BASEWIDTH(FT) =   30.00     CHANNEL Z =  1.00
           UPSTREAM ELEVATION(FT) =     375.00
           DOWNSTREAM ELEVATION(FT) =     314.00
           CHANNEL LENGTH(FT) =    6086.00     MANNING'S FACTOR = 0.040
           CONSTANT LOSS RATE(CFS) =    0.00


         CHANNEL ROUTING COEFFICIENT ESTIMATED:
           MAXIMUM INFLOW(CFS) =  2763.77
           AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  1874.16
           CHANNEL NORMAL VELOCITY FOR Q =  1874.16 CFS =   9.75 FPS
           ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.852

         MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
         UNIT INTERVALS IS CSTAR = 0.742


         CONVEX METHOD CHANNEL ROUTING RESULTS:
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PEAK DAY	TIME (HRS)	CLOCK TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
2	24.000	96.000	66.18	67.23	67.23
1	0.083	96.083	66.57	66.73	66.73
1	0.167	96.167	69.97	66.39	66.39
1	0.250	96.250	77.48	67.10	67.10
1	0.333	96.333	87.31	70.50	70.50
1	0.417	96.417	98.48	77.35	77.35
1	0.500	96.500	114.15	86.63	86.63
1	0.583	96.583	137.72	98.08	98.08
1	0.667	96.667	162.50	114.00	114.00
1	0.750	96.750	179.81	135.80	135.80
1	0.833	96.833	191.04	158.54	158.54
1	0.917	96.917	199.69	176.23	176.23
1	1.000	97.000	206.83	188.68	188.68
1	1.083	97.083	212.90	198.06	198.06
1	1.167	97.167	218.21	205.59	205.59
1	1.250	97.250	222.89	211.91	211.91
1	1.333	97.333	227.01	217.38	217.38
1	1.417	97.417	230.68	222.17	222.17
1	1.500	97.500	234.05	226.38	226.38
1	1.583	97.583	237.13	230.14	230.14
1	1.667	97.667	239.90	233.56	233.56
1	1.750	97.750	242.40	236.68	236.68
1	1.833	97.833	244.64	239.49	239.49
1	1.917	97.917	246.63	242.03	242.03
1	2.000	98.000	248.49	244.31	244.31
1	2.083	98.083	250.24	246.35	246.35
1	2.167	98.167	251.71	248.24	248.24
1	2.250	98.250	252.92	249.97	249.97
1	2.333	98.333	254.05	251.47	251.47
1	2.417	98.417	255.17	252.74	252.74
1	2.500	98.500	256.28	253.90	253.90
1	2.583	98.583	257.40	255.03	255.03
1	2.667	98.667	258.52	256.14	256.14
1	2.750	98.750	259.65	257.26	257.26
1	2.833	98.833	260.77	258.39	258.39
1	2.917	98.917	261.90	259.51	259.51
1	3.000	99.000	263.04	260.64	260.64
1	3.083	99.083	264.20	261.77	261.77
1	3.167	99.167	265.37	262.91	262.91
1	3.250	99.250	266.54	264.06	264.06

1	3.333	99.333	267.73	265.23	265.23
1	3.417	99.417	268.93	266.40	266.40
1	3.500	99.500	270.14	267.59	267.59
1	3.583	99.583	271.37	268.79	268.79
1	3.667	99.667	272.60	270.00	270.00
1	3.750	99.750	273.84	271.22	271.22
1	3.833	99.833	275.09	272.45	272.45
1	3.917	99.917	276.34	273.69	273.69
1	4.000	100.000	277.55	274.94	274.94
1	4.083	100.083	278.73	276.18	276.18
1	4.167	100.167	279.89	277.40	277.40
1	4.250	100.250	281.05	278.58	278.58
1	4.333	100.333	282.22	279.75	279.75
1	4.417	100.417	283.41	280.91	280.91
1	4.500	100.500	284.61	282.09	282.09
1	4.583	100.583	285.82	283.27	283.27
1	4.667	100.667	287.05	284.47	284.47
1	4.750	100.750	288.29	285.68	285.68
1	4.833	100.833	289.55	286.91	286.91
1	4.917	100.917	290.82	288.15	288.15
1	5.000	101.000	292.10	289.40	289.40
1	5.083	101.083	293.40	290.67	290.67
1	5.167	101.167	294.71	291.95	291.95
1	5.250	101.250	296.04	293.25	293.25
1	5.333	101.333	297.39	294.56	294.56
1	5.417	101.417	298.75	295.89	295.89
1	5.500	101.500	300.13	297.23	297.23
1	5.583	101.583	301.52	298.59	298.59
1	5.667	101.667	302.93	299.97	299.97
1	5.750	101.750	304.36	301.36	301.36
1	5.833	101.833	305.80	302.77	302.77
1	5.917	101.917	307.27	304.19	304.19
1	6.000	102.000	308.75	305.64	305.64
1	6.083	102.083	310.25	307.10	307.10
1	6.167	102.167	311.77	308.58	308.58
1	6.250	102.250	313.31	310.08	310.08
1	6.333	102.333	314.87	311.59	311.59
1	6.417	102.417	316.45	313.13	313.13
1	6.500	102.500	318.05	314.69	314.69
1	6.583	102.583	319.67	316.27	316.27
1	6.667	102.667	321.32	317.87	317.87
1	6.750	102.750	322.98	319.49	319.49
1	6.833	102.833	324.67	321.13	321.13
1	6.917	102.917	326.39	322.79	322.79
1	7.000	103.000	328.12	324.48	324.48
1	7.083	103.083	329.88	326.19	326.19
1	7.167	103.167	331.67	327.92	327.92
1	7.250	103.250	333.48	329.68	329.68
1	7.333	103.333	335.32	331.46	331.46
1	7.417	103.417	337.18	333.27	333.27
1	7.500	103.500	339.07	335.10	335.10
1	7.583	103.583	340.99	336.96	336.96
1	7.667	103.667	342.94	338.85	338.85
1	7.750	103.750	344.91	340.77	340.77
1	7.833	103.833	346.92	342.71	342.71
1	7.917	103.917	348.96	344.68	344.68
1	8.000	104.000	351.03	346.69	346.69
1	8.083	104.083	353.13	348.72	348.72
1	8.167	104.167	355.26	350.79	350.79
1	8.250	104.250	357.43	352.88	352.88
1	8.333	104.333	359.63	355.02	355.02
1	8.417	104.417	361.87	357.18	357.18
1	8.500	104.500	364.15	359.38	359.38
1	8.583	104.583	366.46	361.61	361.61
1	8.667	104.667	368.81	363.89	363.89
1	8.750	104.750	371.21	366.19	366.19
1	8.833	104.833	373.64	368.54	368.54
1	8.917	104.917	376.11	370.93	370.93
1	9.000	105.000	378.63	373.36	373.36
1	9.083	105.083	381.19	375.83	375.83
1	9.167	105.167	383.80	378.34	378.34
1	9.250	105.250	386.46	380.90	380.90
1	9.333	105.333	389.16	383.50	383.50
1	9.417	105.417	391.92	386.15	386.15
1	9.500	105.500	394.72	388.85	388.85
1	9.583	105.583	397.58	391.60	391.60
1	9.667	105.667	400.49	394.40	394.40
1	9.750	105.750	403.46	397.25	397.25
1	9.833	105.833	406.49	400.16	400.16
1	9.917	105.917	409.58	403.12	403.12
1	10.000	106.000	412.73	406.14	406.14
1	10.083	106.083	415.94	409.23	409.23
1	10.167	106.167	419.22	412.37	412.37
1	10.250	106.250	422.57	415.58	415.58
1	10.333	106.333	426.00	418.85	418.85
1	10.417	106.417	429.49	422.19	422.19
1	10.500	106.500	433.06	425.61	425.61
1	10.583	106.583	436.71	429.09	429.09
1	10.667	106.667	440.44	432.66	432.66
1	10.750	106.750	444.25	436.30	436.30
1	10.833	106.833	448.15	440.02	440.02
1	10.917	106.917	452.15	443.82	443.82
1	11.000	107.000	456.23	447.71	447.71
1	11.083	107.083	460.42	451.69	451.69
1	11.167	107.167	464.70	455.77	455.77
1	11.250	107.250	469.10	459.94	459.94
1	11.333	107.333	473.60	464.22	464.22
1	11.417	107.417	478.22	468.60	468.60
1	11.500	107.500	482.96	473.09	473.09
1	11.583	107.583	487.82	477.70	477.70
1	11.667	107.667	492.82	482.43	482.43
1	11.750	107.750	497.95	487.28	487.28
1	11.833	107.833	503.22	492.25	492.25
1	11.917	107.917	508.64	497.37	497.37
1	12.000	108.000	514.22	502.63	502.63
1	12.083	108.083	520.71	508.03	508.03
1	12.167	108.167	530.07	513.72	513.72
1	12.250	108.250	543.36	520.50	520.50
1	12.333	108.333	559.07	529.85	529.85
1	12.417	108.417	576.45	542.54	542.54
1	12.500	108.500	598.49	557.75	557.75
1	12.583	108.583	628.43	575.36	575.36
1	12.667	108.667	659.71	597.60	597.60
1	12.750	108.750	683.89	625.77	625.77
1	12.833	108.833	702.34	655.05	655.05
1	12.917	108.917	718.52	679.57	679.57
1	13.000	109.000	733.47	699.20	699.20
1	13.083	109.083	747.70	716.07	716.07
1	13.167	109.167	761.45	731.39	731.39
1	13.250	109.250	774.08	745.82	745.82
1	13.333	109.333	784.72	759.56	759.56
1	13.417	109.417	794.66	772.14	772.14
1	13.500	109.500	806.61	783.16	783.16
1	13.583	109.583	821.55	793.72	793.72
1	13.667	109.667	839.17	805.82	805.82
1	13.750	109.750	858.78	820.48	820.48
1	13.833	109.833	878.29	837.67	837.67
1	13.917	109.917	895.57	856.64	856.64
1	14.000	110.000	911.76	875.63	875.63
1	14.083	110.083	929.86	893.17	893.17
1	14.167	110.167	951.30	910.03	910.03
1	14.250	110.250	975.20	928.37	928.37
1	14.333	110.333	1000.25	949.43	949.43
1	14.417	110.417	1027.54	972.79	972.79

1	14.500	110.500	1057.98	997.79	997.79
1	14.583	110.583	1090.93	1025.02	1025.02
1	14.667	110.667	1127.55	1055.06	1055.06
1	14.750	110.750	1168.67	1087.88	1087.88
1	14.833	110.833	1211.07	1124.28	1124.28
1	14.917	110.917	1251.40	1164.40	1164.40
1	15.000	111.000	1290.69	1205.86	1205.86
1	15.083	111.083	1331.69	1246.30	1246.30
1	15.167	111.167	1374.57	1286.18	1286.18
1	15.250	111.250	1418.82	1327.21	1327.21
1	15.333	111.333	1464.87	1369.85	1369.85
1	15.417	111.417	1509.88	1413.99	1413.99
1	15.500	111.500	1547.23	1459.37	1459.37
1	15.583	111.583	1577.46	1503.17	1503.17
1	15.667	111.667	1610.84	1540.98	1540.98
1	15.750	111.750	1654.95	1573.70	1573.70
1	15.833	111.833	1710.75	1608.73	1608.73
1	15.917	111.917	1782.35	1652.48	1652.48
1	16.000	112.000	1884.85	1707.85	1707.85
1	16.083	112.083	2105.44	1780.50	1780.50
1	16.167	112.167	2471.65	1895.33	1895.33
1	16.250	112.250	2763.77	2113.31	2113.31
1	16.333	112.333	2710.98	2428.67	2428.67
1	16.417	112.417	2466.36	2668.28	2668.28
1	16.500	112.500	2321.59	2658.46	2658.46
1	16.583	112.583	2285.31	2491.41	2491.41
1	16.667	112.667	2274.04	2359.29	2359.29
1	16.750	112.750	2252.87	2302.50	2302.50
1	16.833	112.833	2227.38	2277.79	2277.79
1	16.917	112.917	2205.52	2254.98	2254.98
1	17.000	113.000	2186.71	2230.80	2230.80
1	17.083	113.083	2171.78	2208.86	2208.86
1	17.167	113.167	2159.26	2189.90	2189.90
1	17.250	113.250	2150.59	2174.33	2174.33
1	17.333	113.333	2143.37	2161.68	2161.68
1	17.417	113.417	2138.79	2152.23	2152.23
1	17.500	113.500	2133.61	2144.88	2144.88
1	17.583	113.583	2127.79	2139.49	2139.49
1	17.667	113.667	2119.98	2134.14	2134.14
1	17.750	113.750	2111.80	2128.10	2128.10
1	17.833	113.833	2101.49	2120.69	2120.69
1	17.917	113.917	2091.10	2112.34	2112.34
1	18.000	114.000	2080.70	2102.53	2102.53
1	18.083	114.083	2066.98	2092.29	2092.29
1	18.167	114.167	2052.69	2081.36	2081.36
1	18.250	114.250	2037.20	2068.27	2068.27
1	18.333	114.333	2020.42	2054.08	2054.08
1	18.417	114.417	2002.38	2038.71	2038.71
1	18.500	114.500	1987.33	2022.08	2022.08
1	18.583	114.583	1974.32	2004.91	2004.91
1	18.667	114.667	1961.69	1989.66	1989.66
1	18.750	114.750	1947.32	1976.14	1976.14
1	18.833	114.833	1933.70	1962.98	1962.98
1	18.917	114.917	1922.00	1949.06	1949.06
1	19.000	115.000	1910.72	1935.68	1935.68
1	19.083	115.083	1899.81	1923.62	1923.62
1	19.167	115.167	1889.16	1912.20	1912.20
1	19.250	115.250	1878.64	1901.20	1901.20
1	19.333	115.333	1867.96	1890.49	1890.49
1	19.417	115.417	1855.95	1879.89	1879.89
1	19.500	115.500	1840.88	1869.00	1869.00
1	19.583	115.583	1822.96	1856.76	1856.76
1	19.667	115.667	1803.48	1841.94	1841.94
1	19.750	115.750	1784.01	1824.56	1824.56
1	19.833	115.833	1765.13	1805.62	1805.62
1	19.917	115.917	1746.30	1786.39	1786.39
1	20.000	116.000	1727.25	1767.43	1767.43
1	20.083	116.083	1708.04	1748.53	1748.53
1	20.167	116.167	1688.73	1729.48	1729.48
1	20.250	116.250	1668.36	1710.30	1710.30
1	20.333	116.333	1648.52	1690.85	1690.85
1	20.417	116.417	1628.73	1670.80	1670.80
1	20.500	116.500	1609.04	1650.91	1650.91
1	20.583	116.583	1589.52	1631.12	1631.12
1	20.667	116.667	1569.99	1611.43	1611.43
1	20.750	116.750	1550.21	1591.86	1591.86
1	20.833	116.833	1530.23	1572.28	1572.28
1	20.917	116.917	1510.33	1552.52	1552.52
1	21.000	117.000	1490.60	1532.61	1532.61
1	21.083	117.083	1470.51	1512.73	1512.73
1	21.167	117.167	1449.09	1492.91	1492.91
1	21.250	117.250	1426.32	1472.66	1472.66
1	21.333	117.333	1403.30	1451.31	1451.31
1	21.417	117.417	1379.92	1428.87	1428.87
1	21.500	117.500	1353.12	1405.94	1405.94
1	21.583	117.583	1319.77	1382.09	1382.09
1	21.667	117.667	1281.45	1354.94	1354.94
1	21.750	117.750	1241.21	1322.35	1322.35
1	21.833	117.833	1199.99	1285.19	1285.19
1	21.917	117.917	1158.00	1245.58	1245.58
1	22.000	118.000	1113.12	1204.64	1204.64
1	22.083	118.083	1063.14	1162.43	1162.43
1	22.167	118.167	1007.38	1117.37	1117.37
1	22.250	118.250	919.50	1067.69	1067.69
1	22.333	118.333	729.68	1008.05	1008.05
1	22.417	118.417	465.25	910.17	910.17
1	22.500	118.500	317.64	731.43	731.43
1	22.583	118.583	299.08	508.94	508.94
1	22.667	118.667	294.38	363.89	363.89
1	22.750	118.750	291.86	315.02	315.02
1	22.833	118.833	289.11	299.29	299.29
1	22.917	118.917	286.71	293.31	293.31
1	23.000	119.000	284.18	289.79	289.79
1	23.083	119.083	281.83	287.07	287.07
1	23.167	119.167	279.46	284.53	284.53
1	23.250	119.250	277.18	282.13	282.13
1	23.333	119.333	274.92	279.76	279.76
1	23.417	119.417	272.73	277.46	277.46
1	23.500	119.500	270.58	275.21	275.21
1	23.583	119.583	268.47	273.01	273.01
1	23.667	119.667	266.41	270.85	270.85
1	23.750	119.750	264.38	268.74	268.74
1	23.833	119.833	262.40	266.66	266.66
1	23.917	119.917	260.46	264.64	264.64
1	24.000	120.000	258.55	262.65	262.65
1	24.083	120.083	255.52	260.70	260.70
1	24.167	120.167	248.50	258.59	258.59
1	24.250	120.250	236.07	255.12	255.12
1	24.333	120.333	220.73	248.10	248.10
1	24.417	120.417	203.81	236.57	236.57
1	24.500	120.500	181.11	221.95	221.95
1	24.583	120.583	148.13	204.64	204.64
1	24.667	120.667	113.96	181.59	181.59
1	24.750	120.750	90.27	150.97	150.97
1	24.833	120.833	75.06	119.50	119.50
1	24.917	120.917	63.52	95.24	95.24
1	25.000	121.000	54.18	78.32	78.32
1	25.083	121.083	46.39	65.76	65.76
1	25.167	121.167	39.73	55.85	55.85
1	25.250	121.250	34.03	47.70	47.70
1	25.333	121.333	29.16	40.82	40.82
1	25.417	121.417	24.97	34.96	34.96
1	25.500	121.500	21.24	29.95	29.95
1	25.583	121.583	17.96	25.62	25.62

1	25.667	121.667	15.16	21.81	21.81
1	25.750	121.750	12.76	18.48	18.48
1	25.833	121.833	10.75	15.61	15.61
1	25.917	121.917	9.12	13.15	13.15
1	26.000	122.000	7.69	11.09	11.09
1	26.083	122.083	6.44	9.39	9.39
1	26.167	122.167	5.61	7.92	7.92
1	26.250	122.250	5.13	6.68	6.68
1	26.333	122.333	4.78	5.80	5.80
1	26.417	122.417	4.47	5.25	5.25
1	26.500	122.500	4.18	4.84	4.84
1	26.583	122.583	3.89	4.51	4.51
1	26.667	122.667	3.61	4.22	4.22
1	26.750	122.750	3.35	3.93	3.93
1	26.833	122.833	3.11	3.65	3.65
1	26.917	122.917	2.87	3.39	3.39
1	27.000	123.000	2.64	3.14	3.14
1	27.083	123.083	2.40	2.90	2.90
1	27.167	123.167	2.17	2.66	2.66
1	27.250	123.250	1.93	2.43	2.43
1	27.333	123.333	1.70	2.19	2.19
1	27.417	123.417	1.47	1.96	1.96
1	27.500	123.500	1.25	1.73	1.73
1	27.583	123.583	1.02	1.50	1.50
1	27.667	123.667	0.80	1.28	1.28
1	27.750	123.750	0.59	1.05	1.05
1	27.833	123.833	0.39	0.83	0.83
1	27.917	123.917	0.20	0.62	0.62
1	28.000	124.000	0.06	0.42	0.42

Note: Computed Hydrograph continues past two days after the peak day of the design storm.

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PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 2256.638 AF
OUTFLOW VOLUME = 2256.636 AF
LOSS VOLUME = 0.000 AF

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FLOW PROCESS FROM NODE 6340.00 TO NODE 6355.00 IS CODE = 1

*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 697.9 Ac. ***

>>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<

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(UNIT-HYDROGRAPH ADDED TO STREAM #2)

WATERSHED AREA = 697.900 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.340 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY(DEVELOPED):
"S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.900
FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.050
MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.050
VALLEY(UNDEVELOPED)/DESERT:
"S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.000
DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.000
BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:

LOSS RATES	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
5-MINUTE (INCHES)	0.58	0.27	0.12	0.06	0.04
30-MINUTE (INCHES)	1.22	0.56	0.24	0.13	0.09
1-HOUR (INCHES)	1.62	0.75	0.33	0.17	0.12
3-HOUR (INCHES)	2.71	1.25	0.54	0.28	0.21
6-HOUR (INCHES)	3.75	1.73	0.75	0.39	0.29
24-HOUR (INCHES)	6.28	2.89	1.26	0.66	0.48
LOSS RATE(IN/HR)	0.210	0.210	0.210	0.210	0.210
LOW LOSS FRACTION	0.450	0.690	0.900	0.980	0.990

5-MINUTE FACTOR = 0.969
30-MINUTE FACTOR = 0.969
1-HOUR FACTOR = 0.969
3-HOUR FACTOR = 0.995
6-HOUR FACTOR = 0.998
24-HOUR FACTOR = 0.999

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 24.510

RUNOFF HYDROGRAPH LISTING LIMITS:
MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 96.00
MODEL TIME(HOURS) FOR END OF RESULTS = 124.00

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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.545	130.419
2	7.337	488.804
3	20.261	1090.852
4	37.173	1427.448
5	57.561	1720.753
6	73.834	1373.504
7	84.155	871.070
8	90.157	506.624
9	93.846	311.340
10	95.934	176.209
11	96.823	75.053
12	97.453	53.201
13	98.047	50.140
14	98.563	43.554
15	98.877	26.445
16	99.042	13.975
17	99.137	8.025
18	99.206	5.797
19	99.261	4.649
20	99.315	4.546
21	99.365	4.228
22	99.414	4.161
23	99.461	3.902
24	99.505	3.743
25	99.548	3.674
26	99.587	3.272
27	99.625	3.204
28	99.663	3.169
29	99.695	2.719
30	99.726	2.582
31	99.756	2.583
32	99.787	2.570

33	99.813	2.195
34	99.830	1.492
35	99.848	1.489
36	99.866	1.488
37	99.883	1.487
38	99.899	1.328
39	99.905	0.518
40	99.910	0.406
41	99.915	0.406
42	99.919	0.404
43	99.924	0.406
44	99.929	0.406
45	99.934	0.405
46	99.939	0.408
47	99.944	0.405
48	99.948	0.408
49	99.953	0.404
50	99.958	0.405
51	99.963	0.405
52	99.968	0.405
53	99.972	0.405
54	99.977	0.404
55	99.982	0.405
56	99.987	0.405
57	99.992	0.405
58	99.996	0.405
59	100.000	0.311

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 349.4661

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 322.3159

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5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	400.0	800.0	1200.0	1600.0
96.000	87.4798	10.14	Q	V	.	.	.
(PEAK DAY 2, HOUR 24.000)							
96.083	87.5521	10.50	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.083)							
96.167	87.6352	12.06	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.167)							
96.250	87.7427	15.61	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.250)							
96.333	87.8825	20.31	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.333)							
96.417	88.0616	26.00	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.417)							
96.500	88.2723	30.59	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.500)							
96.583	88.5034	33.55	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.583)							
96.667	88.7466	35.32	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.667)							
96.750	88.9977	36.46	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.750)							
96.833	89.2536	37.16	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.833)							
96.917	89.5120	37.53	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.917)							
97.000	89.7725	37.82	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.000)							
97.083	90.0351	38.12	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.083)							
97.167	90.2995	38.39	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.167)							
97.250	90.5654	38.61	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.250)							
97.333	90.8325	38.79	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.333)							
97.417	91.1007	38.95	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.417)							
97.500	91.3700	39.10	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.500)							
97.583	91.6403	39.25	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.583)							
97.667	91.9117	39.41	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.667)							
97.750	92.1842	39.56	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.750)							
97.833	92.4577	39.71	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.833)							
97.917	92.7323	39.87	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.917)							
98.000	93.0079	40.03	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.000)							
98.083	93.2847	40.18	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.083)							
98.167	93.5625	40.34	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.167)							
98.250	93.8414	40.50	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.250)							
98.333	94.1214	40.66	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.333)							
98.417	94.4026	40.82	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.417)							
98.500	94.6848	40.98	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.500)							
98.583	94.9682	41.14	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.583)							
98.667	95.2526	41.31	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.667)							
98.750	95.5383	41.47	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.750)							
98.833	95.8250	41.63	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.833)							
98.917	96.1129	41.80	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.917)							
99.000	96.4019	41.97	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.000)							
99.083	96.6921	42.14	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.083)							
99.167	96.9835	42.31	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.167)							
99.250	97.2760	42.48	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.250)							
99.333	97.5697	42.65	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.333)							
99.417	97.8646	42.82	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.417)							
99.500	98.1607	42.99	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.500)							
99.583	98.4580	43.17	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.583)							
99.667	98.7566	43.35	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.667)							
99.750	99.0563	43.53	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.750)							
99.833	99.3573	43.71	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.833)							
99.917	99.6596	43.89	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.917)							
100.000	99.9632	44.08	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.000)							
100.083	100.2680	44.26	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.083)							
100.167	100.5742	44.45	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.167)							
100.250	100.8816	44.65	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.250)							
100.333	101.1905	44.84	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.333)							
100.417	101.5006	45.04	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.417)							
100.500	101.8121	45.23	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.500)							
100.583	102.1251	45.43	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.583)							
100.667	102.4394	45.64	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.667)							
100.750	102.7551	45.84	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.750)							
100.833	103.0722	46.05	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.833)							
100.917	103.3908	46.26	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.917)							
101.000	103.7108	46.47	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 5.000)							
101.083	104.0324	46.68	.Q	. V	.	.	.

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 (PEAK DAY 1, HOUR   5.083)
 101.167    104.3554     46.90  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.167)
 101.250    104.6799     47.12  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.250)
 101.333    105.0059     47.34  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   5.333)
 101.417    105.3335     47.56  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   5.417)
 101.500    105.6626     47.79  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   5.500)
 101.583    105.9933     48.02  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   5.583)
 101.667    106.3257     48.25  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   5.667)
 101.750    106.6596     48.49  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   5.750)
 101.833    106.9952     48.73  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   5.833)
 101.917    107.3325     48.97  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   5.917)
 102.000    107.6714     49.21  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.000)
 102.083    108.0120     49.46  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.083)
 102.167    108.3544     49.71  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.167)
 102.250    108.6985     49.97  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.250)
 102.333    109.0444     50.23  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.333)
 102.417    109.3922     50.49  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.417)
 102.500    109.7417     50.75  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.500)
 102.583    110.0931     51.02  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.583)
 102.667    110.4463     51.29  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.667)
 102.750    110.8015     51.57  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.750)
 102.833    111.1586     51.85  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.833)
 102.917    111.5177     52.14  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.917)
 103.000    111.8787     52.42  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.000)
 103.083    112.2418     52.72  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.083)
 103.167    112.6068     53.01  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.167)
 103.250    112.9740     53.31  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   7.250)
 103.333    113.3433     53.62  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   7.333)
 103.417    113.7147     53.93  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   7.417)
 103.500    114.0882     54.24  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   7.500)
 103.583    114.4640     54.56  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   7.583)
 103.667    114.8420     54.89  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   7.667)
 103.750    115.2223     55.22  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   7.750)
 103.833    115.6049     55.55  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   7.833)
 103.917    115.9898     55.89  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   7.917)
 104.000    116.3771     56.24  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.000)
 104.083    116.7669     56.59  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.083)
 104.167    117.1590     56.94  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.167)
 104.250    117.5537     57.31  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.250)
 104.333    117.9509     57.68  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.333)
 104.417    118.3508     58.05  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.417)
 104.500    118.7532     58.43  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.500)
 104.583    119.1583     58.82  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.583)
 104.667    119.5661     59.22  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.667)
 104.750    119.9767     59.62  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.750)
 104.833    120.3901     60.03  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.833)
 104.917    120.8064     60.45  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.917)
 105.000    121.2256     60.87  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.000)
 105.083    121.6478     61.30  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.083)
 105.167    122.0730     61.74  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.167)
 105.250    122.5013     62.19  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.250)
 105.333    122.9327     62.64  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.333)
 105.417    123.3674     63.11  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.417)
 105.500    123.8053     63.58  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.500)
 105.583    124.2466     64.07  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.583)
 105.667    124.6912     64.56  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.667)
 105.750    125.1393     65.07  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.750)
 105.833    125.5910     65.58  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.833)
 105.917    126.0462     66.11  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.917)
 106.000    126.5052     66.64  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.000)
 106.083    126.9679     67.19  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.083)
 106.167    127.4345     67.74  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.167)
 106.250    127.9050     68.32  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.250)
 106.333    128.3795     68.90  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.333)
 106.417    128.8582     69.50  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.417)
 106.500    129.3410     70.11  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  10.500)
 106.583    129.8282     70.74  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  10.583)
 106.667    130.3197     71.37  .Q        .     V   .         .         .
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(PEAK DAY 1, HOUR  10.667)
106.750    130.8158     72.03  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.750)
106.833    131.3165     72.70  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.833)
106.917    131.8219     73.39  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.917)
107.000    132.3321     74.09  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.000)
107.083    132.8474     74.81  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.083)
107.167    133.3677     75.55  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.167)
107.250    133.8932     76.31  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.250)
107.333    134.4241     77.09  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.333)
107.417    134.9606     77.90  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.417)
107.500    135.5027     78.71  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.500)
107.583    136.0507     79.56  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.583)
107.667    136.6046     80.43  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  11.667)
107.750    137.1647     81.33  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.750)
107.833    137.7311     82.24  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.833)
107.917    138.3041     83.20  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.917)
108.000    138.8838     84.17  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.000)
108.083    139.4731     85.56  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.083)
108.167    140.0790     87.98  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.167)
108.250    140.7138     92.17  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.250)
108.333    141.3842     97.34  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.333)
108.417    142.0964    103.42  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.417)
108.500    142.8440    108.54  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.500)
108.583    143.6175    112.31  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.583)
108.667    144.4101    115.08  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.667)
108.750    145.2184    117.37  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  12.750)
108.833    146.0400    119.30  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  12.833)
108.917    146.8734    121.02  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  12.917)
109.000    147.7185    122.71  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.000)
109.083    148.5758    124.48  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.083)
109.167    149.4454    126.26  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.167)
109.250    150.3275    128.09  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.250)
109.333    151.2224    129.93  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.333)
109.417    152.1305    131.86  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.417)
109.500    153.0522    133.83  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.500)
109.583    153.9883    135.93  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.583)
109.667    154.9393    138.08  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.667)
109.750    155.9060    140.37  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.750)
109.833    156.8890    142.73  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.833)
109.917    157.8894    145.25  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.917)
110.000    158.9077    147.86  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  14.000)
110.083    159.9461    150.77  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  14.083)
110.167    161.0074    154.10  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  14.167)
110.250    162.0967    158.17  .  Q      .        V          .         .
(PEAK DAY 1, HOUR  14.250)
110.333    163.2173    162.70  .   Q     .        V          .         .
(PEAK DAY 1, HOUR  14.333)
110.417    164.3738    167.94  .   Q     .        V          .         .
(PEAK DAY 1, HOUR  14.417)
110.500    165.5685    173.47  .   Q     .        V          .         .
(PEAK DAY 1, HOUR  14.500)
110.583    166.8051    179.55  .   Q     .        V          .         .
(PEAK DAY 1, HOUR  14.583)
110.667    168.0883    186.32  .   Q     .        V          .         .
(PEAK DAY 1, HOUR  14.667)
110.750    169.4257    194.19  .   Q     .        .V         .         .
(PEAK DAY 1, HOUR  14.750)
110.833    170.8223    202.78  .    Q    .        .V         .         .
(PEAK DAY 1, HOUR  14.833)
110.917    172.2852    212.42  .    Q    .        .V         .         .
(PEAK DAY 1, HOUR  14.917)
111.000    173.8201    222.86  .    Q    .        .V         .         .
(PEAK DAY 1, HOUR  15.000)
111.083    175.4357    234.58  .    Q    .        .V         .         .
(PEAK DAY 1, HOUR  15.083)
111.167    177.1388    247.30  .     Q   .        .V         .         .
(PEAK DAY 1, HOUR  15.167)
111.250    178.9411    261.69  .     Q   .        . V        .         .
(PEAK DAY 1, HOUR  15.250)
111.333    180.8522    277.50  .     Q   .        . V        .         .
(PEAK DAY 1, HOUR  15.333)
111.417    182.8791    294.30  .      Q  .        . V        .         .
(PEAK DAY 1, HOUR  15.417)
111.500    185.0097    309.37  .      Q  .        . V        .         .
(PEAK DAY 1, HOUR  15.500)
111.583    187.2243    321.55  .       Q .        .  V       .         .
(PEAK DAY 1, HOUR  15.583)
111.667    189.5230    333.78  .       Q .        .  V       .         .
(PEAK DAY 1, HOUR  15.667)
111.750    191.9303    349.53  .       Q .        .  V       .         .
(PEAK DAY 1, HOUR  15.750)
111.833    194.5298    377.44  .        Q.        .   V      .         .
(PEAK DAY 1, HOUR  15.833)
111.917    197.4737    427.47  .         Q        .   V      .         .
(PEAK DAY 1, HOUR  15.917)
112.000    200.9750    508.38  .         . Q      .   V      .         .
(PEAK DAY 1, HOUR  16.000)
112.083    205.6728    682.13  .         .     Q  .    V     .         .
(PEAK DAY 1, HOUR  16.083)
112.167    212.3362    967.53  .         .        .   Q V    .         .
(PEAK DAY 1, HOUR  16.167)
112.250    221.4721   1326.53  .         .        .      V . Q       .
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 (PEAK DAY 1, HOUR  16.250)
112.333    231.8962   1513.58  .         .         .       V .      Q  .
 (PEAK DAY 1, HOUR  16.333)
112.417    242.8206   1586.22  .         .         .         V        Q.
 (PEAK DAY 1, HOUR  16.417)
112.500    251.9846   1330.62  .         .         .         .V Q      .
 (PEAK DAY 1, HOUR  16.500)
112.583    258.8450    996.13  .         .         .   Q     . V       .
 (PEAK DAY 1, HOUR  16.583)
112.667    263.9171    736.46  .         .       Q .         . V       .
 (PEAK DAY 1, HOUR  16.667)
112.750    267.8633    572.98  .         .   Q     .         .  V      .
 (PEAK DAY 1, HOUR  16.750)
112.833    270.9846    453.22  .         .Q        .         .  V      .
 (PEAK DAY 1, HOUR  16.833)
112.917    273.4837    362.87  .        Q.         .         .  V      .
 (PEAK DAY 1, HOUR  16.917)
113.000    275.6631    316.44  .      Q  .         .         .   V     .
 (PEAK DAY 1, HOUR  17.000)
113.083    277.6262    285.04  .      Q  .         .         .   V     .
 (PEAK DAY 1, HOUR  17.083)
113.167    279.3894    256.02  .     Q   .         .         .   V     .
 (PEAK DAY 1, HOUR  17.167)
113.250    280.9456    225.96  .    Q    .         .         .   V     .
 (PEAK DAY 1, HOUR  17.250)
113.333    282.3374    202.09  .    Q    .         .         .    V    .
 (PEAK DAY 1, HOUR  17.333)
113.417    283.6112    184.96  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  17.417)
113.500    284.8014    172.81  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  17.500)
113.583    285.9275    163.52  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  17.583)
113.667    287.0038    156.28  .  Q      .         .         .    V    .
 (PEAK DAY 1, HOUR  17.667)
113.750    288.0374    150.07  .  Q      .         .         .    V    .
 (PEAK DAY 1, HOUR  17.750)
113.833    289.0344    144.76  .  Q      .         .         .    V    .
 (PEAK DAY 1, HOUR  17.833)
113.917    289.9984    139.98  .  Q      .         .         .    V    .
 (PEAK DAY 1, HOUR  17.917)
114.000    290.9330    135.70  .  Q      .         .         .     V   .
 (PEAK DAY 1, HOUR  18.000)
114.083    291.8382    131.44  .  Q      .         .         .     V   .
 (PEAK DAY 1, HOUR  18.083)
114.167    292.7084    126.36  .  Q      .         .         .     V   .
 (PEAK DAY 1, HOUR  18.167)
114.250    293.5348    119.99  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.250)
114.333    294.3125    112.92  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.333)
114.417    295.0361    105.07  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.417)
114.500    295.7149     98.56  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.500)
114.583    296.3602     93.70  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.583)
114.667    296.9800     89.99  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.667)
114.750    297.5778     86.80  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.750)
114.833    298.1563     84.01  . Q       .         .         .      V  .
 (PEAK DAY 1, HOUR  18.833)
114.917    298.7205     81.92  . Q       .         .         .      V  .
 (PEAK DAY 1, HOUR  18.917)
115.000    299.2716     80.01  . Q       .         .         .      V  .
 (PEAK DAY 1, HOUR  19.000)
115.083    299.8099     78.17  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.083)
115.167    300.3355     76.31  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.167)
115.250    300.8476     74.35  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.250)
115.333    301.3492     72.83  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.333)
115.417    301.8414     71.47  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.417)
115.500    302.3248     70.19  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.500)
115.583    302.7998     68.97  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.583)
115.667    303.2668     67.81  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.667)
115.750    303.7261     66.70  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.750)
115.833    304.1781     65.64  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.833)
115.917    304.6231     64.62  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.917)
116.000    305.0614     63.64  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  20.000)
116.083    305.4932     62.70  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  20.083)
116.167    305.9187     61.79  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  20.167)
116.250    306.3383     60.92  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.250)
116.333    306.7520     60.08  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.333)
116.417    307.1602     59.26  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.417)
116.500    307.5629     58.48  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.500)
116.583    307.9604     57.71  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.583)
116.667    308.3527     56.97  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.667)
116.750    308.7400     56.24  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.750)
116.833    309.1223     55.51  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.833)
116.917    309.4995     54.76  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.917)
117.000    309.8710     53.95  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.000)
117.083    310.2382     53.31  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.083)
117.167    310.6010     52.69  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.167)
117.250    310.9598     52.10  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.250)
117.333    311.3147     51.52  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.333)
117.417    311.6657     50.97  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.417)
117.500    312.0130     50.43  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.500)
117.583    312.3567     49.90  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.583)
117.667    312.6969     49.39  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.667)
117.750    313.0336     48.90  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.750)
117.833    313.3671     48.41  .Q        .         .         .       V .
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(PEAK DAY 1, HOUR 21.833)
117.917 313.6973 47.94 .Q . . . V .
(PEAK DAY 1, HOUR 21.917)
118.000 314.0243 47.49 .Q . . . V .
(PEAK DAY 1, HOUR 22.000)
118.083 314.3483 47.04 .Q . . . V.
(PEAK DAY 1, HOUR 22.083)
118.167 314.6692 46.60 .Q . . . V.
(PEAK DAY 1, HOUR 22.167)
118.250 314.9872 46.18 .Q . . . V.
(PEAK DAY 1, HOUR 22.250)
118.333 315.3024 45.76 .Q . . . V.
(PEAK DAY 1, HOUR 22.333)
118.417 315.6148 45.36 .Q . . . V.
(PEAK DAY 1, HOUR 22.417)
118.500 315.9244 44.96 .Q . . . V.
(PEAK DAY 1, HOUR 22.500)
118.583 316.2314 44.57 .Q . . . V.
(PEAK DAY 1, HOUR 22.583)
118.667 316.5357 44.19 .Q . . . V.
(PEAK DAY 1, HOUR 22.667)
118.750 316.8376 43.82 .Q . . . V.
(PEAK DAY 1, HOUR 22.750)
118.833 317.1369 43.46 .Q . . . V.
(PEAK DAY 1, HOUR 22.833)
118.917 317.4337 43.10 .Q . . . V.
(PEAK DAY 1, HOUR 22.917)
119.000 317.7282 42.76 .Q . . . V.
(PEAK DAY 1, HOUR 23.000)
119.083 318.0204 42.42 .Q . . . V.
(PEAK DAY 1, HOUR 23.083)
119.167 318.3102 42.09 .Q . . . V.
(PEAK DAY 1, HOUR 23.167)
119.250 318.5978 41.76 .Q . . . V.
(PEAK DAY 1, HOUR 23.250)
119.333 318.8832 41.44 .Q . . . V.
(PEAK DAY 1, HOUR 23.333)
119.417 319.1664 41.13 .Q . . . V.
(PEAK DAY 1, HOUR 23.417)
119.500 319.4476 40.82 .Q . . . V.
(PEAK DAY 1, HOUR 23.500)
119.583 319.7266 40.52 .Q . . . V.
(PEAK DAY 1, HOUR 23.583)
119.667 320.0037 40.22 .Q . . . V.
(PEAK DAY 1, HOUR 23.667)
119.750 320.2787 39.94 Q . . . V.
(PEAK DAY 1, HOUR 23.750)
119.833 320.5518 39.65 Q . . . V.
(PEAK DAY 1, HOUR 23.833)
119.917 320.8229 39.37 Q . . . V.
(PEAK DAY 1, HOUR 23.917)
120.000 321.0922 39.10 Q . . . V.
(PEAK DAY 1, HOUR 24.000)
120.083 321.3556 38.25 Q . . . V.
(PEAK DAY 1, HOUR 24.083)
120.167 321.6022 35.81 Q . . . V.
(PEAK DAY 1, HOUR 24.167)
120.250 321.8137 30.70 Q . . . V.
(PEAK DAY 1, HOUR 24.250)
120.333 321.9799 24.13 Q . . . V.
(PEAK DAY 1, HOUR 24.333)
120.417 322.0921 16.30 Q . . . V.
(PEAK DAY 1, HOUR 24.417)
120.500 322.1615 10.07 Q . . . V.
(PEAK DAY 1, HOUR 24.500)
120.583 322.2036 6.12 Q . . . V.
(PEAK DAY 1, HOUR 24.583)
120.667 322.2299 3.82 Q . . . V.
(PEAK DAY 1, HOUR 24.667)
120.750 322.2465 2.40 Q . . . V.
(PEAK DAY 1, HOUR 24.750)
120.833 322.2575 1.60 Q . . . V.
(PEAK DAY 1, HOUR 24.833)
120.917 322.2662 1.26 Q . . . V.
(PEAK DAY 1, HOUR 24.917)
121.000 322.2732 1.01 Q . . . V.
(PEAK DAY 1, HOUR 25.000)
121.083 322.2785 0.78 Q . . . V.
(PEAK DAY 1, HOUR 25.083)
121.167 322.2825 0.58 Q . . . V.
(PEAK DAY 1, HOUR 25.167)
121.250 322.2857 0.46 Q . . . V.
(PEAK DAY 1, HOUR 25.250)
121.333 322.2884 0.39 Q . . . V.
(PEAK DAY 1, HOUR 25.333)
121.417 322.2908 0.35 Q . . . V.
(PEAK DAY 1, HOUR 25.417)
121.500 322.2931 0.33 Q . . . V.
(PEAK DAY 1, HOUR 25.500)
121.583 322.2951 0.30 Q . . . V.
(PEAK DAY 1, HOUR 25.583)
121.667 322.2971 0.28 Q . . . V.
(PEAK DAY 1, HOUR 25.667)
121.750 322.2988 0.26 Q . . . V.
(PEAK DAY 1, HOUR 25.750)
121.833 322.3005 0.24 Q . . . V.
(PEAK DAY 1, HOUR 25.833)
121.917 322.3020 0.22 Q . . . V.
(PEAK DAY 1, HOUR 25.917)
122.000 322.3033 0.20 Q . . . V.
(PEAK DAY 1, HOUR 26.000)
122.083 322.3046 0.18 Q . . . V.
(PEAK DAY 1, HOUR 26.083)
122.167 322.3058 0.17 Q . . . V.
(PEAK DAY 1, HOUR 26.167)
122.250 322.3068 0.15 Q . . . V.
(PEAK DAY 1, HOUR 26.250)
122.333 322.3077 0.14 Q . . . V.
(PEAK DAY 1, HOUR 26.333)
122.417 322.3086 0.12 Q . . . V.
(PEAK DAY 1, HOUR 26.417)
122.500 322.3094 0.11 Q . . . V.
(PEAK DAY 1, HOUR 26.500)
122.583 322.3100 0.10 Q . . . V.
(PEAK DAY 1, HOUR 26.583)
122.667 322.3106 0.09 Q . . . V.
(PEAK DAY 1, HOUR 26.667)
122.750 322.3111 0.08 Q . . . V.
(PEAK DAY 1, HOUR 26.750)
122.833 322.3116 0.07 Q . . . V.
(PEAK DAY 1, HOUR 26.833)
122.917 322.3120 0.06 Q . . . V.
(PEAK DAY 1, HOUR 26.917)
123.000 322.3124 0.05 Q . . . V.
(PEAK DAY 1, HOUR 27.000)
123.083 322.3127 0.05 Q . . . V.
(PEAK DAY 1, HOUR 27.083)
123.167 322.3130 0.04 Q . . . V.
(PEAK DAY 1, HOUR 27.167)
123.250 322.3133 0.04 Q . . . V.
(PEAK DAY 1, HOUR 27.250)
123.333 322.3135 0.04 Q . . . V.
(PEAK DAY 1, HOUR 27.333)
123.417 322.3138 0.03 Q . . . V.

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 (PEAK DAY 1, HOUR  27.417)
 123.500    322.3140      0.03  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  27.500)
 123.583    322.3142      0.03  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  27.583)
 123.667    322.3144      0.03  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  27.667)
 123.750    322.3145      0.03  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  27.750)
 123.833    322.3147      0.02  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  27.833)
 123.917    322.3148      0.02  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  27.917)
 124.000    322.3150      0.02  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  28.000)
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********************************************************************************
  FLOW PROCESS FROM NODE   6355.00 TO NODE   6355.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  6039.2 Ac. ***
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6355.00 TO NODE   6355.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  6039.2 Ac. ***

           STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
         (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.     1075.0    2150.0    3225.0    4300.0
--------------------------------------------------------------------------------
  96.000    680.9462     77.37  Q          V          .          .          .
 (PEAK DAY 2, HOUR  24.000)
  96.083    681.4781     77.24  Q          V          .          .          .
 (PEAK DAY 1, HOUR   0.083)
  96.167    682.0183     78.44  Q          V          .          .          .
 (PEAK DAY 1, HOUR   0.167)
  96.250    682.5880     82.71  Q          V          .          .          .
 (PEAK DAY 1, HOUR   0.250)
  96.333    683.2134     90.81  Q          V          .          .          .
 (PEAK DAY 1, HOUR   0.333)
  96.417    683.9252    103.35  Q          V          .          .          .
 (PEAK DAY 1, HOUR   0.417)
  96.500    684.7325    117.22  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.500)
  96.583    685.6390    131.63  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.583)
  96.667    686.6674    149.32  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.667)
  96.750    687.8538    172.26  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.750)
  96.833    689.2015    195.70  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.833)
  96.917    690.6736    213.75  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.917)
  97.000    692.2336    226.51  . Q        V          .          .          .
 (PEAK DAY 1, HOUR   1.000)
  97.083    693.8602    236.18  . Q        V          .          .          .
 (PEAK DAY 1, HOUR   1.083)
  97.167    695.5405    243.98  . Q        V          .          .          .
 (PEAK DAY 1, HOUR   1.167)
  97.250    697.2659    250.52  . Q        V          .          .          .
 (PEAK DAY 1, HOUR   1.250)
  97.333    699.0301    256.17  . Q        V          .          .          .
 (PEAK DAY 1, HOUR   1.333)
  97.417    700.8284    261.11  . Q        V          .          .          .
 (PEAK DAY 1, HOUR   1.417)
  97.500    702.6567    265.48  . Q        V          .          .          .
 (PEAK DAY 1, HOUR   1.500)
  97.583    704.5121    269.39  . Q        V          .          .          .
 (PEAK DAY 1, HOUR   1.583)
  97.667    706.3920    272.97  . Q        V          .          .          .
 (PEAK DAY 1, HOUR   1.667)
  97.750    708.2945    276.24  . Q        V          .          .          .
 (PEAK DAY 1, HOUR   1.750)
  97.833    710.2174    279.21  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   1.833)
  97.917    712.1589    281.90  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   1.917)
  98.000    714.1171    284.33  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   2.000)
  98.083    716.0904    286.53  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   2.083)
  98.167    718.0778    288.58  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   2.167)
  98.250    720.0783    290.47  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   2.250)
  98.333    722.0902    292.12  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   2.333)
  98.417    724.1119    293.55  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   2.417)
  98.500    726.1428    294.88  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   2.500)
  98.583    728.1826    296.17  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   2.583)
  98.667    730.2311    297.45  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   2.667)
  98.750    732.2886    298.74  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   2.750)
  98.833    734.3549    300.02  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   2.833)
  98.917    736.4301    301.31  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   2.917)
  99.000    738.5141    302.60  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   3.000)
  99.083    740.6071    303.91  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   3.083)
  99.167    742.7092    305.22  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   3.167)
  99.250    744.8203    306.54  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   3.250)
  99.333    746.9407    307.87  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   3.333)
  99.417    749.0703    309.22  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   3.417)
  99.500    751.2094    310.58  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   3.500)
  99.583    753.3578    311.96  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   3.583)
  99.667    755.5159    313.35  . Q        .V         .          .          .
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(PEAK DAY 1, HOUR   3.667)
 99.750    757.6835    314.75  . Q       .V        .         .         .
(PEAK DAY 1, HOUR   3.750)
 99.833    759.8610    316.16  . Q       .V        .         .         .
(PEAK DAY 1, HOUR   3.833)
 99.917    762.0482    317.58  . Q       .V        .         .         .
(PEAK DAY 1, HOUR   3.917)
100.000    764.2452    319.01  . Q       .V        .         .         .
(PEAK DAY 1, HOUR   4.000)
100.083    766.4521    320.45  . Q       .V        .         .         .
(PEAK DAY 1, HOUR   4.083)
100.167    768.6688    321.85  . Q       .V        .         .         .
(PEAK DAY 1, HOUR   4.167)
100.250    770.8948    323.23  .  Q      .V        .         .         .
(PEAK DAY 1, HOUR   4.250)
100.333    773.1302    324.59  .  Q      .V        .         .         .
(PEAK DAY 1, HOUR   4.333)
100.417    775.3751    325.95  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   4.417)
100.500    777.6293    327.32  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   4.500)
100.583    779.8932    328.71  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   4.583)
100.667    782.1667    330.11  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   4.667)
100.750    784.4500    331.53  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   4.750)
100.833    786.7430    332.96  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   4.833)
100.917    789.0461    334.41  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   4.917)
101.000    791.3593    335.87  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   5.000)
101.083    793.6827    337.35  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   5.083)
101.167    796.0164    338.85  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   5.167)
101.250    798.3605    340.37  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   5.250)
101.333    800.7151    341.90  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   5.333)
101.417    803.0805    343.45  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   5.417)
101.500    805.4567    345.02  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   5.500)
101.583    807.8438    346.61  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   5.583)
101.667    810.2420    348.22  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   5.667)
101.750    812.6514    349.85  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   5.750)
101.833    815.0722    351.49  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   5.833)
101.917    817.5045    353.16  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   5.917)
102.000    819.9483    354.85  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   6.000)
102.083    822.4039    356.56  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   6.083)
102.167    824.8715    358.29  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   6.167)
102.250    827.3512    360.05  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   6.250)
102.333    829.8431    361.82  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   6.333)
102.417    832.3474    363.62  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   6.417)
102.500    834.8641    365.44  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   6.500)
102.583    837.3937    367.29  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   6.583)
102.667    839.9361    369.16  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   6.667)
102.750    842.4916    371.06  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   6.750)
102.833    845.0603    372.98  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   6.833)
102.917    847.6425    374.93  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   6.917)
103.000    850.2382    376.90  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.000)
103.083    852.8477    378.90  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.083)
103.167    855.4712    380.93  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.167)
103.250    858.1089    382.99  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.250)
103.333    860.7609    385.08  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.333)
103.417    863.4276    387.20  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.417)
103.500    866.1091    389.34  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.500)
103.583    868.8055    391.53  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.583)
103.667    871.5172    393.74  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.667)
103.750    874.2444    395.98  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.750)
103.833    876.9872    398.26  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.833)
103.917    879.7460    400.58  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.917)
104.000    882.5210    402.92  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   8.000)
104.083    885.3124    405.31  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   8.083)
104.167    888.1204    407.73  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   8.167)
104.250    890.9454    410.19  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   8.250)
104.333    893.7877    412.69  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   8.333)
104.417    896.6474    415.23  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   8.417)
104.500    899.5249    417.81  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   8.500)
104.583    902.4205    420.44  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   8.583)
104.667    905.3344    423.10  .  Q      .   V     .         .         .
(PEAK DAY 1, HOUR   8.667)
104.750    908.2670    425.82  .  Q      .   V     .         .         .
(PEAK DAY 1, HOUR   8.750)
104.833    911.2186    428.57  .  Q      .   V     .         .         .
(PEAK DAY 1, HOUR   8.833)
104.917    914.1895    431.38  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR   8.917)
105.000    917.1801    434.22  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR   9.000)
105.083    920.1906    437.13  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR   9.083)
105.167    923.2214    440.08  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR   9.167)
105.250    926.2730    443.09  .   Q     .   V     .         .         .
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(PEAK DAY 1, HOUR   9.250)
105.333    929.3456    446.14  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR   9.333)
105.417    932.4398    449.26  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR   9.417)
105.500    935.5557    452.43  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR   9.500)
105.583    938.6939    455.67  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR   9.583)
105.667    941.8548    458.96  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR   9.667)
105.750    945.0388    462.32  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR   9.750)
105.833    948.2464    465.74  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR   9.833)
105.917    951.4780    469.23  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR   9.917)
106.000    954.7341    472.78  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.000)
106.083    958.0153    476.42  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.083)
106.167    961.3218    480.11  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.167)
106.250    964.6545    483.90  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.250)
106.333    968.0136    487.75  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  10.333)
106.417    971.4000    491.69  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  10.417)
106.500    974.8140    495.71  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  10.500)
106.583    978.2563    499.83  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  10.583)
106.667    981.7276    504.03  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  10.667)
106.750    985.2285    508.33  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  10.750)
106.833    988.7595    512.71  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  10.833)
106.917    992.3216    517.21  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  10.917)
107.000    995.9152    521.80  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.000)
107.083    999.5413    526.51  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.083)
107.167   1003.2006    531.32  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.167)
107.250   1006.8938    536.26  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.250)
107.333   1010.6218    541.31  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  11.333)
107.417   1014.3856    546.50  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  11.417)
107.500   1018.1859    551.80  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  11.500)
107.583   1022.0237    557.26  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  11.583)
107.667   1025.9001    562.85  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  11.667)
107.750   1029.8162    568.61  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  11.750)
107.833   1033.7727    574.50  .    Q    .     V   .         .         .
(PEAK DAY 1, HOUR  11.833)
107.917   1037.7711    580.57  .    Q    .     V   .         .         .
(PEAK DAY 1, HOUR  11.917)
108.000   1041.8124    586.80  .    Q    .     V   .         .         .
(PEAK DAY 1, HOUR  12.000)
108.083   1045.9005    593.59  .    Q    .     V   .         .         .
(PEAK DAY 1, HOUR  12.083)
108.167   1050.0444    601.70  .    Q    .     V   .         .         .
(PEAK DAY 1, HOUR  12.167)
108.250   1054.2639    612.67  .    Q    .     V   .         .         .
(PEAK DAY 1, HOUR  12.250)
108.333   1058.5835    627.20  .    Q    .     V   .         .         .
(PEAK DAY 1, HOUR  12.333)
108.417   1063.0322    645.96  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  12.417)
108.500   1067.6210    666.29  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  12.500)
108.583   1072.3571    687.68  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  12.583)
108.667   1077.2653    712.68  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  12.667)
108.750   1082.3833    743.14  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  12.750)
108.833   1087.7162    774.34  .      Q  .     V   .         .         .
(PEAK DAY 1, HOUR  12.833)
108.917   1093.2299    800.59  .      Q  .     V   .         .         .
(PEAK DAY 1, HOUR  12.917)
109.000   1098.8904    821.91  .      Q  .      V  .         .         .
(PEAK DAY 1, HOUR  13.000)
109.083   1104.6792    840.54  .      Q  .      V  .         .         .
(PEAK DAY 1, HOUR  13.083)
109.167   1110.5859    857.65  .      Q  .      V  .         .         .
(PEAK DAY 1, HOUR  13.167)
109.250   1116.6046    873.92  .       Q .      V  .         .         .
(PEAK DAY 1, HOUR  13.250)
109.333   1122.7306    889.49  .       Q .      V  .         .         .
(PEAK DAY 1, HOUR  13.333)
109.417   1128.9564    904.00  .       Q .      V  .         .         .
(PEAK DAY 1, HOUR  13.417)
109.500   1135.2717    916.99  .       Q .      V  .         .         .
(PEAK DAY 1, HOUR  13.500)
109.583   1141.6742    929.64  .       Q .      V  .         .         .
(PEAK DAY 1, HOUR  13.583)
109.667   1148.1748    943.89  .       Q .      V  .         .         .
(PEAK DAY 1, HOUR  13.667)
109.750   1154.7922    960.84  .       Q .      V  .         .         .
(PEAK DAY 1, HOUR  13.750)
109.833   1161.5443    980.40  .        Q.       V .         .         .
(PEAK DAY 1, HOUR  13.833)
109.917   1168.4445   1001.89  .        Q.       V .         .         .
(PEAK DAY 1, HOUR  13.917)
110.000   1175.4933   1023.49  .        Q.       V .         .         .
(PEAK DAY 1, HOUR  14.000)
110.083   1182.6830   1043.94  .        Q.       V .         .         .
(PEAK DAY 1, HOUR  14.083)
110.167   1190.0117   1064.13  .        Q.       V .         .         .
(PEAK DAY 1, HOUR  14.167)
110.250   1197.4948   1086.55  .         Q       V .         .         .
(PEAK DAY 1, HOUR  14.250)
110.333   1205.1541   1112.14  .         Q       V .         .         .
(PEAK DAY 1, HOUR  14.333)
110.417   1213.0104   1140.73  .         Q       V .         .         .
(PEAK DAY 1, HOUR  14.417)
110.500   1221.0769   1171.25  .         Q       V .         .         .
(PEAK DAY 1, HOUR  14.500)
110.583   1229.3728   1204.57  .         .Q       V.         .         .
(PEAK DAY 1, HOUR  14.583)
110.667   1237.9222   1241.38  .         .Q       V.         .         .
(PEAK DAY 1, HOUR  14.667)
110.750   1246.7518   1282.06  .         .Q       V.         .         .
(PEAK DAY 1, HOUR  14.750)
110.833   1255.8914   1327.06  .         . Q      V.         .         .
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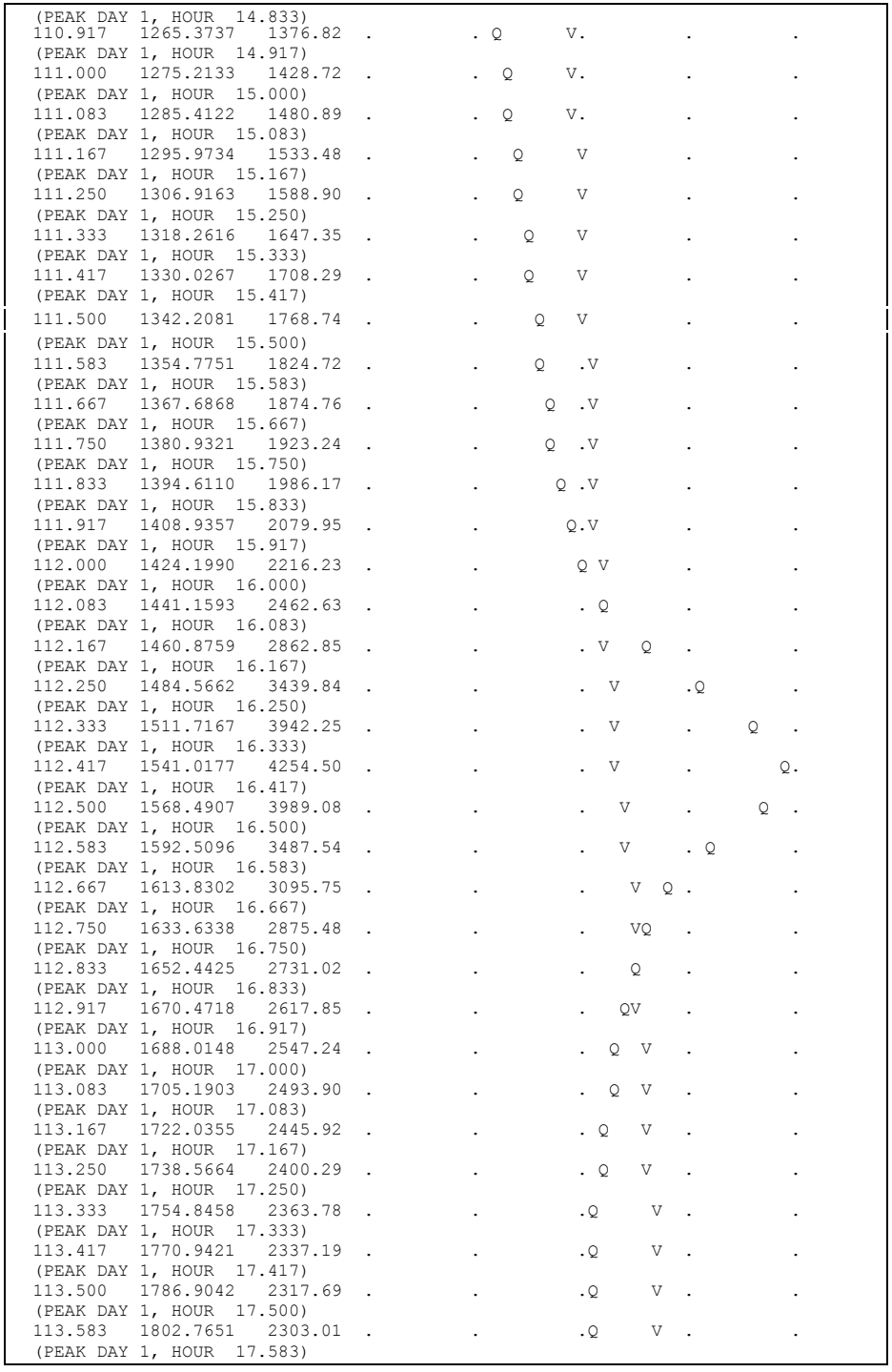
(PEAK DAY 1, HOUR 14.833)
110.917 1265.3737 1376.82 . . Q V. . .
(PEAK DAY 1, HOUR 14.917)
111.000 1275.2133 1428.72 . . Q V. . .
(PEAK DAY 1, HOUR 15.000)
111.083 1285.4122 1480.89 . . Q V. . .
(PEAK DAY 1, HOUR 15.083)
111.167 1295.9734 1533.48 . . Q V . .
(PEAK DAY 1, HOUR 15.167)
111.250 1306.9163 1588.90 . . Q V . .
(PEAK DAY 1, HOUR 15.250)
111.333 1318.2616 1647.35 . . Q V . .
(PEAK DAY 1, HOUR 15.333)
111.417 1330.0267 1708.29 . . Q V . .
(PEAK DAY 1, HOUR 15.417)
111.500 1342.2081 1768.74 . . Q V . .
(PEAK DAY 1, HOUR 15.500)
111.583 1354.7751 1824.72 . . Q .V . .
(PEAK DAY 1, HOUR 15.583)
111.667 1367.6868 1874.76 . . Q .V . .
(PEAK DAY 1, HOUR 15.667)
111.750 1380.9321 1923.24 . . Q .V . .
(PEAK DAY 1, HOUR 15.750)
111.833 1394.6110 1986.17 . . Q .V . .
(PEAK DAY 1, HOUR 15.833)
111.917 1408.9357 2079.95 . . Q.V . .
(PEAK DAY 1, HOUR 15.917)
112.000 1424.1990 2216.23 . . Q V . .
(PEAK DAY 1, HOUR 16.000)
112.083 1441.1593 2462.63 . . . Q . .
(PEAK DAY 1, HOUR 16.083)
112.167 1460.8759 2862.85 . . . V Q . .
(PEAK DAY 1, HOUR 16.167)
112.250 1484.5662 3439.84 . . . V .Q .
(PEAK DAY 1, HOUR 16.250)
112.333 1511.7167 3942.25 . . . V . Q .
(PEAK DAY 1, HOUR 16.333)
112.417 1541.0177 4254.50 . . . V . Q.
(PEAK DAY 1, HOUR 16.417)
112.500 1568.4907 3989.08 . . . V . Q .
(PEAK DAY 1, HOUR 16.500)
112.583 1592.5096 3487.54 . . . V . Q .
(PEAK DAY 1, HOUR 16.583)
112.667 1613.8302 3095.75 . . . V Q . .
(PEAK DAY 1, HOUR 16.667)
112.750 1633.6338 2875.48 . . . VQ . .
(PEAK DAY 1, HOUR 16.750)
112.833 1652.4425 2731.02 . . . Q . .
(PEAK DAY 1, HOUR 16.833)
112.917 1670.4718 2617.85 . . . QV . .
(PEAK DAY 1, HOUR 16.917)
113.000 1688.0148 2547.24 . . . Q V . .
(PEAK DAY 1, HOUR 17.000)
113.083 1705.1903 2493.90 . . . Q V . .
(PEAK DAY 1, HOUR 17.083)
113.167 1722.0355 2445.92 . . . Q V . .
(PEAK DAY 1, HOUR 17.167)
113.250 1738.5664 2400.29 . . . Q V . .
(PEAK DAY 1, HOUR 17.250)
113.333 1754.8458 2363.78 . . .Q V . .
(PEAK DAY 1, HOUR 17.333)
113.417 1770.9421 2337.19 . . .Q V . .
(PEAK DAY 1, HOUR 17.417)
113.500 1786.9042 2317.69 . . .Q V . .
(PEAK DAY 1, HOUR 17.500)
113.583 1802.7651 2303.01 . . .Q V . .
(PEAK DAY 1, HOUR 17.583)
113.667 1818.5394 2290.42 . . .Q V . .
(PEAK DAY 1, HOUR 17.667)
113.750 1834.2294 2278.17 . . .Q V . .
(PEAK DAY 1, HOUR 17.750)
113.833 1849.8317 2265.45 . . .Q V . .
(PEAK DAY 1, HOUR 17.833)
113.917 1865.3435 2252.33 . . Q V . .
(PEAK DAY 1, HOUR 17.917)
114.000 1880.7583 2238.23 . . Q V. .
(PEAK DAY 1, HOUR 18.000)
114.083 1896.0732 2223.72 . . Q V. .
(PEAK DAY 1, HOUR 18.083)
114.167 1911.2780 2207.72 . . Q V. .
(PEAK DAY 1, HOUR 18.167)
114.250 1926.3486 2188.26 . . Q V. .
(PEAK DAY 1, HOUR 18.250)
114.333 1941.2729 2167.00 . . Q V .
(PEAK DAY 1, HOUR 18.333)
114.417 1956.0374 2143.79 . . Q. V .
(PEAK DAY 1, HOUR 18.417)
114.500 1970.6423 2120.64 . . Q. V .
(PEAK DAY 1, HOUR 18.500)
114.583 1985.0956 2098.61 . . Q. V .
(PEAK DAY 1, HOUR 18.583)
114.667 1999.4183 2079.66 . . Q. .V .
(PEAK DAY 1, HOUR 18.667)
114.750 2013.6259 2062.94 . . Q. .V .
(PEAK DAY 1, HOUR 18.750)
114.833 2027.7236 2046.99 . . Q. .V .
(PEAK DAY 1, HOUR 18.833)
114.917 2041.7111 2030.98 . . Q . .V .
(PEAK DAY 1, HOUR 18.917)
115.000 2055.5933 2015.69 . . Q . .V .
(PEAK DAY 1, HOUR 19.000)
115.083 2069.3796 2001.79 . . Q . . V .
(PEAK DAY 1, HOUR 19.083)
115.167 2083.0747 1988.52 . . Q . . V .
(PEAK DAY 1, HOUR 19.167)
115.250 2096.6804 1975.56 . . Q . . V .
(PEAK DAY 1, HOUR 19.250)
115.333 2110.2019 1963.32 . . Q . . V .
(PEAK DAY 1, HOUR 19.333)
115.417 2123.6411 1951.36 . . Q . . V .
(PEAK DAY 1, HOUR 19.417)
115.500 2136.9963 1939.19 . . Q . . V .
(PEAK DAY 1, HOUR 19.500)
115.583 2150.2590 1925.73 . . Q . . V .
(PEAK DAY 1, HOUR 19.583)
115.667 2163.4116 1909.75 . . Q . . V .
(PEAK DAY 1, HOUR 19.667)
115.750 2176.4368 1891.25 . . Q . . V .
(PEAK DAY 1, HOUR 19.750)
115.833 2189.3242 1871.26 . . Q . . V .
(PEAK DAY 1, HOUR 19.833)
115.917 2202.0723 1851.00 . . Q . . V .
(PEAK DAY 1, HOUR 19.917)
116.000 2214.6829 1831.06 . . Q . . V .
(PEAK DAY 1, HOUR 20.000)
116.083 2227.1567 1811.22 . . Q . . V .
(PEAK DAY 1, HOUR 20.083)
116.167 2239.4934 1791.27 . . Q . . V .
(PEAK DAY 1, HOUR 20.167)
116.250 2251.6919 1771.22 . . Q . . V .
(PEAK DAY 1, HOUR 20.250)
116.333 2263.7505 1750.92 . . Q . . V .
(PEAK DAY 1, HOUR 20.333)
116.417 2275.6655 1730.06 . . Q . . V .

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 (PEAK DAY 1, HOUR  20.417)
116.500   2287.4382   1709.39  .         .    Q    .         .    V    .
 (PEAK DAY 1, HOUR  20.500)
116.583   2299.0693   1688.83  .         .    Q    .         .    V    .
 (PEAK DAY 1, HOUR  20.583)
116.667   2310.5596   1668.40  .         .    Q    .         .    V    .
 (PEAK DAY 1, HOUR  20.667)
116.750   2321.9102   1648.10  .         .    Q    .         .     V   .
 (PEAK DAY 1, HOUR  20.750)
116.833   2333.1208   1627.80  .         .    Q    .         .     V   .
 (PEAK DAY 1, HOUR  20.833)
116.917   2344.1902   1607.28  .         .   Q     .         .     V   .
 (PEAK DAY 1, HOUR  20.917)
117.000   2355.1169   1586.56  .         .   Q     .         .     V   .
 (PEAK DAY 1, HOUR  21.000)
117.083   2365.9023   1566.04  .         .   Q     .         .     V   .
 (PEAK DAY 1, HOUR  21.083)
117.167   2376.5469   1545.60  .         .   Q     .         .     V   .
 (PEAK DAY 1, HOUR  21.167)
117.250   2387.0481   1524.76  .         .   Q     .         .      V  .
 (PEAK DAY 1, HOUR  21.250)
117.333   2397.3982   1502.84  .         .  Q      .         .      V  .
 (PEAK DAY 1, HOUR  21.333)
117.417   2407.5898   1479.84  .         .  Q      .         .      V  .
 (PEAK DAY 1, HOUR  21.417)
117.500   2417.6199   1456.36  .         .  Q      .         .      V  .
 (PEAK DAY 1, HOUR  21.500)
117.583   2427.4822   1431.99  .         .  Q      .         .      V  .
 (PEAK DAY 1, HOUR  21.583)
117.667   2437.1538   1404.34  .         .  Q      .         .      V  .
 (PEAK DAY 1, HOUR  21.667)
117.750   2446.5977   1371.25  .         . Q       .         .      V  .
 (PEAK DAY 1, HOUR  21.750)
117.833   2455.7822   1333.60  .         . Q       .         .       V .
 (PEAK DAY 1, HOUR  21.833)
117.917   2464.6907   1293.52  .         . Q       .         .       V .
 (PEAK DAY 1, HOUR  21.917)
118.000   2473.3142   1252.12  .         .Q        .         .       V .
 (PEAK DAY 1, HOUR  22.000)
118.083   2481.6438   1209.47  .         .Q        .         .       V .
 (PEAK DAY 1, HOUR  22.083)
118.167   2489.6602   1163.98  .         Q         .         .       V .
 (PEAK DAY 1, HOUR  22.167)
118.250   2497.3313   1113.86  .         Q         .         .       V .
 (PEAK DAY 1, HOUR  22.250)
118.333   2504.5889   1053.81  .        Q.         .         .       V .
 (PEAK DAY 1, HOUR  22.333)
118.417   2511.1697    955.52  .       Q .         .         .       V .
 (PEAK DAY 1, HOUR  22.417)
118.500   2516.5166    776.39  .      Q  .         .         .        V.
 (PEAK DAY 1, HOUR  22.500)
118.583   2520.3286    553.52  .    Q    .         .         .        V.
 (PEAK DAY 1, HOUR  22.583)
118.667   2523.1392    408.09  .  Q      .         .         .        V.
 (PEAK DAY 1, HOUR  22.667)
118.750   2525.6106    358.85  .  Q      .         .         .        V.
 (PEAK DAY 1, HOUR  22.750)
118.833   2527.9712    342.75  .  Q      .         .         .        V.
 (PEAK DAY 1, HOUR  22.833)
118.917   2530.2881    336.41  .  Q      .         .         .        V.
 (PEAK DAY 1, HOUR  22.917)
119.000   2532.5784    332.54  .  Q      .         .         .        V.
 (PEAK DAY 1, HOUR  23.000)
119.083   2534.8477    329.49  .  Q      .         .         .        V.
 (PEAK DAY 1, HOUR  23.083)
119.167   2537.0972    326.62  .  Q      .         .         .        V.
 (PEAK DAY 1, HOUR  23.167)
119.250   2539.3279    323.89  .  Q      .         .         .        V.
 (PEAK DAY 1, HOUR  23.250)
119.333   2541.5400    321.20  . Q       .         .         .        V.
 (PEAK DAY 1, HOUR  23.333)
119.417   2543.7341    318.59  . Q       .         .         .        V.
 (PEAK DAY 1, HOUR  23.417)
119.500   2545.9106    316.03  . Q       .         .         .        V.
 (PEAK DAY 1, HOUR  23.500)
119.583   2548.0698    313.53  . Q       .         .         .        V.
 (PEAK DAY 1, HOUR  23.583)
119.667   2550.2122    311.07  . Q       .         .         .        V.
 (PEAK DAY 1, HOUR  23.667)
119.750   2552.3379    308.67  . Q       .         .         .        V.
 (PEAK DAY 1, HOUR  23.750)
119.833   2554.4475    306.32  . Q       .         .         .        V.
 (PEAK DAY 1, HOUR  23.833)
119.917   2556.5413    304.01  . Q       .         .         .        V.
 (PEAK DAY 1, HOUR  23.917)
120.000   2558.6194    301.75  . Q       .         .         .        V.
 (PEAK DAY 1, HOUR  24.000)
120.083   2560.6782    298.95  . Q       .         .         .        V.
 (PEAK DAY 1, HOUR  24.083)
120.167   2562.7058    294.40  . Q       .         .         .        V.
 (PEAK DAY 1, HOUR  24.167)
120.250   2564.6743    285.82  . Q       .         .         .        V.
 (PEAK DAY 1, HOUR  24.250)
120.333   2566.5491    272.23  . Q       .         .         .        V.
 (PEAK DAY 1, HOUR  24.333)
120.417   2568.2905    252.87  . Q       .         .         .        V.
 (PEAK DAY 1, HOUR  24.417)
120.500   2569.8884    232.02  . Q       .         .         .        V.
 (PEAK DAY 1, HOUR  24.500)
120.583   2571.3398    210.76  .Q        .         .         .        V.
 (PEAK DAY 1, HOUR  24.583)
120.667   2572.6167    185.41  .Q        .         .         .        V.
 (PEAK DAY 1, HOUR  24.667)
120.750   2573.6731    153.38  .Q        .         .         .        V.
 (PEAK DAY 1, HOUR  24.750)
120.833   2574.5071    121.11  .Q        .         .         .        V.
 (PEAK DAY 1, HOUR  24.833)
120.917   2575.1716     96.50  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  24.917)
121.000   2575.7180     79.33  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  25.000)
121.083   2576.1763     66.54  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  25.083)
121.167   2576.5649     56.43  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  25.167)
121.250   2576.8967     48.16  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  25.250)
121.333   2577.1807     41.22  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  25.333)
121.417   2577.4238     35.31  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  25.417)
121.500   2577.6323     30.27  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  25.500)
121.583   2577.8108     25.92  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  25.583)
121.667   2577.9629     22.09  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  25.667)
121.750   2578.0920     18.74  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  25.750)
121.833   2578.2012     15.84  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  25.833)
121.917   2578.2932     13.37  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  25.917)
122.000   2578.3711     11.29  Q         .         .         .        V.
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(PEAK DAY 1, HOUR 26.000)
122.083 2578.4370 9.57 Q . . . V.
(PEAK DAY 1, HOUR 26.083)
122.167 2578.4927 8.09 Q . . . V.
(PEAK DAY 1, HOUR 26.167)
122.250 2578.5398 6.83 Q . . . V.
(PEAK DAY 1, HOUR 26.250)
122.333 2578.5808 5.94 Q . . . V.
(PEAK DAY 1, HOUR 26.333)
122.417 2578.6177 5.37 Q . . . V.
(PEAK DAY 1, HOUR 26.417)
122.500 2578.6519 4.95 Q . . . V.
(PEAK DAY 1, HOUR 26.500)
122.583 2578.6836 4.61 Q . . . V.
(PEAK DAY 1, HOUR 26.583)
122.667 2578.7131 4.30 Q . . . V.
(PEAK DAY 1, HOUR 26.667)
122.750 2578.7407 4.00 Q . . . V.
(PEAK DAY 1, HOUR 26.750)
122.833 2578.7664 3.72 Q . . . V.
(PEAK DAY 1, HOUR 26.833)
122.917 2578.7900 3.45 Q . . . V.
(PEAK DAY 1, HOUR 26.917)
123.000 2578.8120 3.20 Q . . . V.
(PEAK DAY 1, HOUR 27.000)
123.083 2578.8323 2.95 Q . . . V.
(PEAK DAY 1, HOUR 27.083)
123.167 2578.8508 2.71 Q . . . V.
(PEAK DAY 1, HOUR 27.167)
123.250 2578.8679 2.47 Q . . . V.
(PEAK DAY 1, HOUR 27.250)
123.333 2578.8833 2.23 Q . . . V.
(PEAK DAY 1, HOUR 27.333)
123.417 2578.8970 2.00 Q . . . V.
(PEAK DAY 1, HOUR 27.417)
123.500 2578.9092 1.76 Q . . . V.
(PEAK DAY 1, HOUR 27.500)
123.583 2578.9197 1.53 Q . . . V.
(PEAK DAY 1, HOUR 27.583)
123.667 2578.9287 1.30 Q . . . V.
(PEAK DAY 1, HOUR 27.667)
123.750 2578.9360 1.08 Q . . . V.
(PEAK DAY 1, HOUR 27.750)
123.833 2578.9419 0.86 Q . . . V.
(PEAK DAY 1, HOUR 27.833)
123.917 2578.9463 0.64 Q . . . V.
(PEAK DAY 1, HOUR 27.917)
124.000 2578.9492 0.44 Q . . . V.
(PEAK DAY 1, HOUR 28.000)
Note: Computed Hydrograph continues past two days after the peak day of the design storm.

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FLOW PROCESS FROM NODE 6355.00 TO NODE 6371.00 IS CODE = 5.2

>>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<

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*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 6039.2 Ac. ***

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS(Reference: the National Engineering Handbook, Hydrology, Chapter 17, page 17-52, August,1972, U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 30.00 CHANNEL Z = 1.00
UPSTREAM ELEVATION(FT) = 314.00
DOWNSTREAM ELEVATION(FT) = 220.00
CHANNEL LENGTH(FT) = 5919.00 MANNING'S FACTOR = 0.040
CONSTANT LOSS RATE(CFS) = 0.00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 4254.50
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 2647.97
CHANNEL NORMAL VELOCITY FOR Q = 2647.97 CFS = 12.74 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.882

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE UNIT INTERVALS IS CSTAR = 0.827

CONVEX METHOD CHANNEL ROUTING RESULTS:

PEAK DAY	TIME (HRS)	CLOCK TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
2	24.000	96.000	77.37	78.29	78.29
1	0.083	96.083	77.24	77.71	77.71
1	0.167	96.167	78.44	77.36	77.36
1	0.250	96.250	82.71	77.89	77.89
1	0.333	96.333	90.81	80.58	80.58
1	0.417	96.417	103.35	86.59	86.59
1	0.500	96.500	117.22	96.65	96.65
1	0.583	96.583	131.63	109.47	109.47
1	0.667	96.667	149.32	123.43	123.43
1	0.750	96.750	172.26	139.48	139.48
1	0.833	96.833	195.70	159.64	159.64
1	0.917	96.917	213.75	182.37	182.37
1	1.000	97.000	226.51	202.86	202.86
1	1.083	97.083	236.18	218.56	218.56
1	1.167	97.167	243.98	230.20	230.20
1	1.250	97.250	250.52	239.24	239.24
1	1.333	97.333	256.17	246.59	246.59
1	1.417	97.417	261.11	252.80	252.80
1	1.500	97.500	265.48	258.18	258.18
1	1.583	97.583	269.39	262.90	262.90
1	1.667	97.667	272.97	267.09	267.09
1	1.750	97.750	276.24	270.87	270.87
1	1.833	97.833	279.21	274.32	274.32
1	1.917	97.917	281.90	277.46	277.46
1	2.000	98.000	284.33	280.32	280.32
1	2.083	98.083	286.53	282.90	282.90
1	2.167	98.167	288.58	285.24	285.24
1	2.250	98.250	290.47	287.38	287.38
1	2.333	98.333	292.12	289.36	289.36
1	2.417	98.417	293.55	291.15	291.15
1	2.500	98.500	294.88	292.71	292.71
1	2.583	98.583	296.17	294.10	294.10
1	2.667	98.667	297.45	295.42	295.42
1	2.750	98.750	298.74	296.71	296.71
1	2.833	98.833	300.02	298.00	298.00
1	2.917	98.917	301.31	299.28	299.28
1	3.000	99.000	302.60	300.57	300.57
1	3.083	99.083	303.91	301.86	301.86
1	3.167	99.167	305.22	303.16	303.16
1	3.250	99.250	306.54	304.46	304.46

1	3.333	99.333	307.87	305.78	305.78
1	3.417	99.417	309.22	307.11	307.11
1	3.500	99.500	310.58	308.45	308.45
1	3.583	99.583	311.96	309.80	309.80
1	3.667	99.667	313.35	311.17	311.17
1	3.750	99.750	314.75	312.55	312.55
1	3.833	99.833	316.16	313.94	313.94
1	3.917	99.917	317.58	315.35	315.35
1	4.000	100.000	319.01	316.76	316.76
1	4.083	100.083	320.45	318.19	318.19
1	4.167	100.167	321.85	319.62	319.62
1	4.250	100.250	323.23	321.04	321.04
1	4.333	100.333	324.59	322.43	322.43
1	4.417	100.417	325.95	323.80	323.80
1	4.500	100.500	327.32	325.17	325.17
1	4.583	100.583	328.71	326.53	326.53
1	4.667	100.667	330.11	327.91	327.91
1	4.750	100.750	331.53	329.30	329.30
1	4.833	100.833	332.96	330.71	330.71
1	4.917	100.917	334.41	332.14	332.14
1	5.000	101.000	335.87	333.57	333.57
1	5.083	101.083	337.35	335.03	335.03
1	5.167	101.167	338.85	336.50	336.50
1	5.250	101.250	340.37	337.99	337.99
1	5.333	101.333	341.90	339.50	339.50
1	5.417	101.417	343.45	341.02	341.02
1	5.500	101.500	345.02	342.56	342.56
1	5.583	101.583	346.61	344.12	344.12
1	5.667	101.667	348.22	345.70	345.70
1	5.750	101.750	349.85	347.30	347.30
1	5.833	101.833	351.49	348.91	348.91
1	5.917	101.917	353.16	350.55	350.55
1	6.000	102.000	354.85	352.21	352.21
1	6.083	102.083	356.56	353.88	353.88
1	6.167	102.167	358.29	355.58	355.58
1	6.250	102.250	360.05	357.30	357.30
1	6.333	102.333	361.82	359.04	359.04
1	6.417	102.417	363.62	360.80	360.80
1	6.500	102.500	365.44	362.59	362.59
1	6.583	102.583	367.29	364.40	364.40
1	6.667	102.667	369.16	366.23	366.23
1	6.750	102.750	371.06	368.09	368.09
1	6.833	102.833	372.98	369.97	369.97
1	6.917	102.917	374.93	371.88	371.88
1	7.000	103.000	376.90	373.81	373.81
1	7.083	103.083	378.90	375.77	375.77
1	7.167	103.167	380.93	377.75	377.75
1	7.250	103.250	382.99	379.77	379.77
1	7.333	103.333	385.08	381.81	381.81
1	7.417	103.417	387.20	383.88	383.88
1	7.500	103.500	389.34	385.98	385.98
1	7.583	103.583	391.53	388.11	388.11
1	7.667	103.667	393.74	390.28	390.28
1	7.750	103.750	395.98	392.47	392.47
1	7.833	103.833	398.26	394.70	394.70
1	7.917	103.917	400.58	396.95	396.95
1	8.000	104.000	402.92	399.25	399.25
1	8.083	104.083	405.31	401.58	401.58
1	8.167	104.167	407.73	403.94	403.94
1	8.250	104.250	410.19	406.34	406.34
1	8.333	104.333	412.69	408.78	408.78
1	8.417	104.417	415.23	411.26	411.26
1	8.500	104.500	417.81	413.78	413.78
1	8.583	104.583	420.44	416.33	416.33
1	8.667	104.667	423.10	418.93	418.93
1	8.750	104.750	425.82	421.57	421.57
1	8.833	104.833	428.57	424.26	424.26
1	8.917	104.917	431.38	426.99	426.99
1	9.000	105.000	434.22	429.77	429.77
1	9.083	105.083	437.13	432.59	432.59
1	9.167	105.167	440.08	435.46	435.46
1	9.250	105.250	443.09	438.39	438.39
1	9.333	105.333	446.14	441.36	441.36
1	9.417	105.417	449.26	444.39	444.39
1	9.500	105.500	452.43	447.48	447.48
1	9.583	105.583	455.67	450.62	450.62
1	9.667	105.667	458.96	453.82	453.82
1	9.750	105.750	462.32	457.07	457.07
1	9.833	105.833	465.74	460.40	460.40
1	9.917	105.917	469.23	463.78	463.78
1	10.000	106.000	472.78	467.23	467.23
1	10.083	106.083	476.42	470.75	470.75
1	10.167	106.167	480.11	474.34	474.34
1	10.250	106.250	483.90	478.00	478.00
1	10.333	106.333	487.75	481.73	481.73
1	10.417	106.417	491.69	485.54	485.54
1	10.500	106.500	495.71	489.44	489.44
1	10.583	106.583	499.83	493.41	493.41
1	10.667	106.667	504.03	497.47	497.47
1	10.750	106.750	508.33	501.62	501.62
1	10.833	106.833	512.71	505.87	505.87
1	10.917	106.917	517.21	510.20	510.20
1	11.000	107.000	521.80	514.64	514.64
1	11.083	107.083	526.51	519.17	519.17
1	11.167	107.167	531.32	523.81	523.81
1	11.250	107.250	536.26	528.56	528.56
1	11.333	107.333	541.31	533.43	533.43
1	11.417	107.417	546.50	538.42	538.42
1	11.500	107.500	551.80	543.53	543.53
1	11.583	107.583	557.26	548.77	548.77
1	11.667	107.667	562.85	554.14	554.14
1	11.750	107.750	568.61	559.65	559.65
1	11.833	107.833	574.50	565.32	565.32
1	11.917	107.917	580.57	571.13	571.13
1	12.000	108.000	586.80	577.10	577.10
1	12.083	108.083	593.59	583.24	583.24
1	12.167	108.167	601.70	589.74	589.74
1	12.250	108.250	612.67	597.18	597.18
1	12.333	108.333	627.20	606.67	606.67
1	12.417	108.417	645.96	619.25	619.25
1	12.500	108.500	666.29	635.65	635.65
1	12.583	108.583	687.68	654.84	654.84
1	12.667	108.667	712.68	675.52	675.52
1	12.750	108.750	743.14	698.68	698.68
1	12.833	108.833	774.34	726.23	726.23
1	12.917	108.917	800.59	756.57	756.57
1	13.000	109.000	821.91	785.03	785.03
1	13.083	109.083	840.54	809.08	809.08
1	13.167	109.167	857.65	829.46	829.46
1	13.250	109.250	873.92	847.60	847.60
1	13.333	109.333	889.49	864.44	864.44
1	13.417	109.417	904.00	880.44	880.44
1	13.500	109.500	916.99	895.53	895.53
1	13.583	109.583	929.64	909.34	909.34
1	13.667	109.667	943.89	922.30	922.30
1	13.750	109.750	960.84	935.84	935.84
1	13.833	109.833	980.40	951.39	951.39
1	13.917	109.917	1001.89	969.46	969.46
1	14.000	110.000	1023.49	989.78	989.78
1	14.083	110.083	1043.94	1011.12	1011.12
1	14.167	110.167	1064.13	1032.08	1032.08
1	14.250	110.250	1086.55	1052.47	1052.47
1	14.333	110.333	1112.14	1073.86	1073.86
1	14.417	110.417	1140.73	1097.77	1097.77

1	14.500	110.500	1171.25	1124.64	1124.64
1	14.583	110.583	1204.57	1153.95	1153.95
1	14.667	110.667	1241.38	1185.73	1185.73
1	14.750	110.750	1282.06	1220.61	1220.61
1	14.833	110.833	1327.06	1259.12	1259.12
1	14.917	110.917	1376.82	1301.69	1301.69
1	15.000	111.000	1428.72	1348.76	1348.76
1	15.083	111.083	1480.89	1399.17	1399.17
1	15.167	111.167	1533.48	1450.96	1450.96
1	15.250	111.250	1588.90	1503.28	1503.28
1	15.333	111.333	1647.35	1557.31	1557.31
1	15.417	111.417	1708.29	1614.08	1614.08
1	15.500	111.500	1768.74	1673.54	1673.54
1	15.583	111.583	1824.72	1733.97	1733.97
1	15.667	111.667	1874.76	1792.08	1792.08
1	15.750	111.750	1923.24	1845.31	1845.31
1	15.833	111.833	1986.17	1895.08	1895.08
1	15.917	111.917	2079.95	1951.36	1951.36
1	16.000	112.000	2216.23	2029.31	2029.31
1	16.083	112.083	2462.63	2142.63	2142.63
1	16.167	112.167	2862.85	2332.66	2332.66
1	16.250	112.250	3439.84	2649.94	2649.94
1	16.333	112.333	3942.25	3128.48	3128.48
1	16.417	112.417	4254.50	3649.39	3649.39
1	16.500	112.500	3989.08	4055.34	4055.34
1	16.583	112.583	3487.54	4081.02	4081.02
1	16.667	112.667	3095.75	3742.10	3742.10
1	16.750	112.750	2875.48	3326.16	3326.16
1	16.833	112.833	2731.02	3020.09	3020.09
1	16.917	112.917	2617.85	2824.74	2824.74
1	17.000	113.000	2547.24	2687.89	2687.89
1	17.083	113.083	2493.90	2592.94	2592.94
1	17.167	113.167	2445.92	2527.17	2527.17
1	17.250	113.250	2400.29	2474.50	2474.50
1	17.333	113.333	2363.78	2426.94	2426.94
1	17.417	113.417	2337.19	2385.75	2385.75
1	17.500	113.500	2317.69	2353.64	2353.64
1	17.583	113.583	2303.01	2329.81	2329.81
1	17.667	113.667	2290.42	2312.09	2312.09
1	17.750	113.750	2278.17	2297.98	2297.98
1	17.833	113.833	2265.45	2285.31	2285.31
1	17.917	113.917	2252.33	2272.74	2272.74
1	18.000	114.000	2238.23	2259.83	2259.83
1	18.083	114.083	2223.72	2246.23	2246.23
1	18.167	114.167	2207.72	2232.01	2232.01
1	18.250	114.250	2188.26	2216.77	2216.77
1	18.333	114.333	2167.00	2199.09	2199.09
1	18.417	114.417	2143.79	2178.99	2178.99
1	18.500	114.500	2120.64	2156.90	2156.90
1	18.583	114.583	2098.61	2133.92	2133.92
1	18.667	114.667	2079.66	2111.39	2111.39
1	18.750	114.750	2062.94	2090.88	2090.88
1	18.833	114.833	2046.99	2072.83	2072.83
1	18.917	114.917	2030.98	2056.29	2056.29
1	19.000	115.000	2015.69	2040.20	2040.20
1	19.083	115.083	2001.79	2024.56	2024.56
1	19.167	115.167	1988.52	2009.94	2009.94
1	19.250	115.250	1975.56	1996.24	1996.24
1	19.333	115.333	1963.32	1983.06	1983.06
1	19.417	115.417	1951.36	1970.44	1970.44
1	19.500	115.500	1939.19	1958.28	1958.28
1	19.583	115.583	1925.73	1946.18	1946.18
1	19.667	115.667	1909.75	1933.35	1933.35
1	19.750	115.750	1891.25	1918.67	1918.67
1	19.833	115.833	1871.26	1901.59	1901.59
1	19.917	115.917	1851.00	1882.56	1882.56
1	20.000	116.000	1831.06	1862.59	1862.59
1	20.083	116.083	1811.22	1842.55	1842.55
1	20.167	116.167	1791.27	1822.65	1822.65
1	20.250	116.250	1771.22	1802.74	1802.74
1	20.333	116.333	1750.92	1782.74	1782.74
1	20.417	116.417	1730.06	1762.57	1762.57
1	20.500	116.500	1709.39	1742.00	1742.00
1	20.583	116.583	1688.83	1721.29	1721.29
1	20.667	116.667	1668.40	1700.67	1700.67
1	20.750	116.750	1648.10	1680.17	1680.17
1	20.833	116.833	1627.80	1659.79	1659.79
1	20.917	116.917	1607.28	1639.48	1639.48
1	21.000	117.000	1586.56	1619.06	1619.06
1	21.083	117.083	1566.04	1598.45	1598.45
1	21.167	117.167	1545.60	1577.86	1577.86
1	21.250	117.250	1524.76	1557.37	1557.37
1	21.333	117.333	1502.84	1536.71	1536.71
1	21.417	117.417	1479.84	1515.33	1515.33
1	21.500	117.500	1456.36	1492.94	1492.94
1	21.583	117.583	1431.99	1469.80	1469.80
1	21.667	117.667	1404.34	1445.91	1445.91
1	21.750	117.750	1371.25	1419.90	1419.90
1	21.833	117.833	1333.60	1389.68	1389.68
1	21.917	117.917	1293.52	1354.70	1354.70
1	22.000	118.000	1252.12	1316.24	1316.24
1	22.083	118.083	1209.47	1275.75	1275.75
1	22.167	118.167	1163.98	1233.85	1233.85
1	22.250	118.250	1113.86	1189.84	1189.84
1	22.333	118.333	1053.81	1142.18	1142.18
1	22.417	118.417	955.52	1087.28	1087.28
1	22.500	118.500	776.39	1008.08	1008.08
1	22.583	118.583	553.52	870.72	870.72
1	22.667	118.667	408.09	675.87	675.87
1	22.750	118.750	358.85	498.42	498.42
1	22.833	118.833	342.75	397.87	397.87
1	22.917	118.917	336.41	357.14	357.14
1	23.000	119.000	332.54	341.91	341.91
1	23.083	119.083	329.49	335.34	335.34
1	23.167	119.167	326.62	331.43	331.43
1	23.250	119.250	323.89	328.32	328.32
1	23.333	119.333	321.20	325.48	325.48
1	23.417	119.417	318.59	322.75	322.75
1	23.500	119.500	316.03	320.10	320.10
1	23.583	119.583	313.53	317.51	317.51
1	23.667	119.667	311.07	314.97	314.97
1	23.750	119.750	308.67	312.49	312.49
1	23.833	119.833	306.32	310.06	310.06
1	23.917	119.917	304.01	307.68	307.68
1	24.000	120.000	301.75	305.34	305.34
1	24.083	120.083	298.95	303.05	303.05
1	24.167	120.167	294.40	300.50	300.50
1	24.250	120.250	285.82	296.83	296.83
1	24.333	120.333	272.23	290.32	290.32
1	24.417	120.417	252.87	279.48	279.48
1	24.500	120.500	232.02	263.34	263.34
1	24.583	120.583	210.76	243.75	243.75
1	24.667	120.667	185.41	222.90	222.90
1	24.750	120.750	153.38	199.57	199.57
1	24.833	120.833	121.11	171.07	171.07
1	24.917	120.917	96.50	139.52	139.52
1	25.000	121.000	79.33	111.39	111.39
1	25.083	121.083	66.54	90.07	90.07
1	25.167	121.167	56.43	74.48	74.48
1	25.250	121.250	48.16	62.61	62.61
1	25.333	121.333	41.22	53.16	53.16
1	25.417	121.417	35.31	45.38	45.38
1	25.500	121.500	30.27	38.84	38.84
1	25.583	121.583	25.92	33.28	33.28

1	25.667	121.667	22.09	28.51	28.51
1	25.750	121.750	18.74	24.36	24.36
1	25.833	121.833	15.84	20.73	20.73
1	25.917	121.917	13.37	17.57	17.57
1	26.000	122.000	11.29	14.85	14.85
1	26.083	122.083	9.57	12.54	12.54
1	26.167	122.167	8.09	10.61	10.61
1	26.250	122.250	6.83	8.97	8.97
1	26.333	122.333	5.94	7.58	7.58
1	26.417	122.417	5.37	6.49	6.49
1	26.500	122.500	4.95	5.74	5.74
1	26.583	122.583	4.61	5.22	5.22
1	26.667	122.667	4.30	4.82	4.82
1	26.750	122.750	4.00	4.49	4.49
1	26.833	122.833	3.72	4.18	4.18
1	26.917	122.917	3.45	3.88	3.88
1	27.000	123.000	3.20	3.60	3.60
1	27.083	123.083	2.95	3.34	3.34
1	27.167	123.167	2.71	3.09	3.09
1	27.250	123.250	2.47	2.85	2.85
1	27.333	123.333	2.23	2.60	2.60
1	27.417	123.417	2.00	2.37	2.37
1	27.500	123.500	1.76	2.13	2.13
1	27.583	123.583	1.53	1.90	1.90
1	27.667	123.667	1.30	1.67	1.67
1	27.750	123.750	1.08	1.44	1.44
1	27.833	123.833	0.86	1.21	1.21
1	27.917	123.917	0.64	0.98	0.98
1	28.000	124.000	0.44	0.77	0.77

Note: Computed Hydrograph continues past two days after the peak day of the design storm.

PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 2578.954 AF
OUTFLOW VOLUME = 2578.954 AF
LOSS VOLUME = 0.000 AF

FLOW PROCESS FROM NODE 6360.00 TO NODE 6371.00 IS CODE = 1

*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 922.3 Ac. ***
>>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<

(UNIT-HYDROGRAPH ADDED TO STREAM #2)

WATERSHED AREA = 922.300 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.250 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY(DEVELOPED):
"S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.900
FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.050
MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.050
VALLEY(UNDEVELOPED)/DESERT:
"S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.000
DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.000
BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:

LOSS RATES	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
5-MINUTE (INCHES)	0.58	0.27	0.12	0.06	0.04
30-MINUTE (INCHES)	1.22	0.56	0.24	0.13	0.09
1-HOUR (INCHES)	1.62	0.75	0.33	0.17	0.12
3-HOUR (INCHES)	2.71	1.25	0.54	0.28	0.21
6-HOUR (INCHES)	3.75	1.73	0.75	0.39	0.29
24-HOUR (INCHES)	6.28	2.89	1.26	0.66	0.48
LOSS RATE(IN/HR)	0.120	0.120	0.120	0.120	0.120
LOW LOSS FRACTION	0.510	0.760	0.950	0.990	0.990

5-MINUTE FACTOR = 0.959
30-MINUTE FACTOR = 0.959
1-HOUR FACTOR = 0.959
3-HOUR FACTOR = 0.994
6-HOUR FACTOR = 0.997
24-HOUR FACTOR = 0.998

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 33.333

RUNOFF HYDROGRAPH LISTING LIMITS:
MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 96.00
MODEL TIME(HOURS) FOR END OF RESULTS = 124.00

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	2.292	255.704
2	13.821	1285.900
3	35.522	2420.567
4	62.164	2971.648
5	80.648	2061.668
6	89.997	1042.866
7	94.646	518.513
8	96.625	220.790
9	97.489	96.296
10	98.211	80.598
11	98.708	55.360
12	99.005	33.223
13	99.174	18.845
14	99.253	8.821
15	99.326	8.100
16	99.394	7.535
17	99.458	7.164
18	99.518	6.727
19	99.574	6.257
20	99.626	5.759
21	99.675	5.514
22	99.718	4.708
23	99.759	4.643
24	99.799	4.443
25	99.827	3.130
26	99.851	2.675
27	99.875	2.675
28	99.897	2.469
29	99.906	1.014
30	99.913	0.730
31	99.919	0.731
32	99.926	0.729

33	99.932	0.731
34	99.939	0.729
35	99.946	0.730
36	99.952	0.729
37	99.959	0.729
38	99.965	0.729
39	99.972	0.730
40	99.978	0.729
41	99.985	0.729
42	99.991	0.729
43	99.998	0.729
44	100.000	0.237

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 433.5397

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 453.8287

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5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	650.0	1300.0	1950.0	2600.0
96.000	126.4908	10.29	Q	.V	.	.	.
(PEAK DAY 2, HOUR 24.000)							
96.083	126.5666	11.01	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.083)							
96.167	126.6693	14.91	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.167)							
96.250	126.8231	22.33	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.250)							
96.333	127.0401	31.50	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.333)							
96.417	127.3012	37.92	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.417)							
96.500	127.5853	41.24	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.500)							
96.583	127.8812	42.97	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.583)							
96.667	128.1828	43.79	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.667)							
96.750	128.4874	44.23	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.750)							
96.833	128.7947	44.62	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.833)							
96.917	129.1042	44.94	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.917)							
97.000	129.4155	45.20	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.000)							
97.083	129.7283	45.41	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.083)							
97.167	130.0422	45.59	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.167)							
97.250	130.3575	45.77	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.250)							
97.333	130.6740	45.95	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.333)							
97.417	130.9917	46.14	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.417)							
97.500	131.3107	46.32	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.500)							
97.583	131.6310	46.50	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.583)							
97.667	131.9525	46.68	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.667)							
97.750	132.2753	46.87	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.750)							
97.833	132.5993	47.05	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.833)							
97.917	132.9246	47.23	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.917)							
98.000	133.2512	47.42	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.000)							
98.083	133.5791	47.60	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.083)							
98.167	133.9082	47.79	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.167)							
98.250	134.2386	47.97	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.250)							
98.333	134.5703	48.16	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.333)							
98.417	134.9032	48.34	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.417)							
98.500	135.2374	48.53	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.500)							
98.583	135.5729	48.71	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.583)							
98.667	135.9097	48.90	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.667)							
98.750	136.2478	49.09	Q	. V	.	.	.
(PEAK DAY 1, HOUR 2.750)							
98.833	136.5872	49.28	Q	. V	.	.	.
(PEAK DAY 1, HOUR 2.833)							
98.917	136.9279	49.48	Q	. V	.	.	.
(PEAK DAY 1, HOUR 2.917)							
99.000	137.2700	49.67	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.000)							
99.083	137.6135	49.87	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.083)							
99.167	137.9583	50.07	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.167)							
99.250	138.3045	50.27	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.250)							
99.333	138.6522	50.48	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.333)							
99.417	139.0012	50.68	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.417)							
99.500	139.3517	50.89	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.500)							
99.583	139.7036	51.10	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.583)							
99.667	140.0570	51.31	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.667)							
99.750	140.4118	51.52	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.750)							
99.833	140.7682	51.74	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.833)							
99.917	141.1260	51.95	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.917)							
100.000	141.4853	52.18	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.000)							
100.083	141.8462	52.40	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.083)							
100.167	142.2086	52.62	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.167)							
100.250	142.5726	52.85	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.250)							
100.333	142.9381	53.08	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.333)							
100.417	143.3053	53.31	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.417)							
100.500	143.6741	53.55	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.500)							
100.583	144.0445	53.78	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.583)							
100.667	144.4165	54.02	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.667)							
100.750	144.7903	54.27	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.750)							
100.833	145.1657	54.51	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.833)							
100.917	145.5429	54.76	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.917)							
101.000	145.9218	55.02	Q	. V	.	.	.
(PEAK DAY 1, HOUR 5.000)							
101.083	146.3024	55.27	Q	. V	.	.	.

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 (PEAK DAY 1, HOUR   5.083)
 101.167    146.6848     55.53  Q          . V        .          .          .
 (PEAK DAY 1, HOUR   5.167)
 101.250    147.0691     55.79  Q          . V        .          .          .
 (PEAK DAY 1, HOUR   5.250)
 101.333    147.4551     56.05  Q          . V        .          .          .
 (PEAK DAY 1, HOUR   5.333)
 101.417    147.8430     56.32  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   5.417)
 101.500    148.2327     56.59  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   5.500)
 101.583    148.6244     56.87  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   5.583)
 101.667    149.0179     57.14  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   5.667)
 101.750    149.4134     57.42  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   5.750)
 101.833    149.8109     57.71  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   5.833)
 101.917    150.2103     58.00  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   5.917)
 102.000    150.6118     58.29  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.000)
 102.083    151.0152     58.59  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.083)
 102.167    151.4208     58.89  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.167)
 102.250    151.8285     59.19  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.250)
 102.333    152.2383     59.50  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.333)
 102.417    152.6502     59.81  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.417)
 102.500    153.0643     60.13  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.500)
 102.583    153.4807     60.45  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.583)
 102.667    153.8993     60.78  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.667)
 102.750    154.3201     61.11  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.750)
 102.833    154.7433     61.45  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.833)
 102.917    155.1688     61.78  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.917)
 103.000    155.5967     62.13  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   7.000)
 103.083    156.0270     62.48  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   7.083)
 103.167    156.4598     62.84  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   7.167)
 103.250    156.8950     63.19  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   7.250)
 103.333    157.3327     63.56  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   7.333)
 103.417    157.7730     63.93  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   7.417)
 103.500    158.2159     64.31  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   7.500)
 103.583    158.6615     64.69  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   7.583)
 103.667    159.1097     65.08  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   7.667)
 103.750    159.5606     65.47  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   7.750)
 103.833    160.0143     65.88  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   7.833)
 103.917    160.4708     66.28  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   7.917)
 104.000    160.9302     66.70  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.000)
 104.083    161.3924     67.12  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.083)
 104.167    161.8577     67.55  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.167)
 104.250    162.3259     67.98  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.250)
 104.333    162.7971     68.43  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.333)
 104.417    163.2715     68.88  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.417)
 104.500    163.7490     69.34  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.500)
 104.583    164.2297     69.80  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.583)
 104.667    164.7137     70.28  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.667)
 104.750    165.2010     70.76  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.750)
 104.833    165.6917     71.25  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.833)
 104.917    166.1859     71.75  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.917)
 105.000    166.6836     72.26  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   9.000)
 105.083    167.1848     72.78  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   9.083)
 105.167    167.6897     73.31  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   9.167)
 105.250    168.1983     73.85  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   9.250)
 105.333    168.7106     74.40  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   9.333)
 105.417    169.2269     74.96  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   9.417)
 105.500    169.7471     75.53  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   9.500)
 105.583    170.2712     76.11  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR   9.583)
 105.667    170.7995     76.71  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR   9.667)
 105.750    171.3320     77.31  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR   9.750)
 105.833    171.8687     77.93  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR   9.833)
 105.917    172.4097     78.56  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR   9.917)
 106.000    172.9553     79.21  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR  10.000)
 106.083    173.5053     79.87  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR  10.083)
 106.167    174.0600     80.55  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR  10.167)
 106.250    174.6195     81.23  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR  10.250)
 106.333    175.1838     81.94  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR  10.333)
 106.417    175.7531     82.66  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR  10.417)
 106.500    176.3275     83.40  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR  10.500)
 106.583    176.9070     84.15  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR  10.583)
 106.667    177.4919     84.93  .Q         .    V     .          .          .
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 (PEAK DAY 1, HOUR  10.667)
106.750    178.0822     85.71  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.750)
106.833    178.6782     86.53  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.833)
106.917    179.2798     87.36  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.917)
107.000    179.8873     88.21  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.000)
107.083    180.5009     89.08  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.083)
107.167    181.1206     89.99  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.167)
107.250    181.7466     90.90  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.250)
107.333    182.3792     91.85  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.333)
107.417    183.0185     92.82  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.417)
107.500    183.6647     93.83  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.500)
107.583    184.3179     94.85  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.583)
107.667    184.9784     95.91  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.667)
107.750    185.6464     96.99  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.750)
107.833    186.3222     98.12  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.833)
107.917    187.0058     99.27  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.917)
108.000    187.6978    100.47  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  12.000)
108.083    188.4071    103.00  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  12.083)
108.167    189.1709    110.90  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  12.167)
108.250    190.0303    124.79  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  12.250)
108.333    191.0077    141.92  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.333)
108.417    192.0742    154.86  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.417)
108.500    193.1971    163.04  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.500)
108.583    194.3594    168.77  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.583)
108.667    195.5523    173.20  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.667)
108.750    196.7720    177.11  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.750)
108.833    198.0194    181.12  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.833)
108.917    199.2942    185.10  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.917)
109.000    200.5969    189.16  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.000)
109.083    201.9279    193.26  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.083)
109.167    203.2883    197.53  .  Q      .      V  .         .         .
 (PEAK DAY 1, HOUR  13.167)
109.250    204.6788    201.90  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.250)
109.333    206.1012    206.52  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.333)
109.417    207.5563    211.28  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.417)
109.500    209.0460    216.31  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.500)
109.583    210.5715    221.50  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.583)
109.667    212.1349    227.01  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.667)
109.750    213.7376    232.71  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.750)
109.833    215.3821    238.78  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.833)
109.917    217.0699    245.07  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  13.917)
110.000    218.8041    251.80  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  14.000)
110.083    220.5902    259.34  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  14.083)
110.167    222.4465    269.54  .   Q     .        V.         .         .
 (PEAK DAY 1, HOUR  14.167)
110.250    224.3919    282.46  .   Q     .        V.         .         .
 (PEAK DAY 1, HOUR  14.250)
110.333    226.4383    297.14  .   Q     .        V.         .         .
 (PEAK DAY 1, HOUR  14.333)
110.417    228.5758    310.36  .   Q     .         V         .         .
 (PEAK DAY 1, HOUR  14.417)
110.500    230.7948    322.20  .   Q     .         V         .         .
 (PEAK DAY 1, HOUR  14.500)
110.583    233.0915    333.49  .    Q    .         V         .         .
 (PEAK DAY 1, HOUR  14.583)
110.667    235.4680    345.08  .    Q    .         V         .         .
 (PEAK DAY 1, HOUR  14.667)
110.750    237.9275    357.12  .    Q    .         V         .         .
 (PEAK DAY 1, HOUR  14.750)
110.833    240.4778    370.30  .    Q    .         .V        .         .
 (PEAK DAY 1, HOUR  14.833)
110.917    243.1250    384.38  .    Q    .         .V        .         .
 (PEAK DAY 1, HOUR  14.917)
111.000    245.8795    399.94  .     Q   .         .V        .         .
 (PEAK DAY 1, HOUR  15.000)
111.083    248.7500    416.80  .     Q   .         .V        .         .
 (PEAK DAY 1, HOUR  15.083)
111.167    251.7508    435.72  .     Q   .         . V       .         .
 (PEAK DAY 1, HOUR  15.167)
111.250    254.8950    456.54  .      Q  .         . V       .         .
 (PEAK DAY 1, HOUR  15.250)
111.333    258.2032    480.36  .      Q  .         . V       .         .
 (PEAK DAY 1, HOUR  15.333)
111.417    261.6745    504.03  .      Q  .         .  V      .         .
 (PEAK DAY 1, HOUR  15.417)
111.500    265.2556    519.98  .      Q  .         .  V      .         .
 (PEAK DAY 1, HOUR  15.500)
111.583    268.8864    527.19  .       Q .         .  V      .         .
 (PEAK DAY 1, HOUR  15.583)
111.667    272.5746    535.52  .       Q .         .   V     .         .
 (PEAK DAY 1, HOUR  15.667)
111.750    276.4615    564.39  .       Q .         .   V     .         .
 (PEAK DAY 1, HOUR  15.750)
111.833    280.7536    623.20  .        Q.         .   V     .         .
 (PEAK DAY 1, HOUR  15.833)
111.917    285.6821    715.63  .         .Q        .    V    .         .
 (PEAK DAY 1, HOUR  15.917)
112.000    291.6738    869.99  .         . Q       .    V    .         .
 (PEAK DAY 1, HOUR  16.000)
112.083    299.9257   1198.18  .         .       Q .     V   .         .
 (PEAK DAY 1, HOUR  16.083)
112.167    312.6125   1842.12  .         .         .      VQ .         .
 (PEAK DAY 1, HOUR  16.167)
112.250    329.2037   2409.04  .         .         .        V.      Q  .
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 (PEAK DAY 1, HOUR  16.250)
112.333    346.6870   2538.58  .         .         .         V         Q.
 (PEAK DAY 1, HOUR  16.333)
112.417    360.1437   1953.91  .         .         .         QV        .
 (PEAK DAY 1, HOUR  16.417)
112.500    369.2429   1321.20  .         .         Q         . V       .
 (PEAK DAY 1, HOUR  16.500)
112.583    375.7551    945.57  .         .   Q     .         .  V      .
 (PEAK DAY 1, HOUR  16.583)
112.667    380.7361    723.23  .         .Q        .         .  V      .
 (PEAK DAY 1, HOUR  16.667)
112.750    384.8868    602.69  .        Q.         .         .  V      .
 (PEAK DAY 1, HOUR  16.750)
112.833    388.6063    540.07  .       Q .         .         .   V     .
 (PEAK DAY 1, HOUR  16.833)
112.917    391.9329    483.02  .      Q  .         .         .   V     .
 (PEAK DAY 1, HOUR  16.917)
113.000    394.9217    433.96  .     Q   .         .         .   V     .
 (PEAK DAY 1, HOUR  17.000)
113.083    397.6353    394.02  .     Q   .         .         .    V    .
 (PEAK DAY 1, HOUR  17.083)
113.167    400.1144    359.97  .    Q    .         .         .    V    .
 (PEAK DAY 1, HOUR  17.167)
113.250    402.3992    331.75  .    Q    .         .         .    V    .
 (PEAK DAY 1, HOUR  17.250)
113.333    404.5044    305.67  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  17.333)
113.417    406.4601    283.98  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  17.417)
113.500    408.2940    266.28  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  17.500)
113.583    410.0247    251.30  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  17.583)
113.667    411.6657    238.27  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  17.667)
113.750    413.2271    226.73  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  17.750)
113.833    414.7146    215.98  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  17.833)
113.917    416.1360    206.38  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  17.917)
114.000    417.4958    197.44  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.000)
114.083    418.7867    187.45  .Q        .         .         .     V   .
 (PEAK DAY 1, HOUR  18.083)
114.167    419.9803    173.31  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  18.167)
114.250    421.0444    154.50  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  18.250)
114.333    421.9666    133.89  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  18.333)
114.417    422.7832    118.57 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  18.417)
114.500    423.5391    109.76 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  18.500)
114.583    424.2572    104.27 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  18.583)
114.667    424.9502    100.61 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  18.667)
114.750    425.6237     97.79 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  18.750)
114.833    426.2794     95.21 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  18.833)
114.917    426.9191     92.90 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  18.917)
115.000    427.5446     90.82 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  19.000)
115.083    428.1571     88.93 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  19.083)
115.167    428.7575     87.18 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  19.167)
115.250    429.3465     85.52 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  19.250)
115.333    429.9244     83.92 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  19.333)
115.417    430.4919     82.39 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  19.417)
115.500    431.0491     80.91 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  19.500)
115.583    431.5964     79.46 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  19.583)
115.667    432.1327     77.87 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  19.667)
115.750    432.6594     76.47 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  19.750)
115.833    433.1776     75.24 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  19.833)
115.917    433.6878     74.08 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  19.917)
116.000    434.1903     72.96 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  20.000)
116.083    434.6854     71.89 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  20.083)
116.167    435.1735     70.87 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  20.167)
116.250    435.6548     69.88 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  20.250)
116.333    436.1295     68.93 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  20.333)
116.417    436.5980     68.02 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  20.417)
116.500    437.0605     67.15 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  20.500)
116.583    437.5171     66.30 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  20.583)
116.667    437.9680     65.48 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  20.667)
116.750    438.4135     64.69 Q          .         .         .       V .
 (PEAK DAY 1, HOUR  20.750)
116.833    438.8538     63.92 Q          .         .         .       V .
 (PEAK DAY 1, HOUR  20.833)
116.917    439.2888     63.18 Q          .         .         .       V .
 (PEAK DAY 1, HOUR  20.917)
117.000    439.7190     62.45 Q          .         .         .       V .
 (PEAK DAY 1, HOUR  21.000)
117.083    440.1443     61.75 Q          .         .         .       V .
 (PEAK DAY 1, HOUR  21.083)
117.167    440.5648     61.07 Q          .         .         .       V .
 (PEAK DAY 1, HOUR  21.167)
117.250    440.9809     60.41 Q          .         .         .       V .
 (PEAK DAY 1, HOUR  21.250)
117.333    441.3925     59.77 Q          .         .         .       V .
 (PEAK DAY 1, HOUR  21.333)
117.417    441.7998     59.14 Q          .         .         .       V .
 (PEAK DAY 1, HOUR  21.417)
117.500    442.2029     58.53 Q          .         .         .       V .
 (PEAK DAY 1, HOUR  21.500)
117.583    442.6020     57.94 Q          .         .         .        V.
 (PEAK DAY 1, HOUR  21.583)
117.667    442.9971     57.37 Q          .         .         .        V.
 (PEAK DAY 1, HOUR  21.667)
117.750    443.3883     56.81 Q          .         .         .        V.
 (PEAK DAY 1, HOUR  21.750)
117.833    443.7758     56.26 Q          .         .         .        V.
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(PEAK DAY 1, HOUR 21.833)
117.917 444.1596 55.73 Q . . . V.
(PEAK DAY 1, HOUR 21.917)
118.000 444.5399 55.21 Q . . . V.
(PEAK DAY 1, HOUR 22.000)
118.083 444.9166 54.71 Q . . . V.
(PEAK DAY 1, HOUR 22.083)
118.167 445.2900 54.21 Q . . . V.
(PEAK DAY 1, HOUR 22.167)
118.250 445.6600 53.73 Q . . . V.
(PEAK DAY 1, HOUR 22.250)
118.333 446.0268 53.26 Q . . . V.
(PEAK DAY 1, HOUR 22.333)
118.417 446.3904 52.79 Q . . . V.
(PEAK DAY 1, HOUR 22.417)
118.500 446.7509 52.34 Q . . . V.
(PEAK DAY 1, HOUR 22.500)
118.583 447.1083 51.90 Q . . . V.
(PEAK DAY 1, HOUR 22.583)
118.667 447.4628 51.47 Q . . . V.
(PEAK DAY 1, HOUR 22.667)
118.750 447.8144 51.05 Q . . . V.
(PEAK DAY 1, HOUR 22.750)
118.833 448.1631 50.64 Q . . . V.
(PEAK DAY 1, HOUR 22.833)
118.917 448.5091 50.23 Q . . . V.
(PEAK DAY 1, HOUR 22.917)
119.000 448.8523 49.83 Q . . . V.
(PEAK DAY 1, HOUR 23.000)
119.083 449.1928 49.45 Q . . . V.
(PEAK DAY 1, HOUR 23.083)
119.167 449.5307 49.06 Q . . . V.
(PEAK DAY 1, HOUR 23.167)
119.250 449.8661 48.69 Q . . . V.
(PEAK DAY 1, HOUR 23.250)
119.333 450.1989 48.33 Q . . . V.
(PEAK DAY 1, HOUR 23.333)
119.417 450.5292 47.97 Q . . . V.
(PEAK DAY 1, HOUR 23.417)
119.500 450.8572 47.62 Q . . . V.
(PEAK DAY 1, HOUR 23.500)
119.583 451.1827 47.27 Q . . . V.
(PEAK DAY 1, HOUR 23.583)
119.667 451.5060 46.93 Q . . . V.
(PEAK DAY 1, HOUR 23.667)
119.750 451.8269 46.60 Q . . . V.
(PEAK DAY 1, HOUR 23.750)
119.833 452.1455 46.27 Q . . . V.
(PEAK DAY 1, HOUR 23.833)
119.917 452.4620 45.95 Q . . . V.
(PEAK DAY 1, HOUR 23.917)
120.000 452.7763 45.64 Q . . . V.
(PEAK DAY 1, HOUR 24.000)
120.083 453.0815 44.31 Q . . . V.
(PEAK DAY 1, HOUR 24.083)
120.167 453.3494 38.91 Q . . . V.
(PEAK DAY 1, HOUR 24.167)
120.250 453.5494 29.03 Q . . . V.
(PEAK DAY 1, HOUR 24.250)
120.333 453.6667 17.04 Q . . . V.
(PEAK DAY 1, HOUR 24.333)
120.417 453.7269 8.73 Q . . . V.
(PEAK DAY 1, HOUR 24.417)
120.500 453.7581 4.53 Q . . . V.
(PEAK DAY 1, HOUR 24.500)
120.583 453.7749 2.44 Q . . . V.
(PEAK DAY 1, HOUR 24.583)
120.667 453.7856 1.55 Q . . . V.
(PEAK DAY 1, HOUR 24.667)
120.750 453.7936 1.16 Q . . . V.
(PEAK DAY 1, HOUR 24.750)
120.833 453.7993 0.83 Q . . . V.
(PEAK DAY 1, HOUR 24.833)
120.917 453.8034 0.60 Q . . . V.
(PEAK DAY 1, HOUR 24.917)
121.000 453.8066 0.47 Q . . . V.
(PEAK DAY 1, HOUR 25.000)
121.083 453.8093 0.39 Q . . . V.
(PEAK DAY 1, HOUR 25.083)
121.167 453.8117 0.35 Q . . . V.
(PEAK DAY 1, HOUR 25.167)
121.250 453.8139 0.32 Q . . . V.
(PEAK DAY 1, HOUR 25.250)
121.333 453.8159 0.28 Q . . . V.
(PEAK DAY 1, HOUR 25.333)
121.417 453.8176 0.25 Q . . . V.
(PEAK DAY 1, HOUR 25.417)
121.500 453.8192 0.23 Q . . . V.
(PEAK DAY 1, HOUR 25.500)
121.583 453.8205 0.20 Q . . . V.
(PEAK DAY 1, HOUR 25.583)
121.667 453.8217 0.17 Q . . . V.
(PEAK DAY 1, HOUR 25.667)
121.750 453.8228 0.15 Q . . . V.
(PEAK DAY 1, HOUR 25.750)
121.833 453.8237 0.13 Q . . . V.
(PEAK DAY 1, HOUR 25.833)
121.917 453.8244 0.11 Q . . . V.
(PEAK DAY 1, HOUR 25.917)
122.000 453.8251 0.09 Q . . . V.
(PEAK DAY 1, HOUR 26.000)
122.083 453.8256 0.08 Q . . . V.
(PEAK DAY 1, HOUR 26.083)
122.167 453.8261 0.07 Q . . . V.
(PEAK DAY 1, HOUR 26.167)
122.250 453.8265 0.06 Q . . . V.
(PEAK DAY 1, HOUR 26.250)
122.333 453.8268 0.05 Q . . . V.
(PEAK DAY 1, HOUR 26.333)
122.417 453.8271 0.04 Q . . . V.
(PEAK DAY 1, HOUR 26.417)
122.500 453.8274 0.04 Q . . . V.
(PEAK DAY 1, HOUR 26.500)
122.583 453.8277 0.04 Q . . . V.
(PEAK DAY 1, HOUR 26.583)
122.667 453.8279 0.03 Q . . . V.
(PEAK DAY 1, HOUR 26.667)
122.750 453.8281 0.03 Q . . . V.
(PEAK DAY 1, HOUR 26.750)
122.833 453.8283 0.03 Q . . . V.
(PEAK DAY 1, HOUR 26.833)
122.917 453.8285 0.02 Q . . . V.
(PEAK DAY 1, HOUR 26.917)
123.000 453.8286 0.02 Q . . . V.
(PEAK DAY 1, HOUR 27.000)
123.083 453.8288 0.02 Q . . . V
(PEAK DAY 1, HOUR 27.083)
123.167 453.8289 0.02 Q . . . V
(PEAK DAY 1, HOUR 27.167)
123.250 453.8290 0.01 Q . . . V
(PEAK DAY 1, HOUR 27.250)
123.333 453.8290 0.01 Q . . . V
(PEAK DAY 1, HOUR 27.333)
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****************************************************************************
  FLOW PROCESS FROM NODE   6371.00 TO NODE   6371.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  6961.5 Ac. ***
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE   6371.00 TO NODE   6371.00 IS CODE =  11
----------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
============================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  6961.5 Ac. ***

            STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
          (Note: Time indicated is at END of Each Unit Intervals)
----------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.     1425.0    2850.0    4275.0    5700.0
----------------------------------------------------------------------------
  96.000    806.5950     88.58  Q         V         .         .         .
 (PEAK DAY 2, HOUR  24.000)
  96.083    807.2060     88.71  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.083)
  96.167    807.8414     92.27  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.167)
  96.250    808.5317    100.22  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.250)
  96.333    809.3036    112.09  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.333)
  96.417    810.1612    124.51  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.417)
  96.500    811.1109    137.90  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.500)
  96.583    812.1607    152.44  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.583)
  96.667    813.3124    167.22  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.667)
  96.750    814.5776    183.71  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.750)
  96.833    815.9844    204.27  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.833)
  96.917    817.5499    227.31  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.917)
  97.000    819.2583    248.06  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   1.000)
  97.083    821.0762    263.96  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   1.083)
  97.167    822.9756    275.80  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   1.167)
  97.250    824.9385    285.01  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.250)
  97.333    826.9533    292.55  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.333)
  97.417    829.0121    298.94  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.417)
  97.500    831.1092    304.50  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.500)
  97.583    833.2400    309.40  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.583)
  97.667    835.4009    313.77  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   1.667)
  97.750    837.5892    317.74  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   1.750)
  97.833    839.8026    321.37  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   1.833)
  97.917    842.0388    324.70  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   1.917)
  98.000    844.2959    327.74  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.000)
  98.083    846.5721    330.51  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.083)
  98.167    848.8657    333.03  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.167)
  98.250    851.1752    335.35  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.250)
  98.333    853.4998    337.52  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.333)
  98.417    855.8378    339.49  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.417)
  98.500    858.1879    341.23  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.500)
  98.583    860.5489    342.82  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.583)
  98.667    862.9203    344.33  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.667)
  98.750    865.3019    345.80  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.750)
  98.833    867.6936    347.28  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.833)
  98.917    870.0955    348.76  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.917)
  99.000    872.5077    350.25  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.000)
  99.083    874.9301    351.73  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.083)
  99.167    877.3629    353.23  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.167)
  99.250    879.8059    354.74  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.250)
  99.333    882.2595    356.26  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.333)
  99.417    884.7236    357.79  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.417)
  99.500    887.1984    359.34  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.500)
  99.583    889.6839    360.90  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.583)
  99.667    892.1804    362.48  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.667)
  99.750    894.6877    364.07  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.750)
  99.833    897.2062    365.68  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.833)
  99.917    899.7359    367.30  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.917)
 100.000    902.2768    368.94  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   4.000)
 100.083    904.8290    370.59  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   4.083)
 100.167    907.3927    372.25  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   4.167)
 100.250    909.9677    373.89  . Q       . V       .         .         .
 (PEAK DAY 1, HOUR   4.250)
 100.333    912.5539    375.51  . Q       . V       .         .         .
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(PEAK DAY 1, HOUR 4.333)								
100.417	915.1511	377.11	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 4.417)								
100.500	917.7593	378.71	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 4.500)								
100.583	920.3785	380.32	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 4.583)								
100.667	923.0090	381.94	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 4.667)								
100.750	925.6506	383.57	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 4.750)								
100.833	928.3037	385.23	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 4.833)								
100.917	930.9683	386.90	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 4.917)								
101.000	933.6445	388.59	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.000)								
101.083	936.3325	390.30	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.083)								
101.167	939.0325	392.03	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.167)								
101.250	941.7444	393.78	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.250)								
101.333	944.4686	395.55	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.333)								
101.417	947.2051	397.34	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.417)								
101.500	949.9541	399.15	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.500)								
101.583	952.7157	400.98	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.583)								
101.667	955.4901	402.84	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.667)								
101.750	958.2775	404.72	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.750)								
101.833	961.0779	406.62	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.833)								
101.917	963.8915	408.55	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.917)								
102.000	966.7187	410.50	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.000)								
102.083	969.5594	412.47	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.083)								
102.167	972.4139	414.47	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.167)								
102.250	975.2823	416.49	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.250)								
102.333	978.1648	418.54	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.333)								
102.417	981.0616	420.62	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.417)								
102.500	983.9729	422.72	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.500)								
102.583	986.8989	424.85	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.583)								
102.667	989.8397	427.01	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.667)								
102.750	992.7956	429.19	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.750)								
102.833	995.7668	431.41	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.833)								
102.917	998.7534	433.66	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.917)								
103.000	1001.7557	435.94	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.000)								
103.083	1004.7740	438.25	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.083)								
103.167	1007.8083	440.59	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.167)								
103.250	1010.8591	442.96	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.250)								
103.333	1013.9264	445.37	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.333)								
103.417	1017.0105	447.81	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.417)								
103.500	1020.1117	450.29	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.500)								
103.583	1023.2302	452.80	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.583)								
103.667	1026.3662	455.36	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.667)								
103.750	1029.5201	457.94	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.750)								
103.833	1032.6921	460.57	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.833)								
103.917	1035.8824	463.24	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.917)								
104.000	1039.0914	465.95	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.000)								
104.083	1042.3193	468.70	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.083)								
104.167	1045.5665	471.49	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.167)								
104.250	1048.8333	474.33	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.250)								
104.333	1052.1199	477.21	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.333)								
104.417	1055.4266	480.13	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.417)								
104.500	1058.7539	483.11	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.500)								
104.583	1062.1019	486.13	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.583)								
104.667	1065.4712	489.21	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.667)								
104.750	1068.8619	492.33	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.750)								
104.833	1072.2745	495.51	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.833)								
104.917	1075.7094	498.74	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.917)								
105.000	1079.1669	502.03	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.000)								
105.083	1082.6473	505.37	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.083)								
105.167	1086.1512	508.78	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.167)								
105.250	1089.6791	512.23	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.250)								
105.333	1093.2312	515.76	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.333)								
105.417	1096.8080	519.35	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.417)								
105.500	1100.4099	523.01	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.500)								
105.583	1104.0375	526.72	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.583)								
105.667	1107.6912	530.52	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.667)								
105.750	1111.3715	534.38	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.750)								
105.833	1115.0790	538.33	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.833)								
105.917	1118.8141	542.34	. Q	. V	.	.	.	

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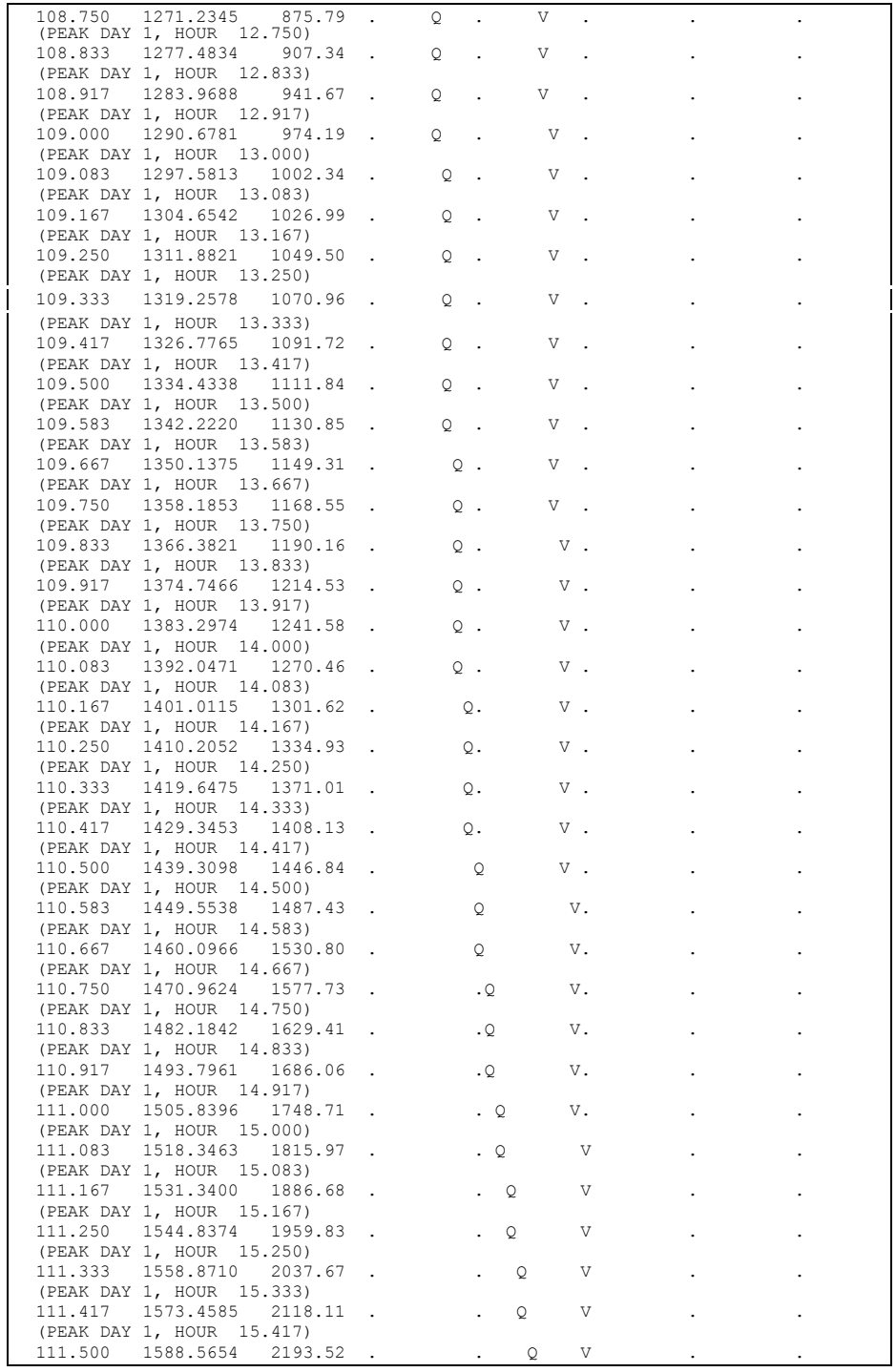
 (PEAK DAY 1, HOUR   9.917)
106.000   1122.5775    546.44  .  Q      .   V     .         .         .
 (PEAK DAY 1, HOUR  10.000)
106.083   1126.3696    550.61  .  Q      .   V     .         .         .
 (PEAK DAY 1, HOUR  10.083)
106.167   1130.1912    554.88  .  Q      .   V     .         .         .
 (PEAK DAY 1, HOUR  10.167)
106.250   1134.0426    559.23  .  Q      .   V     .         .         .
 (PEAK DAY 1, HOUR  10.250)
106.333   1137.9247    563.67  .  Q      .    V    .         .         .
 (PEAK DAY 1, HOUR  10.333)
106.417   1141.8379    568.20  .  Q      .    V    .         .         .
 (PEAK DAY 1, HOUR  10.417)
106.500   1145.7831    572.84  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  10.500)
106.583   1149.7607    577.56  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  10.583)
106.667   1153.7717    582.40  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  10.667)
106.750   1157.8168    587.34  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  10.750)
106.833   1161.8966    592.40  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  10.833)
106.917   1166.0120    597.56  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  10.917)
107.000   1170.1638    602.85  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  11.000)
107.083   1174.3529    608.25  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  11.083)
107.167   1178.5802    613.80  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  11.167)
107.250   1182.8464    619.47  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  11.250)
107.333   1187.1528    625.29  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  11.333)
107.417   1191.5002    631.24  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  11.417)
107.500   1195.8898    637.35  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  11.500)
107.583   1200.3224    643.61  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  11.583)
107.667   1204.7993    650.05  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  11.667)
107.750   1209.3217    656.65  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  11.750)
107.833   1213.8907    663.44  .   Q     .     V   .         .         .
 (PEAK DAY 1, HOUR  11.833)
107.917   1218.5078    670.39  .   Q     .     V   .         .         .
 (PEAK DAY 1, HOUR  11.917)
108.000   1223.1742    677.57  .   Q     .     V   .         .         .
 (PEAK DAY 1, HOUR  12.000)
108.083   1227.9004    686.24  .   Q     .     V   .         .         .
 (PEAK DAY 1, HOUR  12.083)
108.167   1232.7257    700.64  .   Q     .     V   .         .         .
 (PEAK DAY 1, HOUR  12.167)
108.250   1237.6979    721.97  .    Q    .     V   .         .         .
 (PEAK DAY 1, HOUR  12.250)
108.333   1242.8534    748.58  .    Q    .     V   .         .         .
 (PEAK DAY 1, HOUR  12.333)
108.417   1248.1847    774.11  .    Q    .     V   .         .         .
 (PEAK DAY 1, HOUR  12.417)
108.500   1253.6854    798.70  .    Q    .     V   .         .         .
 (PEAK DAY 1, HOUR  12.500)
108.583   1259.3577    823.60  .    Q    .     V   .         .         .
 (PEAK DAY 1, HOUR  12.583)
108.667   1265.2029    848.72  .    Q    .     V   .         .         .
 (PEAK DAY 1, HOUR  12.667)
```



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 (PEAK DAY 1, HOUR  15.500)
111.583   1604.1382   2261.16  .         .    Q    .V        .         .
 (PEAK DAY 1, HOUR  15.583)
111.667   1620.1685   2327.59  .         .     Q   .V        .         .
 (PEAK DAY 1, HOUR  15.667)
111.750   1636.7642   2409.70  .         .     Q   .V        .         .
 (PEAK DAY 1, HOUR  15.750)
111.833   1654.1077   2518.28  .         .      Q  .V        .         .
 (PEAK DAY 1, HOUR  15.833)
111.917   1672.4753   2666.99  .         .       Q . V       .         .
 (PEAK DAY 1, HOUR  15.917)
112.000   1692.4430   2899.30  .         .         Q V       .         .
 (PEAK DAY 1, HOUR  16.000)
112.083   1715.4513   3340.80  .         .          . VQ     .         .
 (PEAK DAY 1, HOUR  16.083)
112.167   1744.2032   4174.78  .         .          .  V     Q.        .
 (PEAK DAY 1, HOUR  16.167)
112.250   1779.0447   5058.98  .         .          .  V      .    Q    .
 (PEAK DAY 1, HOUR  16.250)
112.333   1818.0741   5667.07  .         .          .  V      .        Q.
 (PEAK DAY 1, HOUR  16.333)
112.417   1856.6643   5603.30  .         .          .   V     .        Q.
 (PEAK DAY 1, HOUR  16.417)
112.500   1893.6927   5376.54  .         .          .   V     .      Q  .
 (PEAK DAY 1, HOUR  16.500)
112.583   1928.3112   5026.59  .         .          .    V    .    Q    .
 (PEAK DAY 1, HOUR  16.583)
112.667   1959.0642   4465.34  .         .          .    V    .Q        .
 (PEAK DAY 1, HOUR  16.667)
112.750   1986.1224   3928.85  .         .          .     VQ  .         .
 (PEAK DAY 1, HOUR  16.750)
112.833   2010.6415   3560.16  .         .          .   Q V   .         .
 (PEAK DAY 1, HOUR  16.833)
112.917   2033.4221   3307.76  .         .          .  Q  V   .         .
 (PEAK DAY 1, HOUR  16.917)
113.000   2054.9224   3121.85  .         .          .Q     V  .         .
 (PEAK DAY 1, HOUR  17.000)
113.083   2075.4937   2986.96  .         .          Q      V  .         .
 (PEAK DAY 1, HOUR  17.083)
113.167   2095.3774   2887.14  .         .          Q      V  .         .
 (PEAK DAY 1, HOUR  17.167)
113.250   2114.7043   2806.25  .         .        Q.      V  .         .
 (PEAK DAY 1, HOUR  17.250)
113.333   2133.5239   2732.61  .         .        Q.       V .         .
 (PEAK DAY 1, HOUR  17.333)
113.417   2151.9104   2669.73  .         .       Q .       V .         .
 (PEAK DAY 1, HOUR  17.417)
113.500   2169.9539   2619.92  .         .       Q .       V .         .
 (PEAK DAY 1, HOUR  17.500)
113.583   2187.7300   2581.11  .         .       Q .       V .         .
 (PEAK DAY 1, HOUR  17.583)
113.667   2205.2944   2550.35  .         .      Q  .        V.         .
 (PEAK DAY 1, HOUR  17.667)
113.750   2222.6821   2524.70  .         .      Q  .        V.         .
 (PEAK DAY 1, HOUR  17.750)
113.833   2239.9087   2501.29  .         .      Q  .        V.         .
 (PEAK DAY 1, HOUR  17.833)
113.917   2256.9824   2479.12  .         .      Q  .        V.         .
 (PEAK DAY 1, HOUR  17.917)
114.000   2273.9058   2457.28  .         .      Q  .        V.         .
 (PEAK DAY 1, HOUR  18.000)
114.083   2290.6667   2433.68  .         .      Q  .         V         .
 (PEAK DAY 1, HOUR  18.083)
114.167   2307.2324   2405.32  .         .     Q   .         V         .
 (PEAK DAY 1, HOUR  18.167)
114.250   2323.5635   2371.27  .         .     Q   .         V         .
 (PEAK DAY 1, HOUR  18.250)
114.333   2339.6309   2332.98  .         .      Q  .         V         .
 (PEAK DAY 1, HOUR  18.333)
114.417   2355.4543   2297.56  .         .      Q  .        .V         .
 (PEAK DAY 1, HOUR  18.417)
114.500   2371.0649   2266.67  .         .     Q   .        .V         .
 (PEAK DAY 1, HOUR  18.500)
114.583   2386.4795   2238.19  .         .     Q   .        .V         .
 (PEAK DAY 1, HOUR  18.583)
114.667   2401.7136   2212.00  .         .     Q   .        .V         .
 (PEAK DAY 1, HOUR  18.667)
114.750   2416.7871   2188.67  .         .     Q   .        .V         .
 (PEAK DAY 1, HOUR  18.750)
114.833   2431.7185   2168.04  .         .     Q   .        . V        .
 (PEAK DAY 1, HOUR  18.833)
114.917   2446.5200   2149.18  .         .     Q   .        . V        .
 (PEAK DAY 1, HOUR  18.917)
115.000   2461.1965   2131.03  .         .    Q    .        . V        .
 (PEAK DAY 1, HOUR  19.000)
115.083   2475.7522   2113.49  .         .    Q    .        . V        .
 (PEAK DAY 1, HOUR  19.083)
115.167   2490.1951   2097.12  .         .    Q    .        . V        .
 (PEAK DAY 1, HOUR  19.167)
115.250   2504.5322   2081.75  .         .    Q    .        .  V       .
 (PEAK DAY 1, HOUR  19.250)
115.333   2518.7676   2066.98  .         .    Q    .        .  V       .
 (PEAK DAY 1, HOUR  19.333)
115.417   2532.9055   2052.83  .         .    Q    .        .  V       .
 (PEAK DAY 1, HOUR  19.417)
115.500   2546.9495   2039.19  .         .    Q    .        .  V       .
 (PEAK DAY 1, HOUR  19.500)
115.583   2560.9001   2025.64  .         .    Q    .        .  V       .
 (PEAK DAY 1, HOUR  19.583)
115.667   2574.7515   2011.22  .         .    Q    .        .  V       .
 (PEAK DAY 1, HOUR  19.667)
115.750   2588.4922   1995.14  .         .    Q    .        .   V      .
 (PEAK DAY 1, HOUR  19.750)
115.833   2602.1067   1976.84  .         .  Q      .        .   V      .
 (PEAK DAY 1, HOUR  19.833)
115.917   2615.5823   1956.64  .         .  Q      .        .   V      .
 (PEAK DAY 1, HOUR  19.917)
116.000   2628.9126   1935.55  .         .  Q      .        .   V      .
 (PEAK DAY 1, HOUR  20.000)
116.083   2642.0974   1914.45  .         .  Q      .        .   V      .
 (PEAK DAY 1, HOUR  20.083)
116.167   2655.1382   1893.52  .         .  Q      .        .    V     .
 (PEAK DAY 1, HOUR  20.167)
116.250   2668.0349   1872.62  .         .  Q      .        .    V     .
 (PEAK DAY 1, HOUR  20.250)
116.333   2680.7876   1851.67  .         . Q       .        .    V     .
 (PEAK DAY 1, HOUR  20.333)
116.417   2693.3950   1830.59  .         . Q       .        .    V     .
 (PEAK DAY 1, HOUR  20.417)
116.500   2705.8547   1809.15  .         . Q       .        .    V     .
 (PEAK DAY 1, HOUR  20.500)
116.583   2718.1660   1787.59  .         . Q       .        .    V     .
 (PEAK DAY 1, HOUR  20.583)
116.667   2730.3296   1766.15  .         . Q       .        .     V    .
 (PEAK DAY 1, HOUR  20.667)
116.750   2742.3464   1744.85  .         . Q       .        .     V    .
 (PEAK DAY 1, HOUR  20.750)
116.833   2754.2178   1723.71  .         . Q       .        .     V    .
 (PEAK DAY 1, HOUR  20.833)
116.917   2765.9441   1702.65  .         .Q        .        .     V    .
 (PEAK DAY 1, HOUR  20.917)
117.000   2777.5247   1681.51  .         .Q        .        .     V    .
 (PEAK DAY 1, HOUR  21.000)
117.083   2788.9585   1660.21  .         .Q        .        .     V    .
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(PEAK DAY 1, HOUR 21.083)
117.167 2800.2458 1638.93 . .Q . . V .
(PEAK DAY 1, HOUR 21.167)
117.250 2811.3875 1617.78 . .Q . . V .
(PEAK DAY 1, HOUR 21.250)
117.333 2822.3826 1596.47 . .Q . . V .
(PEAK DAY 1, HOUR 21.333)
117.417 2833.2261 1574.47 . .Q . . V .
(PEAK DAY 1, HOUR 21.417)
117.500 2843.9111 1551.47 . Q . . V .
(PEAK DAY 1, HOUR 21.500)
117.583 2854.4326 1527.74 . Q . . V .
(PEAK DAY 1, HOUR 21.583)
117.667 2864.7856 1503.28 . Q . . V .
(PEAK DAY 1, HOUR 21.667)
117.750 2874.9558 1476.71 . Q . . V .
(PEAK DAY 1, HOUR 21.750)
117.833 2884.9141 1445.94 . Q . . V .
(PEAK DAY 1, HOUR 21.833)
117.917 2894.6277 1410.43 . Q. . . V .
(PEAK DAY 1, HOUR 21.917)
118.000 2904.0730 1371.45 . Q. . . V .
(PEAK DAY 1, HOUR 22.000)
118.083 2913.2358 1330.45 . Q. . . V .
(PEAK DAY 1, HOUR 22.083)
118.167 2922.1067 1288.06 . Q. . . V .
(PEAK DAY 1, HOUR 22.167)
118.250 2930.6711 1243.56 . Q . . . V .
(PEAK DAY 1, HOUR 22.250)
118.333 2938.9041 1195.43 . Q . . . V .
(PEAK DAY 1, HOUR 22.333)
118.417 2946.7559 1140.07 . Q . . . V .
(PEAK DAY 1, HOUR 22.417)
118.500 2954.0591 1060.42 . Q . . . V .
(PEAK DAY 1, HOUR 22.500)
118.583 2960.4131 922.62 . Q . . . V.
(PEAK DAY 1, HOUR 22.583)
118.667 2965.4224 727.34 . Q . . . V.
(PEAK DAY 1, HOUR 22.667)
118.750 2969.2065 549.47 . Q . . . V.
(PEAK DAY 1, HOUR 22.750)
118.833 2972.2954 448.51 . Q . . . V.
(PEAK DAY 1, HOUR 22.833)
118.917 2975.1011 407.38 . Q . . . V.
(PEAK DAY 1, HOUR 22.917)
119.000 2977.7991 391.75 . Q . . . V.
(PEAK DAY 1, HOUR 23.000)
119.083 2980.4490 384.78 . Q . . . V.
(PEAK DAY 1, HOUR 23.083)
119.167 2983.0693 380.49 . Q . . . V.
(PEAK DAY 1, HOUR 23.167)
119.250 2985.6658 377.01 . Q . . . V.
(PEAK DAY 1, HOUR 23.250)
119.333 2988.2402 373.80 . Q . . . V.
(PEAK DAY 1, HOUR 23.333)
119.417 2990.7935 370.72 . Q . . . V.
(PEAK DAY 1, HOUR 23.417)
119.500 2993.3259 367.72 . Q . . . V.
(PEAK DAY 1, HOUR 23.500)
119.583 2995.8381 364.78 . Q . . . V.
(PEAK DAY 1, HOUR 23.583)
119.667 2998.3306 361.90 . Q . . . V.
(PEAK DAY 1, HOUR 23.667)
119.750 3000.8037 359.09 . Q . . . V.
(PEAK DAY 1, HOUR 23.750)
119.833 3003.2578 356.33 . Q . . . V.
(PEAK DAY 1, HOUR 23.833)
119.917 3005.6934 353.63 . Q . . . V.
(PEAK DAY 1, HOUR 23.917)
120.000 3008.1106 350.98 . Q . . . V.
(PEAK DAY 1, HOUR 24.000)
120.083 3010.5029 347.36 . Q . . . V.
(PEAK DAY 1, HOUR 24.083)
120.167 3012.8406 339.41 . Q . . . V.
(PEAK DAY 1, HOUR 24.167)
120.250 3015.0847 325.86 . Q . . . V.
(PEAK DAY 1, HOUR 24.250)
120.333 3017.2014 307.36 . Q . . . V.
(PEAK DAY 1, HOUR 24.333)
120.417 3019.1863 288.21 . Q . . . V.
(PEAK DAY 1, HOUR 24.417)
120.500 3021.0310 267.87 .Q . . . V.
(PEAK DAY 1, HOUR 24.500)
120.583 3022.7266 246.19 .Q . . . V.
(PEAK DAY 1, HOUR 24.583)
120.667 3024.2725 224.45 .Q . . . V.
(PEAK DAY 1, HOUR 24.667)
120.750 3025.6548 200.73 .Q . . . V.
(PEAK DAY 1, HOUR 24.750)
120.833 3026.8386 171.90 .Q . . . V.
(PEAK DAY 1, HOUR 24.833)
120.917 3027.8037 140.12 Q . . . V.
(PEAK DAY 1, HOUR 24.917)
121.000 3028.5740 111.86 Q . . . V.
(PEAK DAY 1, HOUR 25.000)
121.083 3029.1970 90.46 Q . . . V.
(PEAK DAY 1, HOUR 25.083)
121.167 3029.7124 74.83 Q . . . V.
(PEAK DAY 1, HOUR 25.167)
121.250 3030.1458 62.93 Q . . . V.
(PEAK DAY 1, HOUR 25.250)
121.333 3030.5139 53.45 Q . . . V.
(PEAK DAY 1, HOUR 25.333)
121.417 3030.8281 45.64 Q . . . V.
(PEAK DAY 1, HOUR 25.417)
121.500 3031.0972 39.07 Q . . . V.
(PEAK DAY 1, HOUR 25.500)
121.583 3031.3276 33.48 Q . . . V.
(PEAK DAY 1, HOUR 25.583)
121.667 3031.5251 28.69 Q . . . V.
(PEAK DAY 1, HOUR 25.667)
121.750 3031.6941 24.51 Q . . . V.
(PEAK DAY 1, HOUR 25.750)
121.833 3031.8376 20.86 Q . . . V.
(PEAK DAY 1, HOUR 25.833)
121.917 3031.9595 17.68 Q . . . V.
(PEAK DAY 1, HOUR 25.917)
122.000 3032.0623 14.94 Q . . . V.
(PEAK DAY 1, HOUR 26.000)
122.083 3032.1492 12.62 Q . . . V.
(PEAK DAY 1, HOUR 26.083)
122.167 3032.2227 10.68 Q . . . V.
(PEAK DAY 1, HOUR 26.167)
122.250 3032.2849 9.03 Q . . . V.
(PEAK DAY 1, HOUR 26.250)
122.333 3032.3374 7.63 Q . . . V.
(PEAK DAY 1, HOUR 26.333)
122.417 3032.3823 6.54 Q . . . V.
(PEAK DAY 1, HOUR 26.417)
122.500 3032.4221 5.78 Q . . . V.
(PEAK DAY 1, HOUR 26.500)
122.583 3032.4583 5.25 Q . . . V.
(PEAK DAY 1, HOUR 26.583)
122.667 3032.4917 4.86 Q . . . V.

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 (PEAK DAY 1, HOUR  26.667)
 122.750   3032.5227      4.52  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.750)
 122.833   3032.5518      4.21  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.833)
 122.917   3032.5786      3.91  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.917)
 123.000   3032.6035      3.63  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.000)
 123.083   3032.6267      3.36  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.083)
 123.167   3032.6482      3.11  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.167)
 123.250   3032.6680      2.86  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.250)
 123.333   3032.6860      2.61  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.333)
 123.417   3032.7024      2.37  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.417)
 123.500   3032.7170      2.14  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.500)
 123.583   3032.7302      1.90  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.583)
 123.667   3032.7417      1.67  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.667)
 123.750   3032.7517      1.44  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.750)
 123.833   3032.7600      1.21  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.833)
 123.917   3032.7668      0.98  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.917)
 124.000   3032.7722      0.77  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  28.000)
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
===============================================================================


*******************************************************************************
  FLOW PROCESS FROM NODE   6371.00 TO NODE   6395.00 IS CODE = 5.2
-------------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
===============================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  6961.5 Ac. ***

         THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
         TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
         INTERVALS(Reference: the National Engineering Handbook,
         Hydrology, Chapter 17, page 17-52, August,1972,
         U.S. Department of Commerce).


         ASSUMED REGULAR CHANNEL INFORMATION:
           BASEWIDTH(FT) =   35.00     CHANNEL Z =  1.00
           UPSTREAM ELEVATION(FT) =     220.00
           DOWNSTREAM ELEVATION(FT) =     213.00
           CHANNEL LENGTH(FT) =     959.00     MANNING'S FACTOR = 0.040
           CONSTANT LOSS RATE(CFS) =    0.00


         CHANNEL ROUTING COEFFICIENT ESTIMATED:
           MAXIMUM INFLOW(CFS) =  5667.07
           AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  4093.69
           CHANNEL NORMAL VELOCITY FOR Q =  4093.69 CFS =  10.87 FPS
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           ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.865

         MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
         UNIT INTERVALS IS CSTAR = 0.997


         CONVEX METHOD CHANNEL ROUTING RESULTS:
                                                          OUTFLOW LESS
                    CLOCK        INFLOW      ROUTED         LOSS
PEAK     TIME      TIME       (STREAM 1)     FLOW       (STREAM 1)
 DAY     (HRS)     (HRS)         (CFS)       (CFS)        (CFS)
  2    24.000    96.000         88.58       88.75        88.75
  1     0.083    96.083         88.71       88.68        88.68
  1     0.167    96.167         92.27       91.36        91.36
  1     0.250    96.250        100.22       98.18        98.18
  1     0.333    96.333        112.09      109.04       109.04
  1     0.417    96.417        124.51      121.32       121.32
  1     0.500    96.500        137.90      134.46       134.46
  1     0.583    96.583        152.44      148.70       148.70
  1     0.667    96.667        167.22      163.42       163.42
  1     0.750    96.750        183.71      179.48       179.48
  1     0.833    96.833        204.27      198.99       198.99
  1     0.917    96.917        227.31      221.39       221.39
  1     1.000    97.000        248.06      242.72       242.72
  1     1.083    97.083        263.96      259.87       259.87
  1     1.167    97.167        275.80      272.75       272.75
  1     1.250    97.250        285.01      282.64       282.64
  1     1.333    97.333        292.55      290.61       290.61
  1     1.417    97.417        298.94      297.29       297.29
  1     1.500    97.500        304.50      303.07       303.07
  1     1.583    97.583        309.40      308.14       308.14
  1     1.667    97.667        313.77      312.65       312.65
  1     1.750    97.750        317.74      316.72       316.72
  1     1.833    97.833        321.37      320.44       320.44
  1     1.917    97.917        324.70      323.84       323.84
  1     2.000    98.000        327.74      326.96       326.96
  1     2.083    98.083        330.51      329.79       329.79
  1     2.167    98.167        333.03      332.38       332.38
  1     2.250    98.250        335.35      334.75       334.75
  1     2.333    98.333        337.52      336.96       336.96
  1     2.417    98.417        339.49      338.98       338.98
  1     2.500    98.500        341.23      340.78       340.78
  1     2.583    98.583        342.82      342.41       342.41
  1     2.667    98.667        344.33      343.94       343.94
  1     2.750    98.750        345.80      345.42       345.42
  1     2.833    98.833        347.28      346.90       346.90
  1     2.917    98.917        348.76      348.38       348.38
  1     3.000    99.000        350.25      349.86       349.86
  1     3.083    99.083        351.73      351.35       351.35
  1     3.167    99.167        353.23      352.84       352.84
  1     3.250    99.250        354.74      354.35       354.35
  1     3.333    99.333        356.26      355.87       355.87
  1     3.417    99.417        357.79      357.40       357.40
  1     3.500    99.500        359.34      358.94       358.94
  1     3.583    99.583        360.90      360.50       360.50
  1     3.667    99.667        362.48      362.08       362.08
  1     3.750    99.750        364.07      363.67       363.67
  1     3.833    99.833        365.68      365.27       365.27
  1     3.917    99.917        367.30      366.89       366.89
  1     4.000   100.000        368.94      368.52       368.52
  1     4.083   100.083        370.59      370.17       370.17
  1     4.167   100.167        372.25      371.82       371.82
  1     4.250   100.250        373.89      373.47       373.47
  1     4.333   100.333        375.51      375.09       375.09
  1     4.417   100.417        377.11      376.70       376.70
  1     4.500   100.500        378.71      378.30       378.30
  1     4.583   100.583        380.32      379.90       379.90
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1	4.667	100.667	381.94	381.52	381.52
1	4.750	100.750	383.57	383.15	383.15
1	4.833	100.833	385.23	384.80	384.80
1	4.917	100.917	386.90	386.47	386.47
1	5.000	101.000	388.59	388.16	388.16
1	5.083	101.083	390.30	389.86	389.86
1	5.167	101.167	392.03	391.59	391.59
1	5.250	101.250	393.78	393.33	393.33
1	5.333	101.333	395.55	395.10	395.10
1	5.417	101.417	397.34	396.88	396.88
1	5.500	101.500	399.15	398.69	398.69
1	5.583	101.583	400.98	400.51	400.51
1	5.667	101.667	402.84	402.37	402.37
1	5.750	101.750	404.72	404.24	404.24
1	5.833	101.833	406.62	406.13	406.13
1	5.917	101.917	408.55	408.05	408.05
1	6.000	102.000	410.50	410.00	410.00
1	6.083	102.083	412.47	411.96	411.96
1	6.167	102.167	414.47	413.96	413.96
1	6.250	102.250	416.49	415.97	415.97
1	6.333	102.333	418.54	418.01	418.01
1	6.417	102.417	420.62	420.08	420.08
1	6.500	102.500	422.72	422.18	422.18
1	6.583	102.583	424.85	424.30	424.30
1	6.667	102.667	427.01	426.45	426.45
1	6.750	102.750	429.19	428.63	428.63
1	6.833	102.833	431.41	430.84	430.84
1	6.917	102.917	433.66	433.08	433.08
1	7.000	103.000	435.94	435.35	435.35
1	7.083	103.083	438.25	437.65	437.65
1	7.167	103.167	440.59	439.99	439.99
1	7.250	103.250	442.96	442.35	442.35
1	7.333	103.333	445.37	444.75	444.75
1	7.417	103.417	447.81	447.19	447.19
1	7.500	103.500	450.29	449.66	449.66
1	7.583	103.583	452.80	452.16	452.16
1	7.667	103.667	455.36	454.70	454.70
1	7.750	103.750	457.94	457.28	457.28
1	7.833	103.833	460.57	459.90	459.90
1	7.917	103.917	463.24	462.55	462.55
1	8.000	104.000	465.95	465.25	465.25
1	8.083	104.083	468.70	467.99	467.99
1	8.167	104.167	471.49	470.77	470.77
1	8.250	104.250	474.33	473.60	473.60
1	8.333	104.333	477.21	476.47	476.47
1	8.417	104.417	480.13	479.38	479.38
1	8.500	104.500	483.11	482.35	482.35
1	8.583	104.583	486.13	485.36	485.36
1	8.667	104.667	489.21	488.42	488.42
1	8.750	104.750	492.33	491.53	491.53
1	8.833	104.833	495.51	494.69	494.69
1	8.917	104.917	498.74	497.91	497.91
1	9.000	105.000	502.03	501.18	501.18
1	9.083	105.083	505.37	504.51	504.51
1	9.167	105.167	508.78	507.90	507.90
1	9.250	105.250	512.23	511.34	511.34
1	9.333	105.333	515.76	514.86	514.86
1	9.417	105.417	519.35	518.43	518.43
1	9.500	105.500	523.01	522.07	522.07
1	9.583	105.583	526.72	525.77	525.77
1	9.667	105.667	530.52	529.55	529.55
1	9.750	105.750	534.38	533.39	533.39
1	9.833	105.833	538.33	537.32	537.32
1	9.917	105.917	542.34	541.31	541.31
1	10.000	106.000	546.44	545.39	545.39
1	10.083	106.083	550.61	549.54	549.54
1	10.167	106.167	554.88	553.79	553.79
1	10.250	106.250	559.23	558.11	558.11
1	10.333	106.333	563.67	562.53	562.53
1	10.417	106.417	568.20	567.04	567.04
1	10.500	106.500	572.84	571.65	571.65
1	10.583	106.583	577.56	576.35	576.35
1	10.667	106.667	582.40	581.16	581.16
1	10.750	106.750	587.34	586.07	586.07
1	10.833	106.833	592.40	591.10	591.10
1	10.917	106.917	597.56	596.23	596.23
1	11.000	107.000	602.85	601.49	601.49
1	11.083	107.083	608.25	606.86	606.86
1	11.167	107.167	613.80	612.37	612.37
1	11.250	107.250	619.47	618.01	618.01
1	11.333	107.333	625.29	623.79	623.79
1	11.417	107.417	631.24	629.71	629.71
1	11.500	107.500	637.35	635.78	635.78
1	11.583	107.583	643.61	642.00	642.00
1	11.667	107.667	650.05	648.40	648.40
1	11.750	107.750	656.65	654.95	654.95
1	11.833	107.833	663.44	661.69	661.69
1	11.917	107.917	670.39	668.61	668.61
1	12.000	108.000	677.57	675.72	675.72
1	12.083	108.083	686.24	684.01	684.01
1	12.167	108.167	700.64	696.94	696.94
1	12.250	108.250	721.97	716.49	716.49
1	12.333	108.333	748.58	741.75	741.75
1	12.417	108.417	774.11	767.55	767.55
1	12.500	108.500	798.70	792.38	792.38
1	12.583	108.583	823.60	817.20	817.20
1	12.667	108.667	848.72	842.27	842.27
1	12.750	108.750	875.79	868.83	868.83
1	12.833	108.833	907.34	899.24	899.24
1	12.917	108.917	941.67	932.85	932.85
1	13.000	109.000	974.19	965.84	965.84
1	13.083	109.083	1002.34	995.10	995.10
1	13.167	109.167	1026.99	1020.65	1020.65
1	13.250	109.250	1049.50	1043.71	1043.71
1	13.333	109.333	1070.96	1065.45	1065.45
1	13.417	109.417	1091.72	1086.39	1086.39
1	13.500	109.500	1111.84	1106.67	1106.67
1	13.583	109.583	1130.85	1125.96	1125.96
1	13.667	109.667	1149.31	1144.57	1144.57
1	13.750	109.750	1168.55	1163.61	1163.61
1	13.833	109.833	1190.16	1184.61	1184.61
1	13.917	109.917	1214.53	1208.27	1208.27
1	14.000	110.000	1241.58	1234.63	1234.63
1	14.083	110.083	1270.46	1263.04	1263.04
1	14.167	110.167	1301.62	1293.61	1293.61
1	14.250	110.250	1334.93	1326.37	1326.37
1	14.333	110.333	1371.01	1361.74	1361.74
1	14.417	110.417	1408.13	1398.59	1398.59
1	14.500	110.500	1446.84	1436.89	1436.89
1	14.583	110.583	1487.43	1477.00	1477.00
1	14.667	110.667	1530.80	1519.66	1519.66
1	14.750	110.750	1577.73	1565.67	1565.67
1	14.833	110.833	1629.41	1616.14	1616.14
1	14.917	110.917	1686.06	1671.51	1671.51
1	15.000	111.000	1748.71	1732.61	1732.61
1	15.083	111.083	1815.97	1798.69	1798.69
1	15.167	111.167	1886.68	1868.51	1868.51
1	15.250	111.250	1959.83	1941.03	1941.03
1	15.333	111.333	2037.67	2017.67	2017.67
1	15.417	111.417	2118.11	2097.44	2097.44
1	15.500	111.500	2193.52	2174.14	2174.14
1	15.583	111.583	2261.16	2243.78	2243.78
1	15.667	111.667	2327.59	2310.52	2310.52
1	15.750	111.750	2409.70	2388.61	2388.61

1	15.833	111.833	2518.28	2490.40	2490.40
1	15.917	111.917	2666.99	2628.81	2628.81
1	16.000	112.000	2899.30	2839.67	2839.67
1	16.083	112.083	3340.80	3227.51	3227.51
1	16.167	112.167	4174.78	3960.77	3960.77
1	16.250	112.250	5058.98	4831.83	4831.83
1	16.333	112.333	5667.07	5510.63	5510.63
1	16.417	112.417	5603.30	5619.22	5619.22
1	16.500	112.500	5376.54	5434.69	5434.69
1	16.583	112.583	5026.59	5116.42	5116.42
1	16.667	112.667	4465.34	4609.40	4609.40
1	16.750	112.750	3928.85	4066.71	4066.71
1	16.833	112.833	3560.16	3655.00	3655.00
1	16.917	112.917	3307.76	3372.69	3372.69
1	17.000	113.000	3121.85	3169.66	3169.66
1	17.083	113.083	2986.96	3021.66	3021.66
1	17.167	113.167	2887.14	2912.81	2912.81
1	17.250	113.250	2806.25	2827.05	2827.05
1	17.333	113.333	2732.61	2751.53	2751.53
1	17.417	113.417	2669.73	2685.89	2685.89
1	17.500	113.500	2619.92	2632.73	2632.73
1	17.583	113.583	2581.11	2591.09	2591.09
1	17.667	113.667	2550.35	2558.26	2558.26
1	17.750	113.750	2524.70	2531.30	2531.30
1	17.833	113.833	2501.29	2507.31	2507.31
1	17.917	113.917	2479.12	2484.82	2484.82
1	18.000	114.000	2457.28	2462.89	2462.89
1	18.083	114.083	2433.68	2439.74	2439.74
1	18.167	114.167	2405.32	2412.60	2412.60
1	18.250	114.250	2371.27	2380.02	2380.02
1	18.333	114.333	2332.98	2342.82	2342.82
1	18.417	114.417	2297.56	2306.66	2306.66
1	18.500	114.500	2266.67	2274.61	2274.61
1	18.583	114.583	2238.19	2245.51	2245.51
1	18.667	114.667	2212.00	2218.73	2218.73
1	18.750	114.750	2188.67	2194.67	2194.67
1	18.833	114.833	2168.04	2173.34	2173.34
1	18.917	114.917	2149.18	2154.03	2154.03
1	19.000	115.000	2131.03	2135.69	2135.69
1	19.083	115.083	2113.49	2118.00	2118.00
1	19.167	115.167	2097.12	2101.32	2101.32
1	19.250	115.250	2081.75	2085.70	2085.70
1	19.333	115.333	2066.98	2070.77	2070.77
1	19.417	115.417	2052.83	2056.47	2056.47
1	19.500	115.500	2039.19	2042.70	2042.70
1	19.583	115.583	2025.64	2029.12	2029.12
1	19.667	115.667	2011.22	2014.92	2014.92
1	19.750	115.750	1995.14	1999.27	1999.27
1	19.833	115.833	1976.84	1981.54	1981.54
1	19.917	115.917	1956.64	1961.83	1961.83
1	20.000	116.000	1935.55	1940.97	1940.97
1	20.083	116.083	1914.45	1919.87	1919.87
1	20.167	116.167	1893.52	1898.89	1898.89
1	20.250	116.250	1872.62	1877.99	1877.99
1	20.333	116.333	1851.67	1857.06	1857.06
1	20.417	116.417	1830.59	1836.01	1836.01
1	20.500	116.500	1809.15	1814.66	1814.66
1	20.583	116.583	1787.59	1793.13	1793.13
1	20.667	116.667	1766.15	1771.66	1771.66
1	20.750	116.750	1744.85	1750.33	1750.33
1	20.833	116.833	1723.71	1729.14	1729.14
1	20.917	116.917	1702.65	1708.06	1708.06
1	21.000	117.000	1681.51	1686.95	1686.95
1	21.083	117.083	1660.21	1665.68	1665.68
1	21.167	117.167	1638.93	1644.40	1644.40
1	21.250	117.250	1617.78	1623.21	1623.21
1	21.333	117.333	1596.47	1601.95	1601.95
1	21.417	117.417	1574.47	1580.13	1580.13
1	21.500	117.500	1551.47	1557.38	1557.38
1	21.583	117.583	1527.74	1533.84	1533.84
1	21.667	117.667	1503.28	1509.56	1509.56
1	21.750	117.750	1476.71	1483.53	1483.53
1	21.833	117.833	1445.94	1453.85	1453.85
1	21.917	117.917	1410.43	1419.55	1419.55
1	22.000	118.000	1371.45	1381.46	1381.46
1	22.083	118.083	1330.45	1340.98	1340.98
1	22.167	118.167	1288.06	1298.95	1298.95
1	22.250	118.250	1243.56	1254.99	1254.99
1	22.333	118.333	1195.43	1207.80	1207.80
1	22.417	118.417	1140.07	1154.29	1154.29
1	22.500	118.500	1060.42	1080.87	1080.87
1	22.583	118.583	922.62	957.98	957.98
1	22.667	118.667	727.34	777.48	777.48
1	22.750	118.750	549.47	595.18	595.18
1	22.833	118.833	448.51	474.50	474.50
1	22.917	118.917	407.38	417.99	417.99
1	23.000	119.000	391.75	395.78	395.78
1	23.083	119.083	384.78	386.58	386.58
1	23.167	119.167	380.49	381.59	381.59
1	23.250	119.250	377.01	377.91	377.91
1	23.333	119.333	373.80	374.63	374.63
1	23.417	119.417	370.72	371.51	371.51
1	23.500	119.500	367.72	368.49	368.49
1	23.583	119.583	364.78	365.53	365.53
1	23.667	119.667	361.90	362.64	362.64
1	23.750	119.750	359.09	359.81	359.81
1	23.833	119.833	356.33	357.04	357.04
1	23.917	119.917	353.63	354.32	354.32
1	24.000	120.000	350.98	351.66	351.66
1	24.083	120.083	347.36	348.29	348.29
1	24.167	120.167	339.41	341.45	341.45
1	24.250	120.250	325.86	329.34	329.34
1	24.333	120.333	307.36	312.11	312.11
1	24.417	120.417	288.21	293.13	293.13
1	24.500	120.500	267.87	273.10	273.10
1	24.583	120.583	246.19	251.76	251.76
1	24.667	120.667	224.45	230.04	230.04
1	24.750	120.750	200.73	206.82	206.82
1	24.833	120.833	171.90	179.30	179.30
1	24.917	120.917	140.12	148.28	148.28
1	25.000	121.000	111.86	119.12	119.12
1	25.083	121.083	90.46	95.96	95.96
1	25.167	121.167	74.83	78.85	78.85
1	25.250	121.250	62.93	65.99	65.99
1	25.333	121.333	53.45	55.88	55.88
1	25.417	121.417	45.64	47.65	47.65
1	25.500	121.500	39.07	40.76	40.76
1	25.583	121.583	33.48	34.91	34.91
1	25.667	121.667	28.69	29.92	29.92
1	25.750	121.750	24.51	25.59	25.59
1	25.833	121.833	20.86	21.80	21.80
1	25.917	121.917	17.68	18.50	18.50
1	26.000	122.000	14.94	15.64	15.64
1	26.083	122.083	12.62	13.21	13.21
1	26.167	122.167	10.68	11.17	11.17
1	26.250	122.250	9.03	9.45	9.45
1	26.333	122.333	7.63	7.99	7.99
1	26.417	122.417	6.54	6.82	6.82
1	26.500	122.500	5.78	5.97	5.97
1	26.583	122.583	5.25	5.39	5.39
1	26.667	122.667	4.86	4.96	4.96
1	26.750	122.750	4.52	4.60	4.60
1	26.833	122.833	4.21	4.29	4.29
1	26.917	122.917	3.91	3.98	3.98

```
  1   27.000 123.000         3.63        3.70        3.70
  1   27.083 123.083         3.36        3.43        3.43
  1   27.167 123.167         3.11        3.17        3.17
  1   27.250 123.250         2.86        2.92        2.92
  1   27.333 123.333         2.61        2.68        2.68
  1   27.417 123.417         2.37        2.44        2.44
  1   27.500 123.500         2.14        2.20        2.20
  1   27.583 123.583         1.90        1.96        1.96
  1   27.667 123.667         1.67        1.73        1.73
  1   27.750 123.750         1.44        1.49        1.49
  1   27.833 123.833         1.21        1.27        1.27
  1   27.917 123.917         0.98        1.04        1.04
  1   28.000 124.000         0.77        0.82        0.82
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
================================================================================
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   3032.782 AF
    OUTFLOW VOLUME =   3032.782 AF
    LOSS    VOLUME =      0.000 AF
================================================================================



********************************************************************************
  FLOW PROCESS FROM NODE   6380.00 TO NODE   6395.00 IS CODE =   1
--------------------------------------------------------------------------------

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of   329.6 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
================================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #2)

        WATERSHED AREA =     329.600 ACRES
        BASEFLOW =   0.000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    0.330 HOURS
         CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
         THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
         MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
        VALLEY(DEVELOPED):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.900
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
        VALLEY(UNDEVELOPED)/DESERT:
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:
        +------------------+--------+--------+--------+--------+--------+
        | RAINFALL DEPTHS & |        |        |        |        |        |
        |    LOSS RATES     |  DAY 1 |  DAY 2 |  DAY 3 |  DAY 4 |  DAY 5 |
        |==================+========+========+========+========+========|
        | 5-MINUTE (INCHES) |    0.58|    0.27|    0.12|    0.06|    0.04|
        |30-MINUTE (INCHES) |    1.22|    0.56|    0.24|    0.13|    0.09|
        |   1-HOUR (INCHES) |    1.62|    0.75|    0.33|    0.17|    0.12|
        |   3-HOUR (INCHES) |    2.71|    1.25|    0.54|    0.28|    0.21|
        |   6-HOUR (INCHES) |    3.75|    1.73|    0.75|    0.39|    0.29|
        |  24-HOUR (INCHES) |    6.28|    2.89|    1.26|    0.66|    0.48|
        |==================+========+========+========+========+========|
        | LOSS RATE(IN/HR)  |   0.150|   0.150|   0.150|   0.150|   0.150|
        | LOW LOSS FRACTION |   0.500|   0.750|   0.950|   0.990|   0.990|
        +------------------+--------+--------+--------+--------+--------+
          5-MINUTE FACTOR = 0.985
         30-MINUTE FACTOR = 0.985
          1-HOUR FACTOR = 0.985
          3-HOUR FACTOR = 0.998
           6-HOUR FACTOR = 0.999
          24-HOUR FACTOR = 0.999

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  25.253


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  96.00
         MODEL TIME(HOURS) FOR END OF RESULTS = 124.00


================================================================================
                      UNIT HYDROGRAPH DETERMINATION

--------------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------------
        1                1.602               63.859
        2                7.797              246.932
        3               21.404              542.405
        4               39.370              716.138
        5               60.064              824.885
        6               75.891              630.876
        7               85.613              387.515
        8               91.167              221.417
        9               94.489              132.407
       10               96.293               71.884
       11               97.026               29.243
       12               97.665               25.478
       13               98.270               24.118
       14               98.850               23.087
       15               98.984                5.349
       16               99.089                4.176
       17               99.176                3.468
       18               99.236                2.391
       19               99.292                2.234
       20               99.345                2.124
       21               99.396                2.026
       22               99.445                1.965
       23               99.491                1.826
       24               99.536                1.815
       25               99.577                1.639
       26               99.617                1.559
       27               99.656                1.556
       28               99.690                1.365
       29               99.721                1.257
       30               99.753                1.257
       31               99.784                1.254
       32               99.812                1.082
       33               99.830                0.737
       34               99.848                0.724
       35               99.866                0.724
       36               99.885                0.724
       37               99.900                0.614
       38               99.906                0.230
       39               99.911                0.198
       40               99.916                0.197
       41               99.921                0.199
       42               99.926                0.197
       43               99.930                0.197
       44               99.935                0.198
       45               99.940                0.198
       46               99.945                0.197
       47               99.950                0.199
       48               99.955                0.197
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49	99.960	0.197
50	99.965	0.196
51	99.970	0.197
52	99.975	0.197
53	99.980	0.197
54	99.985	0.196
55	99.990	0.197
56	99.995	0.197
57	100.000	0.197
58	100.000	0.013

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 162.7269

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 154.7721

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5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	200.0	400.0	600.0	800.0
96.000	41.7912	3.86	Q	V	.	.	.
(PEAK DAY 2, HOUR 24.000)							
96.083	41.8189	4.03	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.083)							
96.167	41.8518	4.78	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.167)							
96.250	41.8963	6.45	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.250)							
96.333	41.9561	8.68	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.333)							
96.417	42.0337	11.27	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.417)							
96.500	42.1251	13.26	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.500)							
96.583	42.2250	14.51	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.583)							
96.667	42.3300	15.24	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.667)							
96.750	42.4381	15.70	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.750)							
96.833	42.5482	15.98	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.833)							
96.917	42.6592	16.12	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.917)							
97.000	42.7712	16.26	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.000)							
97.083	42.8840	16.39	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.083)							
97.167	42.9978	16.51	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.167)							
97.250	43.1120	16.59	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.250)							
97.333	43.2267	16.66	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.333)							
97.417	43.3419	16.73	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.417)							
97.500	43.4576	16.79	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.500)							
97.583	43.5737	16.86	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.583)							
97.667	43.6902	16.92	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.667)							
97.750	43.8072	16.99	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.750)							
97.833	43.9247	17.06	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.833)							
97.917	44.0426	17.12	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.917)							
98.000	44.1610	17.19	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.000)							
98.083	44.2799	17.26	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.083)							
98.167	44.3992	17.33	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.167)							
98.250	44.5190	17.40	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.250)							
98.333	44.6393	17.46	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.333)							
98.417	44.7600	17.53	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.417)							
98.500	44.8812	17.60	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.500)							
98.583	45.0029	17.67	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.583)							
98.667	45.1251	17.74	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.667)							
98.750	45.2478	17.81	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.750)							
98.833	45.3710	17.88	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.833)							
98.917	45.4946	17.95	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.917)							
99.000	45.6188	18.03	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.000)							
99.083	45.7434	18.10	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.083)							
99.167	45.8686	18.17	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.167)							
99.250	45.9942	18.24	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.250)							
99.333	46.1204	18.32	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.333)							
99.417	46.2470	18.39	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.417)							
99.500	46.3742	18.47	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.500)							
99.583	46.5019	18.54	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.583)							
99.667	46.6301	18.62	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.667)							
99.750	46.7589	18.70	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.750)							
99.833	46.8882	18.77	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.833)							
99.917	47.0181	18.85	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.917)							
100.000	47.1484	18.93	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.000)							
100.083	47.2794	19.01	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.083)							
100.167	47.4109	19.09	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.167)							
100.250	47.5430	19.18	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.250)							
100.333	47.6756	19.26	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.333)							
100.417	47.8089	19.35	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.417)							
100.500	47.9427	19.43	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.500)							
100.583	48.0771	19.52	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.583)							
100.667	48.2121	19.60	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.667)							
100.750	48.3477	19.69	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.750)							
100.833	48.4840	19.78	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.833)							
100.917	48.6208	19.87	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.917)							
101.000	48.7583	19.96	Q	. V	.	.	.
(PEAK DAY 1, HOUR 5.000)							
101.083	48.8964	20.05	.Q	. V	.	.	.

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(PEAK DAY 1, HOUR   5.083)
101.167     49.0351     20.15  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.167)
101.250     49.1745     20.24  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.250)
101.333     49.3146     20.34  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.333)
101.417     49.4553     20.43  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.417)
101.500     49.5967     20.53  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.500)
101.583     49.7388     20.63  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.583)
101.667     49.8815     20.73  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.667)
101.750     50.0250     20.83  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.750)
101.833     50.1692     20.93  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.833)
101.917     50.3140     21.04  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.917)
102.000     50.4596     21.14  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.000)
102.083     50.6060     21.25  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.083)
102.167     50.7531     21.36  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.167)
102.250     50.9009     21.47  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.250)
102.333     51.0495     21.58  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.333)
102.417     51.1989     21.69  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.417)
102.500     51.3491     21.80  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.500)
102.583     51.5000     21.92  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.583)
102.667     51.6518     22.04  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.667)
102.750     51.8044     22.16  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.750)
102.833     51.9578     22.28  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.833)
102.917     52.1121     22.40  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.917)
103.000     52.2672     22.52  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.000)
103.083     52.4232     22.65  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.083)
103.167     52.5800     22.78  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.167)
103.250     52.7378     22.91  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.250)
103.333     52.8965     23.04  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.333)
103.417     53.0560     23.17  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.417)
103.500     53.2166     23.31  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.500)
103.583     53.3780     23.44  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.583)
103.667     53.5404     23.58  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.667)
103.750     53.7038     23.73  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.750)
103.833     53.8682     23.87  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.833)
103.917     54.0336     24.02  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.917)
104.000     54.2001     24.16  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.000)
104.083     54.3675     24.32  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.083)
104.167     54.5361     24.47  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.167)
104.250     54.7057     24.63  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.250)
104.333     54.8764     24.78  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.333)
104.417     55.0482     24.95  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.417)
104.500     55.2211     25.11  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.500)
104.583     55.3952     25.28  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.583)
104.667     55.5705     25.45  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.667)
104.750     55.7469     25.62  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.750)
104.833     55.9246     25.80  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.833)
104.917     56.1035     25.98  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.917)
105.000     56.2836     26.16  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.000)
105.083     56.4651     26.35  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.083)
105.167     56.6478     26.53  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.167)
105.250     56.8319     26.73  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.250)
105.333     57.0173     26.92  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.333)
105.417     57.2041     27.13  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.417)
105.500     57.3923     27.33  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.500)
105.583     57.5820     27.54  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.583)
105.667     57.7731     27.75  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.667)
105.750     57.9657     27.97  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.750)
105.833     58.1598     28.19  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.833)
105.917     58.3555     28.41  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.917)
106.000     58.5528     28.64  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.000)
106.083     58.7517     28.88  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.083)
106.167     58.9523     29.12  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.167)
106.250     59.1545     29.37  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.250)
106.333     59.3585     29.62  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.333)
106.417     59.5643     29.88  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.417)
106.500     59.7718     30.14  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.500)
106.583     59.9813     30.41  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.583)
106.667     60.1926     30.68  .Q        .    V    .         .         .
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 (PEAK DAY 1, HOUR  10.667)
106.750     60.4058     30.97  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.750)
106.833     60.6211     31.25  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.833)
106.917     60.8384     31.55  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.917)
107.000     61.0578     31.85  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.000)
107.083     61.2793     32.17  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.083)
107.167     61.5030     32.48  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.167)
107.250     61.7290     32.81  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.250)
107.333     61.9573     33.15  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.333)
107.417     62.1880     33.50  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.417)
107.500     62.4211     33.85  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.500)
107.583     62.6567     34.21  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.583)
107.667     62.8950     34.59  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.667)
107.750     63.1358     34.98  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.750)
107.833     63.3794     35.37  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.833)
107.917     63.6259     35.78  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.917)
108.000     63.8752     36.20  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  12.000)
108.083     64.1287     36.80  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  12.083)
108.167     64.3896     37.88  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  12.167)
108.250     64.6632     39.74  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  12.250)
108.333     64.9529     42.06  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.333)
108.417     65.2611     44.75  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.417)
108.500     65.5850     47.04  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.500)
108.583     65.9215     48.85  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.583)
108.667     66.2684     50.37  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.667)
108.750     66.6252     51.80  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.750)
108.833     66.9912     53.15  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.833)
108.917     67.3665     54.49  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.917)
109.000     67.7512     55.86  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.000)
109.083     68.1459     57.30  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.083)
109.167     68.5507     58.79  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.167)
109.250     68.9661     60.31  .  Q      .      V  .         .         .
 (PEAK DAY 1, HOUR  13.250)
109.333     69.3921     61.87  .  Q      .      V  .         .         .
 (PEAK DAY 1, HOUR  13.333)
109.417     69.8296     63.52  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.417)
109.500     70.2787     65.21  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.500)
109.583     70.7402     67.01  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.583)
109.667     71.2144     68.86  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.667)
109.750     71.7022     70.83  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.750)
109.833     72.2041     72.87  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.833)
109.917     72.7209     75.04  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.917)
110.000     73.2533     77.30  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  14.000)
110.083     73.8026     79.76  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  14.083)
110.167     74.3704     82.45  .   Q     .        V.         .         .
 (PEAK DAY 1, HOUR  14.167)
110.250     74.9596     85.54  .   Q     .        V.         .         .
 (PEAK DAY 1, HOUR  14.250)
110.333     75.5717     88.89  .   Q     .        V.         .         .
 (PEAK DAY 1, HOUR  14.333)
110.417     76.2090     92.53  .   Q     .        V.         .         .
 (PEAK DAY 1, HOUR  14.417)
110.500     76.8715     96.20  .   Q     .        V.         .         .
 (PEAK DAY 1, HOUR  14.500)
110.583     77.5600     99.96  .   Q     .         V         .         .
 (PEAK DAY 1, HOUR  14.583)
110.667     78.2749    103.81  .    Q    .         V         .         .
 (PEAK DAY 1, HOUR  14.667)
110.750     79.0182    107.93  .    Q    .         V         .         .
 (PEAK DAY 1, HOUR  14.750)
110.833     79.7914    112.27  .    Q    .         V         .         .
 (PEAK DAY 1, HOUR  14.833)
110.917     80.5973    117.01  .    Q    .         V         .         .
 (PEAK DAY 1, HOUR  14.917)
111.000     81.4383    122.11  .     Q   .         .V        .         .
 (PEAK DAY 1, HOUR  15.000)
111.083     82.3183    127.78  .     Q   .         .V        .         .
 (PEAK DAY 1, HOUR  15.083)
111.167     83.2408    133.95  .     Q   .         .V        .         .
 (PEAK DAY 1, HOUR  15.167)
111.250     84.2112    140.89  .      Q  .         .V        .         .
 (PEAK DAY 1, HOUR  15.250)
111.333     85.2343    148.56  .      Q  .         . V       .         .
 (PEAK DAY 1, HOUR  15.333)
111.417     86.3140    156.77  .      Q  .         . V       .         .
 (PEAK DAY 1, HOUR  15.417)
111.500     87.4461    164.38  .       Q .         . V       .         .
 (PEAK DAY 1, HOUR  15.500)
111.583     88.6237    170.99  .       Q .         . V       .         .
 (PEAK DAY 1, HOUR  15.583)
111.667     89.8487    177.87  .       Q .         .  V      .         .
 (PEAK DAY 1, HOUR  15.667)
111.750     91.1366    187.00  .        Q.         .  V      .         .
 (PEAK DAY 1, HOUR  15.750)
111.833     92.5291    202.19  .         Q         .  V      .         .
 (PEAK DAY 1, HOUR  15.833)
111.917     94.0982    227.84  .         .Q        .   V     .         .
 (PEAK DAY 1, HOUR  15.917)
112.000     95.9486    268.68  .         .  Q      .   V     .         .
 (PEAK DAY 1, HOUR  16.000)
112.083     98.3970    355.50  .         .     Q   .    V    .         .
 (PEAK DAY 1, HOUR  16.083)
112.167    101.8439    500.50  .         .         .    QV   .         .
 (PEAK DAY 1, HOUR  16.167)
112.250    106.5117    677.76  .         .         .      V  .  Q      .
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 (PEAK DAY 1, HOUR  16.250)
112.333    111.8129    769.73  .         .         .       V .       Q .
 (PEAK DAY 1, HOUR  16.333)
112.417    117.2284    786.33  .         .         .         V        Q.
 (PEAK DAY 1, HOUR  16.417)
112.500    121.6811    646.54  .         .         .         .VQ       .
 (PEAK DAY 1, HOUR  16.500)
112.583    124.9948    481.15  .         .         .   Q     . V       .
 (PEAK DAY 1, HOUR  16.583)
112.667    127.4627    358.33  .         .      Q  .         . V       .
 (PEAK DAY 1, HOUR  16.667)
112.750    129.3967    280.83  .         .   Q     .         .  V      .
 (PEAK DAY 1, HOUR  16.750)
112.833    130.9455    224.88  .         .Q        .         .  V      .
 (PEAK DAY 1, HOUR  16.833)
112.917    132.2140    184.19  .        Q.         .         .   V     .
 (PEAK DAY 1, HOUR  16.917)
113.000    133.3513    165.13  .       Q .         .         .   V     .
 (PEAK DAY 1, HOUR  17.000)
113.083    134.3849    150.08  .      Q  .         .         .   V     .
 (PEAK DAY 1, HOUR  17.083)
113.167    135.3235    136.28  .     Q   .         .         .   V     .
 (PEAK DAY 1, HOUR  17.167)
113.250    136.1315    117.32  .    Q    .         .         .    V    .
 (PEAK DAY 1, HOUR  17.250)
113.333    136.8693    107.13  .    Q    .         .         .    V    .
 (PEAK DAY 1, HOUR  17.333)
113.417    137.5491     98.70  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  17.417)
113.500    138.1786     91.40  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  17.500)
113.583    138.7664     85.36  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  17.583)
113.667    139.3183     80.13  .   Q     .         .         .     V   .
 (PEAK DAY 1, HOUR  17.667)
113.750    139.8382     75.50  .  Q      .         .         .     V   .
 (PEAK DAY 1, HOUR  17.750)
113.833    140.3296     71.35  .  Q      .         .         .     V   .
 (PEAK DAY 1, HOUR  17.833)
113.917    140.7949     67.57  .  Q      .         .         .     V   .
 (PEAK DAY 1, HOUR  17.917)
114.000    141.2367     64.15  .  Q      .         .         .     V   .
 (PEAK DAY 1, HOUR  18.000)
114.083    141.6554     60.80  .  Q      .         .         .     V   .
 (PEAK DAY 1, HOUR  18.083)
114.167    142.0503     57.33  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.167)
114.250    142.4188     53.51  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.250)
114.333    142.7600     49.55  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.333)
114.417    143.0749     45.72  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.417)
114.500    143.3691     42.72  . Q       .         .         .      V  .
 (PEAK DAY 1, HOUR  18.500)
114.583    143.6481     40.51  . Q       .         .         .      V  .
 (PEAK DAY 1, HOUR  18.583)
114.667    143.9151     38.78  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  18.667)
114.750    144.1721     37.31  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  18.750)
114.833    144.4216     36.23  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  18.833)
114.917    144.6648     35.31  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  18.917)
115.000    144.9020     34.45  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.000)
115.083    145.1332     33.56  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.083)
115.167    145.3579     32.63  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.167)
115.250    145.5779     31.94  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.250)
115.333    145.7936     31.32  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.333)
115.417    146.0053     30.74  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.417)
115.500    146.2132     30.18  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.500)
115.583    146.4174     29.65  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.583)
115.667    146.6181     29.15  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.667)
115.750    146.8156     28.67  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.750)
115.833    147.0098     28.20  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.833)
115.917    147.2010     27.76  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  19.917)
116.000    147.3893     27.34  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.000)
116.083    147.5748     26.93  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.083)
116.167    147.7575     26.54  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.167)
116.250    147.9377     26.16  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.250)
116.333    148.1153     25.80  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.333)
116.417    148.2906     25.44  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.417)
116.500    148.4634     25.10  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.500)
116.583    148.6340     24.76  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.583)
116.667    148.8022     24.43  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.667)
116.750    148.9682     24.10  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.750)
116.833    149.1315     23.71  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.833)
116.917    149.2927     23.41  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.917)
117.000    149.4519     23.12  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.000)
117.083    149.6093     22.85  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.083)
117.167    149.7649     22.59  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.167)
117.250    149.9187     22.34  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.250)
117.333    150.0708     22.09  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.333)
117.417    150.2213     21.85  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.417)
117.500    150.3702     21.62  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.500)
117.583    150.5176     21.40  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.583)
117.667    150.6634     21.18  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.667)
117.750    150.8078     20.96  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.750)
117.833    150.9508     20.76  .Q        .         .         .        V.
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(PEAK DAY 1, HOUR 21.833)
117.917 151.0923 20.56 .Q . . . V.
(PEAK DAY 1, HOUR 21.917)
118.000 151.2325 20.36 .Q . . . V.
(PEAK DAY 1, HOUR 22.000)
118.083 151.3714 20.17 .Q . . . V.
(PEAK DAY 1, HOUR 22.083)
118.167 151.5090 19.98 Q . . . V.
(PEAK DAY 1, HOUR 22.167)
118.250 151.6454 19.80 Q . . . V.
(PEAK DAY 1, HOUR 22.250)
118.333 151.7805 19.62 Q . . . V.
(PEAK DAY 1, HOUR 22.333)
118.417 151.9144 19.45 Q . . . V.
(PEAK DAY 1, HOUR 22.417)
118.500 152.0472 19.28 Q . . . V.
(PEAK DAY 1, HOUR 22.500)
118.583 152.1788 19.11 Q . . . V.
(PEAK DAY 1, HOUR 22.583)
118.667 152.3093 18.95 Q . . . V.
(PEAK DAY 1, HOUR 22.667)
118.750 152.4387 18.79 Q . . . V.
(PEAK DAY 1, HOUR 22.750)
118.833 152.5670 18.63 Q . . . V.
(PEAK DAY 1, HOUR 22.833)
118.917 152.6943 18.48 Q . . . V.
(PEAK DAY 1, HOUR 22.917)
119.000 152.8205 18.33 Q . . . V.
(PEAK DAY 1, HOUR 23.000)
119.083 152.9458 18.19 Q . . . V.
(PEAK DAY 1, HOUR 23.083)
119.167 153.0701 18.05 Q . . . V.
(PEAK DAY 1, HOUR 23.167)
119.250 153.1934 17.91 Q . . . V.
(PEAK DAY 1, HOUR 23.250)
119.333 153.3158 17.77 Q . . . V.
(PEAK DAY 1, HOUR 23.333)
119.417 153.4372 17.64 Q . . . V.
(PEAK DAY 1, HOUR 23.417)
119.500 153.5578 17.50 Q . . . V.
(PEAK DAY 1, HOUR 23.500)
119.583 153.6774 17.38 Q . . . V.
(PEAK DAY 1, HOUR 23.583)
119.667 153.7962 17.25 Q . . . V.
(PEAK DAY 1, HOUR 23.667)
119.750 153.9142 17.12 Q . . . V.
(PEAK DAY 1, HOUR 23.750)
119.833 154.0313 17.00 Q . . . V.
(PEAK DAY 1, HOUR 23.833)
119.917 154.1475 16.88 Q . . . V.
(PEAK DAY 1, HOUR 23.917)
120.000 154.2630 16.77 Q . . . V.
(PEAK DAY 1, HOUR 24.000)
120.083 154.3759 16.39 Q . . . V.
(PEAK DAY 1, HOUR 24.083)
120.167 154.4811 15.28 Q . . . V.
(PEAK DAY 1, HOUR 24.167)
120.250 154.5705 12.98 Q . . . V.
(PEAK DAY 1, HOUR 24.250)
120.333 154.6393 9.99 Q . . . V.
(PEAK DAY 1, HOUR 24.333)
120.417 154.6846 6.58 Q . . . V.
(PEAK DAY 1, HOUR 24.417)
120.500 154.7121 3.98 Q . . . V.
(PEAK DAY 1, HOUR 24.500)
120.583 154.7285 2.38 Q . . . V.
(PEAK DAY 1, HOUR 24.583)
120.667 154.7386 1.47 Q . . . V.
(PEAK DAY 1, HOUR 24.667)
120.750 154.7450 0.92 Q . . . V.
(PEAK DAY 1, HOUR 24.750)
120.833 154.7493 0.63 Q . . . V.
(PEAK DAY 1, HOUR 24.833)
120.917 154.7528 0.50 Q . . . V.
(PEAK DAY 1, HOUR 24.917)
121.000 154.7555 0.40 Q . . . V.
(PEAK DAY 1, HOUR 25.000)
121.083 154.7576 0.30 Q . . . V.
(PEAK DAY 1, HOUR 25.083)
121.167 154.7589 0.20 Q . . . V.
(PEAK DAY 1, HOUR 25.167)
121.250 154.7602 0.18 Q . . . V.
(PEAK DAY 1, HOUR 25.250)
121.333 154.7613 0.16 Q . . . V.
(PEAK DAY 1, HOUR 25.333)
121.417 154.7623 0.14 Q . . . V.
(PEAK DAY 1, HOUR 25.417)
121.500 154.7632 0.13 Q . . . V.
(PEAK DAY 1, HOUR 25.500)
121.583 154.7640 0.12 Q . . . V.
(PEAK DAY 1, HOUR 25.583)
121.667 154.7648 0.11 Q . . . V.
(PEAK DAY 1, HOUR 25.667)
121.750 154.7655 0.11 Q . . . V.
(PEAK DAY 1, HOUR 25.750)
121.833 154.7662 0.10 Q . . . V.
(PEAK DAY 1, HOUR 25.833)
121.917 154.7668 0.09 Q . . . V.
(PEAK DAY 1, HOUR 25.917)
122.000 154.7674 0.08 Q . . . V.
(PEAK DAY 1, HOUR 26.000)
122.083 154.7679 0.07 Q . . . V.
(PEAK DAY 1, HOUR 26.083)
122.167 154.7683 0.07 Q . . . V.
(PEAK DAY 1, HOUR 26.167)
122.250 154.7688 0.06 Q . . . V.
(PEAK DAY 1, HOUR 26.250)
122.333 154.7691 0.05 Q . . . V.
(PEAK DAY 1, HOUR 26.333)
122.417 154.7695 0.05 Q . . . V.
(PEAK DAY 1, HOUR 26.417)
122.500 154.7697 0.04 Q . . . V.
(PEAK DAY 1, HOUR 26.500)
122.583 154.7700 0.04 Q . . . V.
(PEAK DAY 1, HOUR 26.583)
122.667 154.7702 0.03 Q . . . V.
(PEAK DAY 1, HOUR 26.667)
122.750 154.7704 0.03 Q . . . V.
(PEAK DAY 1, HOUR 26.750)
122.833 154.7706 0.03 Q . . . V.
(PEAK DAY 1, HOUR 26.833)
122.917 154.7708 0.02 Q . . . V.
(PEAK DAY 1, HOUR 26.917)
123.000 154.7709 0.02 Q . . . V.
(PEAK DAY 1, HOUR 27.000)
123.083 154.7710 0.02 Q . . . V.
(PEAK DAY 1, HOUR 27.083)
123.167 154.7711 0.02 Q . . . V.
(PEAK DAY 1, HOUR 27.167)
123.250 154.7712 0.02 Q . . . V.
(PEAK DAY 1, HOUR 27.250)
123.333 154.7713 0.01 Q . . . V.
(PEAK DAY 1, HOUR 27.333)
123.417 154.7714 0.01 Q . . . V.

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 (PEAK DAY 1, HOUR  27.417)
 123.500    154.7715      0.01  Q          .          .          .        V.
 (PEAK DAY 1, HOUR  27.500)
 123.583    154.7716      0.01  Q          .          .          .        V.
 (PEAK DAY 1, HOUR  27.583)
 123.667    154.7717      0.01  Q          .          .          .        V.
 (PEAK DAY 1, HOUR  27.667)
 123.750    154.7718      0.01  Q          .          .          .        V.
 (PEAK DAY 1, HOUR  27.750)
 123.833    154.7718      0.01  Q          .          .          .        V.
 (PEAK DAY 1, HOUR  27.833)
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********************************************************************************
  FLOW PROCESS FROM NODE   6395.00 TO NODE   6395.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  7291.1 Ac. ***
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6395.00 TO NODE   6395.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  7291.1 Ac. ***

            STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
          (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)    Q(CFS) 0.     1625.0    3250.0    4875.0    6500.0
--------------------------------------------------------------------------------
  96.000    848.2297     92.61  Q          V          .          .          .
 (PEAK DAY 2, HOUR  24.000)
  96.083    848.8682     92.71  Q          V          .          .          .
 (PEAK DAY 1, HOUR   0.083)
  96.167    849.5303     96.13  Q          V          .          .          .
 (PEAK DAY 1, HOUR   0.167)
  96.250    850.2509    104.64  Q          V          .          .          .
 (PEAK DAY 1, HOUR   0.250)
  96.333    851.0617    117.73  Q          V          .          .          .
 (PEAK DAY 1, HOUR   0.333)
  96.417    851.9749    132.59  Q          V          .          .          .
 (PEAK DAY 1, HOUR   0.417)
  96.500    852.9922    147.72  Q          V          .          .          .
 (PEAK DAY 1, HOUR   0.500)
  96.583    854.1163    163.21  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.583)
  96.667    855.3467    178.67  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.667)
  96.750    856.6910    195.18  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.750)
  96.833    858.1714    214.97  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.833)
  96.917    859.8072    237.51  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.917)
  97.000    861.5908    258.98  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   1.000)
  97.083    863.4935    276.26  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   1.083)
  97.167    865.4857    289.27  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   1.167)
  97.250    867.5464    299.23  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   1.250)
  97.333    869.6626    307.27  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   1.333)
  97.417    871.8253    314.02  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   1.417)
  97.500    874.0281    319.86  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   1.500)
  97.583    876.2664    324.99  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   1.583)
  97.667    878.5362    329.57  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   1.667)
  97.750    880.8345    333.71  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   1.750)
  97.833    883.1588    337.49  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   1.833)
  97.917    885.5071    340.97  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   1.917)
  98.000    887.8773    344.15  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   2.000)
  98.083    890.2675    347.05  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   2.083)
  98.167    892.6759    349.70  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   2.167)
  98.250    895.1012    352.15  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   2.250)
  98.333    897.5422    354.43  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   2.333)
  98.417    899.9975    356.52  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   2.417)
  98.500    902.4657    358.39  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   2.500)
  98.583    904.9456    360.08  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   2.583)
  98.667    907.4365    361.68  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   2.667)
  98.750    909.9382    363.24  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   2.750)
  98.833    912.4504    364.78  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   2.833)
  98.917    914.9734    366.33  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   2.917)
  99.000    917.5071    367.89  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   3.000)
  99.083    920.0515    369.45  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   3.083)
  99.167    922.6067    371.02  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   3.167)
  99.250    925.1727    372.59  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   3.250)
  99.333    927.7498    374.18  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   3.333)
  99.417    930.3378    375.79  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   3.417)
  99.500    932.9371    377.41  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   3.500)
  99.583    935.5475    379.04  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   3.583)
  99.667    938.1694    380.70  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   3.667)
  99.750    940.8028    382.36  . Q        .V         .          .          .
 (PEAK DAY 1, HOUR   3.750)
  99.833    943.4478    384.04  . Q        .V         .          .          .
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(PEAK DAY 1, HOUR	3.833)							
99.917	946.1044	385.74	. Q	.V	.	.	.	
(PEAK DAY 1, HOUR	3.917)							
100.000	948.7728	387.45	. Q	.V	.	.	.	
(PEAK DAY 1, HOUR	4.000)							
100.083	951.4531	389.18	. Q	.V	.	.	.	
(PEAK DAY 1, HOUR	4.083)							
100.167	954.1453	390.91	. Q	.V	.	.	.	
(PEAK DAY 1, HOUR	4.167)							
100.250	956.8495	392.64	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	4.250)							
100.333	959.5654	394.36	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	4.333)							
100.417	962.2930	396.05	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	4.417)							
100.500	965.0322	397.73	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	4.500)							
100.583	967.7831	399.42	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	4.583)							
100.667	970.5457	401.12	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	4.667)							
100.750	973.3201	402.84	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	4.750)							
100.833	976.1064	404.58	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	4.833)							
100.917	978.9049	406.34	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	4.917)							
101.000	981.7156	408.12	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.000)							
101.083	984.5388	409.91	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.083)							
101.167	987.3744	411.73	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.167)							
101.250	990.2227	413.57	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.250)							
101.333	993.0837	415.43	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.333)							
101.417	995.9578	417.31	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.417)							
101.500	998.8449	419.22	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.500)							
101.583	1001.7454	421.14	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.583)							
101.667	1004.6592	423.09	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.667)							
101.750	1007.5867	425.07	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.750)							
101.833	1010.5280	427.07	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.833)							
101.917	1013.4831	429.09	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.917)							
102.000	1016.4524	431.14	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.000)							
102.083	1019.4360	433.21	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.083)							
102.167	1022.4340	435.31	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.167)							
102.250	1025.4467	437.44	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.250)							
102.333	1028.4741	439.59	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.333)							
102.417	1031.5166	441.77	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.417)							
102.500	1034.5743	443.98	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.500)							
102.583	1037.6475	446.22	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.583)							
102.667	1040.7362	448.49	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.667)							
102.750	1043.8408	450.79	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.750)							
102.833	1046.9614	453.12	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.833)							
102.917	1050.0984	455.48	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.917)							
103.000	1053.2518	457.88	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.000)							
103.083	1056.4220	460.30	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.083)							
103.167	1059.6091	462.76	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.167)							
103.250	1062.8134	465.26	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.250)							
103.333	1066.0350	467.79	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.333)							
103.417	1069.2744	470.36	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.417)							
103.500	1072.5317	472.96	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.500)							
103.583	1075.8073	475.60	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.583)							
103.667	1079.1012	478.29	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.667)							
103.750	1082.4139	481.01	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.750)							
103.833	1085.7457	483.77	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.833)							
103.917	1089.0968	486.57	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.917)							
104.000	1092.4674	489.42	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.000)							
104.083	1095.8579	492.31	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.083)							
104.167	1099.2687	495.24	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.167)							
104.250	1102.7000	498.22	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.250)							
104.333	1106.1521	501.25	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.333)							
104.417	1109.6255	504.33	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.417)							
104.500	1113.1204	507.46	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.500)							
104.583	1116.6371	510.64	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.583)							
104.667	1120.1761	513.87	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.667)							
104.750	1123.7378	517.15	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.750)							
104.833	1127.3224	520.49	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.833)							
104.917	1130.9304	523.89	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.917)							
105.000	1134.5623	527.34	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.000)							
105.083	1138.2183	530.86	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.083)							
105.167	1141.8989	534.43	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.167)							
105.250	1145.6046	538.07	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.250)							
105.333	1149.3358	541.78	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.333)							
105.417	1153.0930	545.55	. Q	. V	.	.	.	

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 (PEAK DAY 1, HOUR   9.417)
105.500   1156.8767    549.39  .  Q      .   V     .         .         .
 (PEAK DAY 1, HOUR   9.500)
105.583   1160.6874    553.31  .  Q      .   V     .         .         .
 (PEAK DAY 1, HOUR   9.583)
105.667   1164.5255    557.30  .  Q      .   V     .         .         .
 (PEAK DAY 1, HOUR   9.667)
105.750   1168.3916    561.36  .  Q      .   V     .         .         .
 (PEAK DAY 1, HOUR   9.750)
105.833   1172.2863    565.50  .  Q      .   V     .         .         .
 (PEAK DAY 1, HOUR   9.833)
105.917   1176.2100    569.72  .  Q      .   V     .         .         .
 (PEAK DAY 1, HOUR   9.917)
106.000   1180.1633    574.03  .  Q      .   V     .         .         .
 (PEAK DAY 1, HOUR  10.000)
106.083   1184.1470    578.42  .  Q      .   V     .         .         .
 (PEAK DAY 1, HOUR  10.083)
106.167   1188.1615    582.91  .  Q      .   V     .         .         .
 (PEAK DAY 1, HOUR  10.167)
106.250   1192.2075    587.48  .  Q      .   V     .         .         .
 (PEAK DAY 1, HOUR  10.250)
106.333   1196.2856    592.15  .  Q      .    V    .         .         .
 (PEAK DAY 1, HOUR  10.333)
106.417   1200.3966    596.91  .  Q      .    V    .         .         .
 (PEAK DAY 1, HOUR  10.417)
106.500   1204.5411    601.78  .  Q      .    V    .         .         .
 (PEAK DAY 1, HOUR  10.500)
106.583   1208.7198    606.76  .  Q      .    V    .         .         .
 (PEAK DAY 1, HOUR  10.583)
106.667   1212.9336    611.84  .  Q      .    V    .         .         .
 (PEAK DAY 1, HOUR  10.667)
106.750   1217.1831    617.04  .  Q      .    V    .         .         .
 (PEAK DAY 1, HOUR  10.750)
106.833   1221.4692    622.35  .  Q      .    V    .         .         .
 (PEAK DAY 1, HOUR  10.833)
106.917   1225.7928    627.78  .  Q      .    V    .         .         .
 (PEAK DAY 1, HOUR  10.917)
107.000   1230.1547    633.34  .  Q      .    V    .         .         .
 (PEAK DAY 1, HOUR  11.000)
107.083   1234.5557    639.03  .  Q      .    V    .         .         .
 (PEAK DAY 1, HOUR  11.083)
107.167   1238.9968    644.86  .  Q      .    V    .         .         .
 (PEAK DAY 1, HOUR  11.167)
107.250   1243.4791    650.82  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  11.250)
107.333   1248.0035    656.94  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  11.333)
107.417   1252.5710    663.20  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  11.417)
107.500   1257.1829    669.63  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  11.500)
107.583   1261.8400    676.22  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  11.583)
107.667   1266.5437    682.99  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  11.667)
107.750   1271.2953    689.93  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  11.750)
107.833   1276.0959    697.06  .   Q     .     V   .         .         .
 (PEAK DAY 1, HOUR  11.833)
107.917   1280.9471    704.39  .   Q     .     V   .         .         .
 (PEAK DAY 1, HOUR  11.917)
108.000   1285.8502    711.93  .   Q     .     V   .         .         .
 (PEAK DAY 1, HOUR  12.000)
108.083   1290.8145    720.81  .   Q     .     V   .         .         .
 (PEAK DAY 1, HOUR  12.083)
108.167   1295.8752    734.82  .   Q     .     V   .         .         .
 (PEAK DAY 1, HOUR  12.167)
108.250   1301.0834    756.23  .   Q     .     V   .         .         .
 (PEAK DAY 1, HOUR  12.250)
108.333   1306.4816    783.81  .   Q     .     V   .         .         .
 (PEAK DAY 1, HOUR  12.333)
108.417   1312.0759    812.30  .   Q     .     V   .         .         .
 (PEAK DAY 1, HOUR  12.417)
108.500   1317.8571    839.42  .    Q    .     V   .         .         .
 (PEAK DAY 1, HOUR  12.500)
108.583   1323.8217    866.06  .    Q    .     V   .         .         .
 (PEAK DAY 1, HOUR  12.583)
108.667   1329.9694    892.64  .    Q    .     V   .         .         .
 (PEAK DAY 1, HOUR  12.667)
108.750   1336.3098    920.64  .    Q    .     V   .         .         .
 (PEAK DAY 1, HOUR  12.750)
108.833   1342.8690    952.39  .    Q    .     V   .         .         .
 (PEAK DAY 1, HOUR  12.833)
108.917   1349.6689    987.34  .     Q   .     V   .         .         .
 (PEAK DAY 1, HOUR  12.917)
109.000   1356.7054   1021.69  .     Q   .      V  .         .         .
 (PEAK DAY 1, HOUR  13.000)
109.083   1363.9534   1052.41  .     Q   .      V  .         .         .
 (PEAK DAY 1, HOUR  13.083)
109.167   1371.3875   1079.44  .     Q   .      V  .         .         .
 (PEAK DAY 1, HOUR  13.167)
109.250   1378.9908   1104.02  .     Q   .      V  .         .         .
 (PEAK DAY 1, HOUR  13.250)
109.333   1386.7548   1127.31  .     Q   .      V  .         .         .
 (PEAK DAY 1, HOUR  13.333)
109.417   1394.6742   1149.90  .      Q  .      V  .         .         .
 (PEAK DAY 1, HOUR  13.417)
109.500   1402.7450   1171.88  .      Q  .      V  .         .         .
 (PEAK DAY 1, HOUR  13.500)
109.583   1410.9611   1192.97  .      Q  .      V  .         .         .
 (PEAK DAY 1, HOUR  13.583)
109.667   1419.3180   1213.43  .      Q  .      V  .         .         .
 (PEAK DAY 1, HOUR  13.667)
109.750   1427.8197   1234.44  .      Q  .      V  .         .         .
 (PEAK DAY 1, HOUR  13.750)
109.833   1436.4801   1257.48  .      Q  .       V .         .         .
 (PEAK DAY 1, HOUR  13.833)
109.917   1445.3184   1283.32  .      Q  .       V .         .         .
 (PEAK DAY 1, HOUR  13.917)
110.000   1454.3536   1311.93  .       Q .       V .         .         .
 (PEAK DAY 1, HOUR  14.000)
110.083   1463.6016   1342.80  .       Q .       V .         .         .
 (PEAK DAY 1, HOUR  14.083)
110.167   1473.0786   1376.06  .       Q .       V .         .         .
 (PEAK DAY 1, HOUR  14.167)
110.250   1482.8025   1411.92  .       Q .       V .         .         .
 (PEAK DAY 1, HOUR  14.250)
110.333   1492.7931   1450.63  .       Q .       V .         .         .
 (PEAK DAY 1, HOUR  14.333)
110.417   1503.0625   1491.12  .        Q.       V .         .         .
 (PEAK DAY 1, HOUR  14.417)
110.500   1513.6210   1533.09  .        Q.       V .         .         .
 (PEAK DAY 1, HOUR  14.500)
110.583   1524.4817   1576.97  .        Q.        V.         .         .
 (PEAK DAY 1, HOUR  14.583)
110.667   1535.6626   1623.47  .        Q.        V.         .         .
 (PEAK DAY 1, HOUR  14.667)
110.750   1547.1887   1673.60  .         Q        V.         .         .
 (PEAK DAY 1, HOUR  14.750)
110.833   1559.0923   1728.40  .         Q        V.         .         .
 (PEAK DAY 1, HOUR  14.833)
110.917   1571.4099   1788.52  .         .Q       V.         .         .
 (PEAK DAY 1, HOUR  14.917)
111.000   1584.1835   1854.72  .         .Q       V.         .         .
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(PEAK DAY 1, HOUR 15.000)
111.083 1597.4512 1926.48 . .Q V . .
(PEAK DAY 1, HOUR 15.083)
111.167 1611.2422 2002.46 . . Q V . .
(PEAK DAY 1, HOUR 15.167)
111.250 1625.5806 2081.93 . . Q V . .
(PEAK DAY 1, HOUR 15.250)
111.333 1640.4995 2166.23 . . Q V . .
(PEAK DAY 1, HOUR 15.333)
111.417 1656.0244 2254.22 . . Q V . .
(PEAK DAY 1, HOUR 15.417)
111.500 1672.1300 2338.52 . . Q V . .
(PEAK DAY 1, HOUR 15.500)
111.583 1688.7606 2414.77 . . Q .V . .
(PEAK DAY 1, HOUR 15.583)
111.667 1705.8983 2488.39 . . Q .V . .
(PEAK DAY 1, HOUR 15.667)
111.750 1723.6367 2575.61 . . Q .V . .
(PEAK DAY 1, HOUR 15.750)
111.833 1742.1808 2692.59 . . Q .V . .
(PEAK DAY 1, HOUR 15.833)
111.917 1761.8546 2856.64 . . Q . V . .
(PEAK DAY 1, HOUR 15.917)
112.000 1783.2620 3108.35 . . Q. V . .
(PEAK DAY 1, HOUR 16.000)
112.083 1807.9384 3583.01 . . . Q . .
(PEAK DAY 1, HOUR 16.083)
112.167 1838.6633 4461.27 . . . V Q . .
(PEAK DAY 1, HOUR 16.167)
112.250 1876.6082 5509.59 . . . V . Q .
(PEAK DAY 1, HOUR 16.250)
112.333 1919.8613 6280.37 . . . V . Q .
(PEAK DAY 1, HOUR 16.333)
112.417 1963.9767 6405.55 . . . V . Q.
(PEAK DAY 1, HOUR 16.417)
112.500 2005.8584 6081.22 . . . V . Q .
(PEAK DAY 1, HOUR 16.500)
112.583 2044.4092 5597.57 . . . V . Q .
(PEAK DAY 1, HOUR 16.583)
112.667 2078.6221 4967.73 . . . V Q .
(PEAK DAY 1, HOUR 16.667)
112.750 2108.5637 4347.53 . . . Q . .
(PEAK DAY 1, HOUR 16.750)
112.833 2135.2847 3879.88 . . . Q V . .
(PEAK DAY 1, HOUR 16.833)
112.917 2159.7810 3556.88 . . .Q V . .
(PEAK DAY 1, HOUR 16.917)
113.000 2182.7480 3334.80 . . Q V . .
(PEAK DAY 1, HOUR 17.000)
113.083 2204.5920 3171.73 . . Q. V . .
(PEAK DAY 1, HOUR 17.083)
113.167 2225.5913 3049.09 . . Q . V . .
(PEAK DAY 1, HOUR 17.167)
113.250 2245.8694 2944.37 . . Q . V . .
(PEAK DAY 1, HOUR 17.250)
113.333 2265.5571 2858.67 . . Q . V . .
(PEAK DAY 1, HOUR 17.333)
113.417 2284.7349 2784.60 . . Q . V . .
(PEAK DAY 1, HOUR 17.417)
113.500 2303.4961 2724.13 . . Q . V . .
(PEAK DAY 1, HOUR 17.500)
113.583 2321.9290 2676.45 . . Q . V. .
(PEAK DAY 1, HOUR 17.583)
113.667 2340.0996 2638.39 . . Q . V. .
(PEAK DAY 1, HOUR 17.667)
113.750 2358.0527 2606.79 . . Q . V. .
(PEAK DAY 1, HOUR 17.750)
113.833 2375.8120 2578.65 . . Q . V. .
(PEAK DAY 1, HOUR 17.833)
113.917 2393.3904 2552.38 . . Q . V .
(PEAK DAY 1, HOUR 17.917)
114.000 2410.7942 2527.04 . . Q . V .
(PEAK DAY 1, HOUR 18.000)
114.083 2428.0156 2500.54 . . Q . V .
(PEAK DAY 1, HOUR 18.083)
114.167 2445.0261 2469.93 . . Q . V .
(PEAK DAY 1, HOUR 18.167)
114.250 2461.7859 2433.53 . . Q . V .
(PEAK DAY 1, HOUR 18.250)
114.333 2478.2622 2392.37 . . Q . .V .
(PEAK DAY 1, HOUR 18.333)
114.417 2494.4631 2352.38 . . Q . .V .
(PEAK DAY 1, HOUR 18.417)
114.500 2510.4226 2317.32 . . Q . .V .
(PEAK DAY 1, HOUR 18.500)
114.583 2526.1665 2286.02 . . Q . .V .
(PEAK DAY 1, HOUR 18.583)
114.667 2541.7141 2257.51 . . Q . .V .
(PEAK DAY 1, HOUR 18.667)
114.750 2557.0859 2231.98 . . Q . . V .
(PEAK DAY 1, HOUR 18.750)
114.833 2572.3035 2209.57 . . Q . . V .
(PEAK DAY 1, HOUR 18.833)
114.917 2587.3816 2189.34 . . Q . . V .
(PEAK DAY 1, HOUR 18.917)
115.000 2602.3274 2170.14 . . Q . . V .
(PEAK DAY 1, HOUR 19.000)
115.083 2617.1453 2151.56 . . Q . . V .
(PEAK DAY 1, HOUR 19.083)
115.167 2631.8420 2133.96 . . Q . . V .
(PEAK DAY 1, HOUR 19.167)
115.250 2646.4263 2117.64 . . Q . . V .
(PEAK DAY 1, HOUR 19.250)
115.333 2660.9036 2102.10 . . Q . . V .
(PEAK DAY 1, HOUR 19.333)
115.417 2675.2783 2087.20 . . Q . . V .
(PEAK DAY 1, HOUR 19.417)
115.500 2689.5542 2072.88 . . Q . . V .
(PEAK DAY 1, HOUR 19.500)
115.583 2703.7332 2058.77 . . Q . . V .
(PEAK DAY 1, HOUR 19.583)
115.667 2717.8108 2044.07 . . Q . . V .
(PEAK DAY 1, HOUR 19.667)
115.750 2731.7773 2027.94 . . Q . . V .
(PEAK DAY 1, HOUR 19.750)
115.833 2745.6187 2009.74 . . Q . . V .
(PEAK DAY 1, HOUR 19.833)
115.917 2759.3210 1989.59 . . Q . . V .
(PEAK DAY 1, HOUR 19.917)
116.000 2772.8770 1968.31 . . Q . . V .
(PEAK DAY 1, HOUR 20.000)
116.083 2786.2847 1946.80 . .Q . . V .
(PEAK DAY 1, HOUR 20.083)
116.167 2799.5452 1925.43 . .Q . . V .
(PEAK DAY 1, HOUR 20.167)
116.250 2812.6592 1904.15 . .Q . . V .
(PEAK DAY 1, HOUR 20.250)
116.333 2825.6265 1882.85 . .Q . . V .
(PEAK DAY 1, HOUR 20.333)
116.417 2838.4463 1861.45 . .Q . . V .
(PEAK DAY 1, HOUR 20.417)
116.500 2851.1167 1839.76 . .Q . . V .
(PEAK DAY 1, HOUR 20.500)
116.583 2863.6367 1817.89 . .Q . . V .

(PEAK DAY 1, HOUR 20.583)
116.667 2876.0066 1796.09 . .Q . . V .
(PEAK DAY 1, HOUR 20.667)
116.750 2888.2271 1774.43 . Q . . V .
(PEAK DAY 1, HOUR 20.750)
116.833 2900.2991 1752.85 . Q . . V .
(PEAK DAY 1, HOUR 20.833)
116.917 2912.2239 1731.47 . Q . . V .
(PEAK DAY 1, HOUR 20.917)
117.000 2924.0012 1710.07 . Q . . V .
(PEAK DAY 1, HOUR 21.000)
117.083 2935.6301 1688.53 . Q . . V .
(PEAK DAY 1, HOUR 21.083)
117.167 2947.1108 1666.99 . Q . . V .
(PEAK DAY 1, HOUR 21.167)
117.250 2958.4438 1645.55 . Q . . V .
(PEAK DAY 1, HOUR 21.250)
117.333 2969.6287 1624.04 . Q. . . V .
(PEAK DAY 1, HOUR 21.333)
117.417 2980.6616 1601.98 . Q. . . V .
(PEAK DAY 1, HOUR 21.417)
117.500 2991.5364 1579.00 . Q. . . V .
(PEAK DAY 1, HOUR 21.500)
117.583 3002.2473 1555.23 . Q. . . V .
(PEAK DAY 1, HOUR 21.583)
117.667 3012.7896 1530.74 . Q. . . V .
(PEAK DAY 1, HOUR 21.667)
117.750 3023.1511 1504.50 . Q. . . V .
(PEAK DAY 1, HOUR 21.750)
117.833 3033.3069 1474.60 . Q. . . V .
(PEAK DAY 1, HOUR 21.833)
117.917 3043.2251 1440.11 . Q . . . V .
(PEAK DAY 1, HOUR 21.917)
118.000 3052.8796 1401.82 . Q . . . V .
(PEAK DAY 1, HOUR 22.000)
118.083 3062.2539 1361.15 . Q . . . V .
(PEAK DAY 1, HOUR 22.083)
118.167 3071.3374 1318.93 . Q . . . V .
(PEAK DAY 1, HOUR 22.167)
118.250 3080.1169 1274.79 . Q . . . V .
(PEAK DAY 1, HOUR 22.250)
118.333 3088.5703 1227.42 . Q . . . V .
(PEAK DAY 1, HOUR 22.333)
118.417 3096.6538 1173.74 . Q . . . V .
(PEAK DAY 1, HOUR 22.417)
118.500 3104.2305 1100.14 . Q . . . V .
(PEAK DAY 1, HOUR 22.500)
118.583 3110.9597 977.09 . Q . . . V.
(PEAK DAY 1, HOUR 22.583)
118.667 3116.4448 796.42 . Q . . . V.
(PEAK DAY 1, HOUR 22.667)
118.750 3120.6733 613.97 . Q . . . V.
(PEAK DAY 1, HOUR 22.750)
118.833 3124.0696 493.14 . Q . . . V.
(PEAK DAY 1, HOUR 22.833)
118.917 3127.0754 436.47 . Q . . . V.
(PEAK DAY 1, HOUR 22.917)
119.000 3129.9275 414.11 . Q . . . V.
(PEAK DAY 1, HOUR 23.000)
119.083 3132.7151 404.76 . Q . . . V.
(PEAK DAY 1, HOUR 23.083)
119.167 3135.4675 399.64 . Q . . . V.
(PEAK DAY 1, HOUR 23.167)
119.250 3138.1936 395.81 . Q . . . V.
(PEAK DAY 1, HOUR 23.250)
119.333 3140.8960 392.40 . Q . . . V.
(PEAK DAY 1, HOUR 23.333)
119.417 3143.5762 389.15 . Q . . . V.
(PEAK DAY 1, HOUR 23.417)
119.500 3146.2346 385.99 . Q . . . V.
(PEAK DAY 1, HOUR 23.500)
119.583 3148.8718 382.91 . Q . . . V.
(PEAK DAY 1, HOUR 23.583)
119.667 3151.4883 379.89 . Q . . . V.
(PEAK DAY 1, HOUR 23.667)
119.750 3154.0842 376.94 . Q . . . V.
(PEAK DAY 1, HOUR 23.750)
119.833 3156.6602 374.04 . Q . . . V.
(PEAK DAY 1, HOUR 23.833)
119.917 3159.2166 371.21 . Q . . . V.
(PEAK DAY 1, HOUR 23.917)
120.000 3161.7539 368.42 . Q . . . V.
(PEAK DAY 1, HOUR 24.000)
120.083 3164.2654 364.68 . Q . . . V.
(PEAK DAY 1, HOUR 24.083)
120.167 3166.7222 356.73 . Q . . . V.
(PEAK DAY 1, HOUR 24.167)
120.250 3169.0798 342.32 . Q . . . V.
(PEAK DAY 1, HOUR 24.250)
120.333 3171.2981 322.10 .Q . . . V.
(PEAK DAY 1, HOUR 24.333)
120.417 3173.3623 299.71 .Q . . . V.
(PEAK DAY 1, HOUR 24.417)
120.500 3175.2705 277.08 .Q . . . V.
(PEAK DAY 1, HOUR 24.500)
120.583 3177.0208 254.15 .Q . . . V.
(PEAK DAY 1, HOUR 24.583)
120.667 3178.6152 231.51 .Q . . . V.
(PEAK DAY 1, HOUR 24.667)
120.750 3180.0459 207.75 .Q . . . V.
(PEAK DAY 1, HOUR 24.750)
120.833 3181.2852 179.93 .Q . . . V.
(PEAK DAY 1, HOUR 24.833)
120.917 3182.3098 148.79 Q . . . V.
(PEAK DAY 1, HOUR 24.917)
121.000 3183.1331 119.52 Q . . . V.
(PEAK DAY 1, HOUR 25.000)
121.083 3183.7959 96.26 Q . . . V.
(PEAK DAY 1, HOUR 25.083)
121.167 3184.3403 79.05 Q . . . V.
(PEAK DAY 1, HOUR 25.167)
121.250 3184.7959 66.16 Q . . . V.
(PEAK DAY 1, HOUR 25.250)
121.333 3185.1819 56.04 Q . . . V.
(PEAK DAY 1, HOUR 25.333)
121.417 3185.5110 47.79 Q . . . V.
(PEAK DAY 1, HOUR 25.417)
121.500 3185.7925 40.89 Q . . . V.
(PEAK DAY 1, HOUR 25.500)
121.583 3186.0337 35.04 Q . . . V.
(PEAK DAY 1, HOUR 25.583)
121.667 3186.2405 30.03 Q . . . V.
(PEAK DAY 1, HOUR 25.667)
121.750 3186.4175 25.69 Q . . . V.
(PEAK DAY 1, HOUR 25.750)
121.833 3186.5684 21.89 Q . . . V.
(PEAK DAY 1, HOUR 25.833)
121.917 3186.6963 18.58 Q . . . V.
(PEAK DAY 1, HOUR 25.917)
122.000 3186.8047 15.72 Q . . . V.
(PEAK DAY 1, HOUR 26.000)
122.083 3186.8962 13.29 Q . . . V.
(PEAK DAY 1, HOUR 26.083)
122.167 3186.9736 11.24 Q . . . V.

```
 (PEAK DAY 1, HOUR  26.167)
122.250   3187.0391      9.51  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.250)
122.333   3187.0945      8.04  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.333)
122.417   3187.1418      6.87  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.417)
122.500   3187.1833      6.02  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.500)
122.583   3187.2207      5.42  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.583)
122.667   3187.2551      4.99  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.667)
122.750   3187.2871      4.63  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.750)
122.833   3187.3169      4.31  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.833)
122.917   3187.3445      4.01  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  26.917)
123.000   3187.3701      3.72  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.000)
123.083   3187.3938      3.45  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.083)
123.167   3187.4158      3.19  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.167)
123.250   3187.4360      2.94  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.250)
123.333   3187.4546      2.69  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.333)
123.417   3187.4714      2.45  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.417)
123.500   3187.4866      2.21  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.500)
123.583   3187.5002      1.97  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.583)
123.667   3187.5122      1.74  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.667)
123.750   3187.5225      1.50  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.750)
123.833   3187.5312      1.28  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.833)
123.917   3187.5386      1.05  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.917)
124.000   3187.5442      0.83  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  28.000)
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
================================================================================
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             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
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                          Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

------------------------------------------------------------------------------
  FILE NAME: CP63CHS6.FLD
  TIME/DATE OF STUDY: 13:21 04/01/2004


******************************************************************************
  FLOW PROCESS FROM NODE    100.00 TO NODE    780.00 IS CODE =   1
------------------------------------------------------------------------------

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  4741.3 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==============================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    4741.300 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.480 HOURS
          CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
          THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
          MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  1.000
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:
         +------------------+--------+--------+--------+--------+--------+
         | RAINFALL DEPTHS & |        |        |        |        |        |
         |    LOSS RATES     |  DAY 1 |  DAY 2 |  DAY 3 |  DAY 4 |  DAY 5 |
         |==================+========+========+========+========+========|
         | 5-MINUTE (INCHES) |    0.58|    0.27|    0.12|    0.06|    0.04|
         |30-MINUTE (INCHES) |    1.22|    0.56|    0.24|    0.13|    0.09|
         |   1-HOUR (INCHES) |    1.62|    0.75|    0.33|    0.17|    0.12|
         |   3-HOUR (INCHES) |    2.71|    1.25|    0.54|    0.28|    0.21|
         |   6-HOUR (INCHES) |    3.75|    1.73|    0.75|    0.39|    0.29|
         |  24-HOUR (INCHES) |    6.28|    2.89|    1.26|    0.66|    0.48|
         |==================+========+========+========+========+========|
         | LOSS RATE(IN/HR)  |   0.190|   0.190|   0.190|   0.190|   0.190|
         | LOW LOSS FRACTION |   0.550|   0.750|   0.900|   0.970|   0.990|
         +------------------+--------+--------+--------+--------+--------+
           5-MINUTE FACTOR = 0.793
          30-MINUTE FACTOR = 0.793
           1-HOUR FACTOR = 0.793
           3-HOUR FACTOR = 0.969
           6-HOUR FACTOR = 0.984
          24-HOUR FACTOR = 0.990

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  17.361


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  96.00
         MODEL TIME(HOURS) FOR END OF RESULTS = 124.00


==============================================================================
                        UNIT HYDROGRAPH DETERMINATION

------------------------------------------------------------------------------
     INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
      NUMBER          MEAN VALUES          ORDINATES(CFS)
------------------------------------------------------------------------------
         1                1.137               652.130
         2                4.082              1688.625
         3                8.525              2547.514
         4               14.577              3470.279
         5               24.203              5519.575
         6               43.203             10894.611
         7               57.937              8448.228
         8               65.484              4327.674
         9               70.911              3111.621
        10               75.443              2599.076
        11               78.982              2029.171
        12               82.133              1806.516
        13               84.749              1499.854
        14               87.075              1334.078
        15               88.974              1088.566
        16               90.645               958.165
        17               92.163               870.854
        18               93.467               747.418
        19               94.550               621.273
        20               95.489               538.119
        21               96.255               439.106
        22               96.815               321.374
        23               97.375               321.055
        24               97.900               301.316
        25               98.079               102.631
        26               98.169                51.477
        27               98.259                51.411
        28               98.349                51.608
        29               98.439                51.604
        30               98.528                51.219
        31               98.618                51.477
        32               98.708                51.477
        33               98.798                51.608
        34               98.887                51.346
        35               98.977                51.608
        36               99.067                51.604
        37               99.157                51.604
        38               99.247                51.604
        39               99.337                51.604
        40               99.427                51.604
        41               99.517                51.604
        42               99.607                51.604
        43               99.697                51.604
        44               99.787                51.604
        45               99.877                51.604
        46               99.967                51.604
        47              100.000                18.785


------------------------------------------------------------------------------
    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =    2535.6968
```

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1991.0461

5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	2025.0	4050.0	6075.0	8100.0
96.000	524.3721	57.05	Q	V	.	.	.
(PEAK DAY 2, HOUR 24.000)							
96.083	524.7745	58.43	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.083)							
96.167	525.2059	62.64	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.167)							
96.250	525.6828	69.24	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.250)							
96.333	526.2228	78.41	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.333)							
96.417	526.8649	93.23	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.417)							
96.500	527.7108	122.82	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.500)							
96.583	528.7158	145.93	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.583)							
96.667	529.8037	157.97	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.667)							
96.750	530.9523	166.77	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.750)							
96.833	532.1523	174.25	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.833)							
96.917	533.3935	180.21	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.917)							
97.000	534.6719	185.62	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.000)							
97.083	535.9819	190.22	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.083)							
97.167	537.3209	194.42	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.167)							
97.250	538.6843	197.97	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.250)							
97.333	540.0699	201.20	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.333)							
97.417	541.4763	204.20	.Q	V	.	.	.
(PEAK DAY 1, HOUR 1.417)							
97.500	542.9012	206.90	.Q	V	.	.	.
(PEAK DAY 1, HOUR 1.500)							
97.583	544.3423	209.26	.Q	V	.	.	.
(PEAK DAY 1, HOUR 1.583)							
97.667	545.7985	211.43	.Q	V	.	.	.
(PEAK DAY 1, HOUR 1.667)							
97.750	547.2676	213.33	.Q	V	.	.	.
(PEAK DAY 1, HOUR 1.750)							
97.833	548.7479	214.94	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.833)							
97.917	550.2393	216.54	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.917)							
98.000	551.7415	218.12	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.000)							
98.083	553.2509	219.16	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.083)							
98.167	554.7665	220.08	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.167)							
98.250	556.2885	220.99	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.250)							
98.333	557.8170	221.93	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.333)							
98.417	559.3518	222.86	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.417)							
98.500	560.8932	223.82	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.500)							
98.583	562.4412	224.77	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.583)							
98.667	563.9959	225.74	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.667)							
98.750	565.5573	226.71	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.750)							
98.833	567.1254	227.70	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.833)							
98.917	568.7004	228.68	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.917)							
99.000	570.2823	229.69	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.000)							
99.083	571.8711	230.70	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.083)							
99.167	573.4670	231.73	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.167)							
99.250	575.0699	232.75	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.250)							
99.333	576.6802	233.80	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.333)							
99.417	578.2975	234.84	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.417)							
99.500	579.9223	235.92	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.500)							
99.583	581.5544	236.98	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.583)							
99.667	583.1940	238.07	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.667)							
99.750	584.8411	239.16	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.750)							
99.833	586.4959	240.27	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.833)							
99.917	588.1577	241.29	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.917)							
100.000	589.8264	242.29	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.000)							
100.083	591.5018	243.27	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.083)							
100.167	593.1842	244.29	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.167)							
100.250	594.8736	245.30	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.250)							
100.333	596.5702	246.34	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.333)							
100.417	598.2739	247.37	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.417)							
100.500	599.9849	248.44	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.500)							
100.583	601.7031	249.49	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.583)							
100.667	603.4288	250.58	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.667)							
100.750	605.1620	251.66	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.750)							
100.833	606.9028	252.77	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.833)							
100.917	608.6512	253.87	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.917)							
101.000	610.4075	255.01	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 5.000)							
101.083	612.1716	256.14	.Q	. V	.	.	.

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 (PEAK DAY 1, HOUR   5.083)
 101.167    613.9436    257.30  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.167)
 101.250    615.7236    258.46  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.250)
 101.333    617.5119    259.65  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.333)
 101.417    619.3083    260.84  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.417)
 101.500    621.1131    262.06  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.500)
 101.583    622.9263    263.27  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.583)
 101.667    624.7480    264.52  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.667)
 101.750    626.5784    265.76  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.750)
 101.833    628.4175    267.05  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.833)
 101.917    630.2655    268.32  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.917)
 102.000    632.1225    269.64  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   6.000)
 102.083    633.9885    270.94  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   6.083)
 102.167    635.8638    272.29  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   6.167)
 102.250    637.7483    273.63  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   6.250)
 102.333    639.6423    275.02  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   6.333)
 102.417    641.5458    276.39  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   6.417)
 102.500    643.4592    277.81  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   6.500)
 102.583    645.3822    279.23  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   6.583)
 102.667    647.3153    280.69  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.667)
 102.750    649.2584    282.14  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.750)
 102.833    651.2119    283.64  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.833)
 102.917    653.1755    285.13  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.917)
 103.000    655.1499    286.67  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.000)
 103.083    657.1348    288.21  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.083)
 103.167    659.1306    289.79  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.167)
 103.250    661.1373    291.37  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.250)
 103.333    663.1552    293.00  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.333)
 103.417    665.1843    294.63  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.417)
 103.500    667.2250    296.31  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.500)
 103.583    669.2772    297.98  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.583)
 103.667    671.3414    299.71  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.667)
 103.750    673.4174    301.43  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.750)
 103.833    675.5057    303.22  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.833)
 103.917    677.6062    305.00  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.917)
 104.000    679.7194    306.84  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   8.000)
 104.083    681.8453    308.67  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   8.083)
 104.167    683.9842    310.57  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   8.167)
 104.250    686.1362    312.46  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   8.250)
 104.333    688.3016    314.43  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   8.333)
 104.417    690.4805    316.38  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   8.417)
 104.500    692.6734    318.41  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   8.500)
 104.583    694.8802    320.42  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   8.583)
 104.667    697.1014    322.52  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.667)
 104.750    699.3370    324.61  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.750)
 104.833    701.5876    326.78  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.833)
 104.917    703.8530    328.94  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.917)
 105.000    706.1339    331.18  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.000)
 105.083    708.4301    333.42  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.083)
 105.167    710.7424    335.75  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.167)
 105.250    713.0707    338.07  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.250)
 105.333    715.4156    340.48  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.333)
 105.417    717.7772    342.89  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.417)
 105.500    720.1559    345.39  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.500)
 105.583    722.5518    347.89  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.583)
 105.667    724.9657    350.49  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.667)
 105.750    727.3975    353.09  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.750)
 105.833    729.8478    355.80  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.833)
 105.917    732.3168    358.50  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.917)
 106.000    734.8052    361.31  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR  10.000)
 106.083    737.3130    364.13  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR  10.083)
 106.167    739.8409    367.06  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR  10.167)
 106.250    742.3892    370.00  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR  10.250)
 106.333    744.9584    373.06  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR  10.333)
 106.417    747.5488    376.12  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.417)
 106.500    750.1611    379.32  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.500)
 106.583    752.7955    382.51  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.583)
 106.667    755.4529    385.85  .Q        .    V    .         .         .
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 (PEAK DAY 1, HOUR  10.667)
106.750    758.1334    389.20  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.750)
106.833    760.8378    392.69  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.833)
106.917    763.5665    396.19  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.917)
107.000    766.3203    399.86  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.000)
107.083    769.0995    403.53  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.083)
107.167    771.9052    407.38  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  11.167)
107.250    774.7374    411.24  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  11.250)
107.333    777.5974    415.28  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  11.333)
107.417    780.4854    419.34  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  11.417)
107.500    783.4028    423.60  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  11.500)
107.583    786.3495    427.88  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  11.583)
107.667    789.3273    432.36  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  11.667)
107.750    792.3361    436.88  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  11.750)
107.833    795.3776    441.62  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  11.833)
107.917    798.4520    446.40  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  11.917)
108.000    801.5609    451.42  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.000)
108.083    804.7167    458.21  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.083)
108.167    807.9401    468.03  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.167)
108.250    811.2471    480.19  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.250)
108.333    814.6569    495.10  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.333)
108.417    818.2075    515.54  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.417)
108.500    821.9995    550.61  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.500)
108.583    825.9893    579.32  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.583)
108.667    830.1044    597.50  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.667)
108.750    834.3231    612.56  .  Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.750)
108.833    838.6390    626.67  .  Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.833)
108.917    843.0424    639.37  .  Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.917)
109.000    847.5322    651.92  .  Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.000)
109.083    852.1049    663.96  .  Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.083)
109.167    856.7635    676.43  .  Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.167)
109.250    861.5088    689.01  .  Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.250)
109.333    866.3477    702.61  .  Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.333)
109.417    871.2896    717.55  .  Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.417)
109.500    876.3552    735.54  .  Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.500)
109.583    881.5556    755.09  .  Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.583)
109.667    886.9045    776.66  .  Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.667)
109.750    892.4076    799.06  .  Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.750)
109.833    898.0772    823.23  .   Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.833)
109.917    903.9202    848.40  .   Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.917)
110.000    909.9514    875.72  .   Q      .       V .         .         .
 (PEAK DAY 1, HOUR  14.000)
110.083    916.2261    911.09  .   Q      .       V .         .         .
 (PEAK DAY 1, HOUR  14.083)
110.167    922.8422    960.67  .   Q      .       V .         .         .
 (PEAK DAY 1, HOUR  14.167)
110.250    929.8752   1021.19  .    Q     .       V .         .         .
 (PEAK DAY 1, HOUR  14.250)
110.333    937.4159   1094.90  .    Q     .       V .         .         .
 (PEAK DAY 1, HOUR  14.333)
110.417    945.6345   1193.34  .    Q     .       V .         .         .
 (PEAK DAY 1, HOUR  14.417)
110.500    954.9769   1356.53  .     Q    .        V.         .         .
 (PEAK DAY 1, HOUR  14.500)
110.583    965.2540   1492.23  .      Q   .        V.         .         .
 (PEAK DAY 1, HOUR  14.583)
110.667    976.1564   1583.02  .      Q   .        V.         .         .
 (PEAK DAY 1, HOUR  14.667)
110.750    987.5969   1661.17  .       Q  .        V.         .         .
 (PEAK DAY 1, HOUR  14.750)
110.833    999.5599   1737.02  .       Q  .         V         .         .
 (PEAK DAY 1, HOUR  14.833)
110.917   1012.0135   1808.27  .       Q  .         V         .         .
 (PEAK DAY 1, HOUR  14.917)
111.000   1024.9714   1881.49  .        Q.         V         .         .
 (PEAK DAY 1, HOUR  15.000)
111.083   1038.4275   1953.82  .        Q.         V         .         .
 (PEAK DAY 1, HOUR  15.083)
111.167   1052.4082   2029.99  .         Q         .V        .         .
 (PEAK DAY 1, HOUR  15.167)
111.250   1066.9198   2107.09  .         Q         .V        .         .
 (PEAK DAY 1, HOUR  15.250)
111.333   1082.0043   2190.26  .         Q         .V        .         .
 (PEAK DAY 1, HOUR  15.333)
111.417   1097.5770   2261.16  .         .Q        . V       .         .
 (PEAK DAY 1, HOUR  15.417)
111.500   1113.5178   2314.61  .         .Q        . V       .         .
 (PEAK DAY 1, HOUR  15.500)
111.583   1129.7285   2353.79  .         .Q        . V       .         .
 (PEAK DAY 1, HOUR  15.583)
111.667   1146.1561   2385.29  .         .Q        .  V      .         .
 (PEAK DAY 1, HOUR  15.667)
111.750   1162.5571   2381.42  .         .Q        .  V      .         .
 (PEAK DAY 1, HOUR  15.750)
111.833   1178.1958   2270.74  .         .Q        .  V      .         .
 (PEAK DAY 1, HOUR  15.833)
111.917   1193.8363   2271.00  .         .Q        .  V      .         .
 (PEAK DAY 1, HOUR  15.917)
112.000   1210.8542   2471.00  .         . Q       .   V     .         .
 (PEAK DAY 1, HOUR  16.000)
112.083   1231.4600   2991.95  .         .   Q     .   V     .         .
 (PEAK DAY 1, HOUR  16.083)
112.167   1257.0110   3710.00  .         .       Q .    V    .         .
 (PEAK DAY 1, HOUR  16.167)
112.250   1287.2900   4396.52  .         .         .Q   V    .         .
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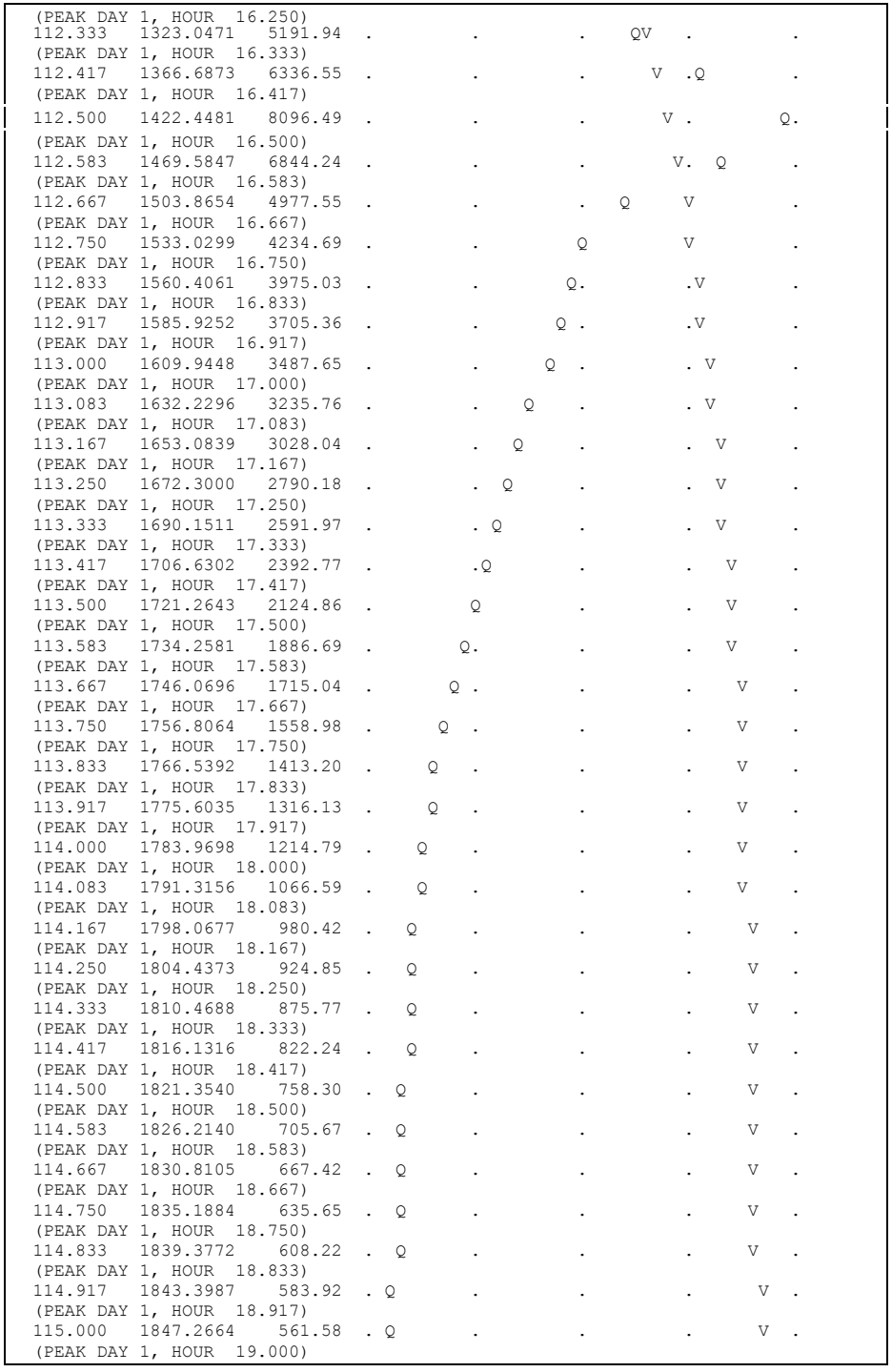
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112.333 1323.0471 5191.94
(PEAK DAY 1, HOUR 16.333)
112.417 1366.6873 6336.55
(PEAK DAY 1, HOUR 16.417)
112.500 1422.4481 8096.49
(PEAK DAY 1, HOUR 16.500)
112.583 1469.5847 6844.24
(PEAK DAY 1, HOUR 16.583)
112.667 1503.8654 4977.55
(PEAK DAY 1, HOUR 16.667)
112.750 1533.0299 4234.69
(PEAK DAY 1, HOUR 16.750)
112.833 1560.4061 3975.03
(PEAK DAY 1, HOUR 16.833)
112.917 1585.9252 3705.36
(PEAK DAY 1, HOUR 16.917)
113.000 1609.9448 3487.65
(PEAK DAY 1, HOUR 17.000)
113.083 1632.2296 3235.76
(PEAK DAY 1, HOUR 17.083)
113.167 1653.0839 3028.04
(PEAK DAY 1, HOUR 17.167)
113.250 1672.3000 2790.18
(PEAK DAY 1, HOUR 17.250)
113.333 1690.1511 2591.97
(PEAK DAY 1, HOUR 17.333)
113.417 1706.6302 2392.77
(PEAK DAY 1, HOUR 17.417)
113.500 1721.2643 2124.86
(PEAK DAY 1, HOUR 17.500)
113.583 1734.2581 1886.69
(PEAK DAY 1, HOUR 17.583)
113.667 1746.0696 1715.04
(PEAK DAY 1, HOUR 17.667)
113.750 1756.8064 1558.98
(PEAK DAY 1, HOUR 17.750)
113.833 1766.5392 1413.20
(PEAK DAY 1, HOUR 17.833)
113.917 1775.6035 1316.13
(PEAK DAY 1, HOUR 17.917)
114.000 1783.9698 1214.79
(PEAK DAY 1, HOUR 18.000)
114.083 1791.3156 1066.59
(PEAK DAY 1, HOUR 18.083)
114.167 1798.0677 980.42
(PEAK DAY 1, HOUR 18.167)
114.250 1804.4373 924.85
(PEAK DAY 1, HOUR 18.250)
114.333 1810.4688 875.77
(PEAK DAY 1, HOUR 18.333)
114.417 1816.1316 822.24
(PEAK DAY 1, HOUR 18.417)
114.500 1821.3540 758.30
(PEAK DAY 1, HOUR 18.500)
114.583 1826.2140 705.67
(PEAK DAY 1, HOUR 18.583)
114.667 1830.8105 667.42
(PEAK DAY 1, HOUR 18.667)
114.750 1835.1884 635.65
(PEAK DAY 1, HOUR 18.750)
114.833 1839.3772 608.22
(PEAK DAY 1, HOUR 18.833)
114.917 1843.3987 583.92
(PEAK DAY 1, HOUR 18.917)
115.000 1847.2664 561.58
(PEAK DAY 1, HOUR 19.000)
115.083 1851.0087 543.39
(PEAK DAY 1, HOUR 19.083)
115.167 1854.6389 527.11
(PEAK DAY 1, HOUR 19.167)
115.250 1858.1722 513.04
(PEAK DAY 1, HOUR 19.250)
115.333 1861.6184 500.38
(PEAK DAY 1, HOUR 19.333)
115.417 1864.9816 488.33
(PEAK DAY 1, HOUR 19.417)
115.500 1868.2661 476.91
(PEAK DAY 1, HOUR 19.500)
115.583 1871.4744 465.84
(PEAK DAY 1, HOUR 19.583)
115.667 1874.6071 454.86
(PEAK DAY 1, HOUR 19.667)
115.750 1877.6595 443.22
(PEAK DAY 1, HOUR 19.750)
115.833 1880.6226 430.23
(PEAK DAY 1, HOUR 19.833)
115.917 1883.4233 406.68
(PEAK DAY 1, HOUR 19.917)
116.000 1886.1075 389.75
(PEAK DAY 1, HOUR 20.000)
116.083 1888.7346 381.46
(PEAK DAY 1, HOUR 20.083)
116.167 1891.3137 374.48
(PEAK DAY 1, HOUR 20.167)
116.250 1893.8436 367.34
(PEAK DAY 1, HOUR 20.250)
116.333 1896.3243 360.20
(PEAK DAY 1, HOUR 20.333)
116.417 1898.7587 353.47
(PEAK DAY 1, HOUR 20.417)
116.500 1901.1489 347.07
(PEAK DAY 1, HOUR 20.500)
116.583 1903.4972 340.98
(PEAK DAY 1, HOUR 20.583)
116.667 1905.8054 335.15
(PEAK DAY 1, HOUR 20.667)
116.750 1908.0751 329.56
(PEAK DAY 1, HOUR 20.750)
116.833 1910.3079 324.20
(PEAK DAY 1, HOUR 20.833)
116.917 1912.5077 319.41
(PEAK DAY 1, HOUR 20.917)
117.000 1914.6774 315.04
(PEAK DAY 1, HOUR 21.000)
117.083 1916.8182 310.85
(PEAK DAY 1, HOUR 21.083)
117.167 1918.9313 306.82
(PEAK DAY 1, HOUR 21.167)
117.250 1921.0177 302.95
(PEAK DAY 1, HOUR 21.250)
117.333 1923.0785 299.22
(PEAK DAY 1, HOUR 21.333)
117.417 1925.1145 295.63
(PEAK DAY 1, HOUR 21.417)
117.500 1927.1267 292.16
(PEAK DAY 1, HOUR 21.500)
117.583 1929.1157 288.80
(PEAK DAY 1, HOUR 21.583)
117.667 1931.0822 285.53
(PEAK DAY 1, HOUR 21.667)
117.750 1933.0267 282.35
(PEAK DAY 1, HOUR 21.750)
117.833 1934.9500 279.25

(PEAK DAY 1, HOUR 21.833)
117.917 1936.8530 276.33 .Q . . . V .
(PEAK DAY 1, HOUR 21.917)
118.000 1938.7368 273.53 .Q . . . V .
(PEAK DAY 1, HOUR 22.000)
118.083 1940.6019 270.81 .Q . . . V .
(PEAK DAY 1, HOUR 22.083)
118.167 1942.4487 268.16 .Q . . . V.
(PEAK DAY 1, HOUR 22.167)
118.250 1944.2778 265.58 .Q . . . V.
(PEAK DAY 1, HOUR 22.250)
118.333 1946.0896 263.06 .Q . . . V.
(PEAK DAY 1, HOUR 22.333)
118.417 1947.8844 260.61 .Q . . . V.
(PEAK DAY 1, HOUR 22.417)
118.500 1949.6627 258.22 .Q . . . V.
(PEAK DAY 1, HOUR 22.500)
118.583 1951.4249 255.88 .Q . . . V.
(PEAK DAY 1, HOUR 22.583)
118.667 1953.1715 253.60 .Q . . . V.
(PEAK DAY 1, HOUR 22.667)
118.750 1954.9027 251.37 .Q . . . V.
(PEAK DAY 1, HOUR 22.750)
118.833 1956.6189 249.19 .Q . . . V.
(PEAK DAY 1, HOUR 22.833)
118.917 1958.3204 247.06 .Q . . . V.
(PEAK DAY 1, HOUR 22.917)
119.000 1960.0077 244.98 .Q . . . V.
(PEAK DAY 1, HOUR 23.000)
119.083 1961.6809 242.95 .Q . . . V.
(PEAK DAY 1, HOUR 23.083)
119.167 1963.3403 240.95 .Q . . . V.
(PEAK DAY 1, HOUR 23.167)
119.250 1964.9863 239.01 .Q . . . V.
(PEAK DAY 1, HOUR 23.250)
119.333 1966.6193 237.10 .Q . . . V.
(PEAK DAY 1, HOUR 23.333)
119.417 1968.2393 235.23 .Q . . . V.
(PEAK DAY 1, HOUR 23.417)
119.500 1969.8467 233.40 .Q . . . V.
(PEAK DAY 1, HOUR 23.500)
119.583 1971.4418 231.61 .Q . . . V.
(PEAK DAY 1, HOUR 23.583)
119.667 1973.0248 229.85 .Q . . . V.
(PEAK DAY 1, HOUR 23.667)
119.750 1974.5959 228.13 .Q . . . V.
(PEAK DAY 1, HOUR 23.750)
119.833 1976.1555 226.44 .Q . . . V.
(PEAK DAY 1, HOUR 23.833)
119.917 1977.7036 224.79 .Q . . . V.
(PEAK DAY 1, HOUR 23.917)
120.000 1979.2406 223.16 .Q . . . V.
(PEAK DAY 1, HOUR 24.000)
120.083 1980.7501 219.19 .Q . . . V.
(PEAK DAY 1, HOUR 24.083)
120.167 1982.2065 211.46 .Q . . . V.
(PEAK DAY 1, HOUR 24.167)
120.250 1983.5886 200.67 Q . . . V.
(PEAK DAY 1, HOUR 24.250)
120.333 1984.8737 186.59 Q . . . V.
(PEAK DAY 1, HOUR 24.333)
120.417 1986.0109 165.13 Q . . . V.
(PEAK DAY 1, HOUR 24.417)
120.500 1986.8660 124.17 Q . . . V.
(PEAK DAY 1, HOUR 24.500)
120.583 1987.5026 92.43 Q . . . V.
(PEAK DAY 1, HOUR 24.583)
120.667 1988.0258 75.96 Q . . . V.
(PEAK DAY 1, HOUR 24.667)
120.750 1988.4669 64.06 Q . . . V.
(PEAK DAY 1, HOUR 24.750)
120.833 1988.8396 54.11 Q . . . V.
(PEAK DAY 1, HOUR 24.833)
120.917 1989.1586 46.31 Q . . . V.
(PEAK DAY 1, HOUR 24.917)
121.000 1989.4298 39.39 Q . . . V.
(PEAK DAY 1, HOUR 25.000)
121.083 1989.6614 33.63 Q . . . V.
(PEAK DAY 1, HOUR 25.083)
121.167 1989.8578 28.51 Q . . . V.
(PEAK DAY 1, HOUR 25.167)
121.250 1990.0254 24.33 Q . . . V.
(PEAK DAY 1, HOUR 25.250)
121.333 1990.1677 20.66 Q . . . V.
(PEAK DAY 1, HOUR 25.333)
121.417 1990.2871 17.33 Q . . . V.
(PEAK DAY 1, HOUR 25.417)
121.500 1990.3868 14.48 Q . . . V.
(PEAK DAY 1, HOUR 25.500)
121.583 1990.4702 12.10 Q . . . V.
(PEAK DAY 1, HOUR 25.583)
121.667 1990.5394 10.05 Q . . . V.
(PEAK DAY 1, HOUR 25.667)
121.750 1990.5970 8.37 Q . . . V.
(PEAK DAY 1, HOUR 25.750)
121.833 1990.6462 7.14 Q . . . V.
(PEAK DAY 1, HOUR 25.833)
121.917 1990.6870 5.91 Q . . . V.
(PEAK DAY 1, HOUR 25.917)
122.000 1990.7198 4.77 Q . . . V.
(PEAK DAY 1, HOUR 26.000)
122.083 1990.7499 4.36 Q . . . V.
(PEAK DAY 1, HOUR 26.083)
122.167 1990.7784 4.14 Q . . . V.
(PEAK DAY 1, HOUR 26.167)
122.250 1990.8054 3.92 Q . . . V.
(PEAK DAY 1, HOUR 26.250)
122.333 1990.8309 3.70 Q . . . V.
(PEAK DAY 1, HOUR 26.333)
122.417 1990.8550 3.49 Q . . . V.
(PEAK DAY 1, HOUR 26.417)
122.500 1990.8776 3.28 Q . . . V.
(PEAK DAY 1, HOUR 26.500)
122.583 1990.8987 3.07 Q . . . V.
(PEAK DAY 1, HOUR 26.583)
122.667 1990.9183 2.86 Q . . . V.
(PEAK DAY 1, HOUR 26.667)
122.750 1990.9365 2.65 Q . . . V.
(PEAK DAY 1, HOUR 26.750)
122.833 1990.9534 2.44 Q . . . V.
(PEAK DAY 1, HOUR 26.833)
122.917 1990.9688 2.24 Q . . . V.
(PEAK DAY 1, HOUR 26.917)
123.000 1990.9828 2.03 Q . . . V.
(PEAK DAY 1, HOUR 27.000)
123.083 1990.9954 1.83 Q . . . V.
(PEAK DAY 1, HOUR 27.083)
123.167 1991.0066 1.63 Q . . . V.
(PEAK DAY 1, HOUR 27.167)
123.250 1991.0165 1.43 Q . . . V.
(PEAK DAY 1, HOUR 27.250)
123.333 1991.0249 1.23 Q . . . V.
(PEAK DAY 1, HOUR 27.333)
123.417 1991.0320 1.03 Q . . . V.

```
 (PEAK DAY 1, HOUR  27.417)
123.500   1991.0377      0.84  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.500)
123.583   1991.0421      0.64  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.583)
123.667   1991.0452      0.45  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.667)
123.750   1991.0470      0.26  Q         .         .         .         V
 (PEAK DAY 1, HOUR  27.750)
123.833   1991.0475      0.07  Q         .         .         .         V
 (PEAK DAY 1, HOUR  27.833)
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE    780.00 TO NODE    780.00 IS CODE = 3.1
--------------------------------------------------------------------------------
  >>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #1<<<<<
================================================================================

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  4741.3 Ac. ***

                    INFLOW
                  (STREAM 1)
                       |
                       |
                       V                  __effective depth
                   -----------            |   (and volume)
                  |           |    |    |
                  |           |    |....V.........
                  | detention |<-->|           outflow
                  |   basin   |    |.........._______
                   -----------     |    ^    |  \
                       |           |  dead   |   basin outlet
                       V           | storage |
                    OUTFLOW         ---------
                  (STREAM 1)



        ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 1
        THROUGH A FLOW-THROUGH DETENTION BASIN
        SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
          DEAD STORAGE(AF) =      0.000
          SPECIFIED DEAD STORAGE(AF) FILLED =      0.000
          SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET =      0.000
          DETENTION BASIN CONSTANT LOSS RATE(CFS) =    0.00


        BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

         INTERVAL    DEPTH      OUTFLOW     STORAGE
          NUMBER      (FT)       (CFS)       (AF)
              1        0.00        0.00       0.000
              2        4.00      394.90       0.700
              3        5.00      449.00       2.100
              4        6.00      497.00       5.300
              5        7.00      541.80      10.700
              6        9.00      623.30      30.100
              7       11.00      696.00      56.800
              8       13.00      762.50      85.500
              9       15.00      824.40     137.200
             10       17.00      881.60     197.600
             11       19.00      936.20     259.700
             12       21.00      987.80     323.800
             13       23.00     1038.30     389.700
             14       25.00     1064.60     457.700
             15       27.00     1094.00     527.900
             16       29.00     1127.00     600.000
             17       31.00     1162.10     674.100


================================================================================
 MODIFIED-PULS BASIN ROUTING MODEL RESULTS(5-MINUTE COMPUTATION INTERVALS):
 (Note: Computed EFFECTIVE DEPTH and VOLUME are estimated at the clock time;
        MEAN OUTFLOW is the average value during the unit interval.)

                  CLOCK                                                MEAN
PEAK TIME         TIME    DEAD-STORAGE    INFLOW     LOSS  EFFECTIVE OUTFLOW  EFFECTIVE
DAY  (HRS)        (HRS)    FILLED(AF)      (CFS)     (CFS)  DEPTH(FT)  (CFS)   VOLUME(AF)
--------------------------------------------------------------------------------------
 1   0.001    96.001          0.000      57.05      0.00       0.58     57.2       0.101
 1   0.084    96.084          0.000      58.43      0.00       0.60     57.9       0.104
 1   0.167    96.167          0.000      62.64      0.00       0.65     61.4       0.113
 1   0.251    96.251          0.000      69.24      0.00       0.72     67.4       0.126
 1   0.334    96.334          0.000      78.41      0.00       0.82     75.9       0.143
 1   0.417    96.417          0.000      93.23      0.00       0.98     89.0       0.172
 1   0.501    96.501          0.000     122.82      0.00       1.33    114.1       0.232
 1   0.584    96.584          0.000     145.93      0.00       1.53    140.9       0.267
 1   0.667    96.667          0.000     157.97      0.00       1.62    155.5       0.284
 1   0.751    96.751          0.000     166.77      0.00       1.71    164.6       0.299
 1   0.834    96.834          0.000     174.25      0.00       1.78    172.4       0.312
 1   0.917    96.917          0.000     180.21      0.00       1.84    178.8       0.322
 1   1.001    97.001          0.000     185.62      0.00       1.89    184.2       0.331
 1   1.084    97.084          0.000     190.22      0.00       1.94    189.1       0.339
 1   1.167    97.167          0.000     194.42      0.00       1.98    193.4       0.346
 1   1.251    97.251          0.000     197.97      0.00       2.01    197.1       0.352
 1   1.334    97.334          0.000     201.20      0.00       2.05    200.4       0.358
 1   1.417    97.417          0.000     204.20      0.00       2.08    203.4       0.363
 1   1.501    97.501          0.000     206.90      0.00       2.10    206.2       0.368
 1   1.584    97.584          0.000     209.26      0.00       2.13    208.7       0.372
 1   1.667    97.667          0.000     211.43      0.00       2.15    210.9       0.376
 1   1.751    97.751          0.000     213.33      0.00       2.17    212.9       0.379
 1   1.834    97.834          0.000     214.94      0.00       2.18    214.5       0.382
 1   1.917    97.917          0.000     216.54      0.00       2.20    216.1       0.385
 1   2.001    98.001          0.000     218.12      0.00       2.21    217.7       0.387
 1   2.084    98.084          0.000     219.16      0.00       2.22    218.9       0.389
 1   2.167    98.167          0.000     220.08      0.00       2.23    219.8       0.391
 1   2.251    98.251          0.000     220.99      0.00       2.24    220.8       0.392
 1   2.334    98.334          0.000     221.93      0.00       2.25    221.7       0.394
 1   2.417    98.417          0.000     222.86      0.00       2.26    222.6       0.395
 1   2.501    98.501          0.000     223.82      0.00       2.27    223.6       0.397
 1   2.584    98.584          0.000     224.77      0.00       2.28    224.5       0.399
 1   2.667    98.667          0.000     225.74      0.00       2.29    225.5       0.401
 1   2.751    98.751          0.000     226.71      0.00       2.30    226.5       0.402
 1   2.834    98.834          0.000     227.70      0.00       2.31    227.4       0.404
 1   2.917    98.917          0.000     228.68      0.00       2.32    228.4       0.406
 1   3.001    99.001          0.000     229.69      0.00       2.33    229.4       0.408
 1   3.084    99.084          0.000     230.70      0.00       2.34    230.4       0.409
 1   3.167    99.167          0.000     231.73      0.00       2.35    231.5       0.411
 1   3.251    99.251          0.000     232.75      0.00       2.36    232.5       0.413
 1   3.334    99.334          0.000     233.80      0.00       2.37    233.5       0.415
 1   3.417    99.417          0.000     234.84      0.00       2.38    234.6       0.417
 1   3.501    99.501          0.000     235.92      0.00       2.39    235.6       0.419
 1   3.584    99.584          0.000     236.98      0.00       2.40    236.7       0.421
 1   3.667    99.667          0.000     238.07      0.00       2.41    237.8       0.422
 1   3.751    99.751          0.000     239.16      0.00       2.43    238.9       0.424
 1   3.834    99.834          0.000     240.27      0.00       2.44    240.0       0.426
 1   3.917    99.917          0.000     241.29      0.00       2.45    241.0       0.428
 1   4.001   100.001          0.000     242.29      0.00       2.46    242.0       0.430
 1   4.084   100.084          0.000     243.27      0.00       2.47    243.0       0.432
 1   4.167   100.167          0.000     244.29      0.00       2.48    244.0       0.433
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1	4.251	100.251	0.000	245.30	0.00	2.49	245.0	0.435
1	4.334	100.334	0.000	246.34	0.00	2.50	246.1	0.437
1	4.417	100.417	0.000	247.37	0.00	2.51	247.1	0.439
1	4.501	100.501	0.000	248.44	0.00	2.52	248.2	0.441
1	4.584	100.584	0.000	249.49	0.00	2.53	249.2	0.443
1	4.667	100.667	0.000	250.58	0.00	2.54	250.3	0.445
1	4.751	100.751	0.000	251.66	0.00	2.55	251.4	0.447
1	4.834	100.834	0.000	252.77	0.00	2.56	252.5	0.449
1	4.917	100.917	0.000	253.87	0.00	2.57	253.6	0.450
1	5.001	101.001	0.000	255.01	0.00	2.59	254.7	0.453
1	5.084	101.084	0.000	256.14	0.00	2.60	255.8	0.455
1	5.167	101.167	0.000	257.30	0.00	2.61	257.0	0.457
1	5.251	101.251	0.000	258.46	0.00	2.62	258.2	0.459
1	5.334	101.334	0.000	259.65	0.00	2.63	259.3	0.461
1	5.417	101.417	0.000	260.84	0.00	2.64	260.5	0.463
1	5.501	101.501	0.000	262.06	0.00	2.66	261.7	0.465
1	5.584	101.584	0.000	263.27	0.00	2.67	263.0	0.467
1	5.667	101.667	0.000	264.52	0.00	2.68	264.2	0.469
1	5.751	101.751	0.000	265.76	0.00	2.69	265.4	0.472
1	5.834	101.834	0.000	267.05	0.00	2.71	266.7	0.474
1	5.917	101.917	0.000	268.32	0.00	2.72	268.0	0.476
1	6.001	102.001	0.000	269.64	0.00	2.73	269.3	0.479
1	6.084	102.084	0.000	270.94	0.00	2.75	270.6	0.481
1	6.167	102.167	0.000	272.29	0.00	2.76	271.9	0.483
1	6.251	102.251	0.000	273.63	0.00	2.77	273.3	0.486
1	6.334	102.334	0.000	275.02	0.00	2.79	274.7	0.488
1	6.417	102.417	0.000	276.39	0.00	2.80	276.0	0.491
1	6.501	102.501	0.000	277.81	0.00	2.82	277.4	0.493
1	6.584	102.584	0.000	279.23	0.00	2.83	278.9	0.496
1	6.667	102.667	0.000	280.69	0.00	2.85	280.3	0.498
1	6.751	102.751	0.000	282.14	0.00	2.86	281.8	0.501
1	6.834	102.834	0.000	283.64	0.00	2.88	283.2	0.503
1	6.917	102.917	0.000	285.13	0.00	2.89	284.7	0.506
1	7.001	103.001	0.000	286.67	0.00	2.91	286.3	0.509
1	7.084	103.084	0.000	288.21	0.00	2.92	287.8	0.512
1	7.167	103.167	0.000	289.79	0.00	2.94	289.4	0.514
1	7.251	103.251	0.000	291.37	0.00	2.96	291.0	0.517
1	7.334	103.334	0.000	293.00	0.00	2.97	292.6	0.520
1	7.417	103.417	0.000	294.63	0.00	2.99	294.2	0.523
1	7.501	103.501	0.000	296.31	0.00	3.01	295.9	0.526
1	7.584	103.584	0.000	297.98	0.00	3.02	297.6	0.529
1	7.667	103.667	0.000	299.71	0.00	3.04	299.3	0.532
1	7.751	103.751	0.000	301.43	0.00	3.06	301.0	0.535
1	7.834	103.834	0.000	303.22	0.00	3.08	302.8	0.538
1	7.917	103.917	0.000	305.00	0.00	3.09	304.5	0.541
1	8.001	104.001	0.000	306.84	0.00	3.11	306.4	0.545
1	8.084	104.084	0.000	308.67	0.00	3.13	308.2	0.548
1	8.167	104.167	0.000	310.57	0.00	3.15	310.1	0.551
1	8.251	104.251	0.000	312.46	0.00	3.17	312.0	0.555
1	8.334	104.334	0.000	314.43	0.00	3.19	313.9	0.558
1	8.418	104.418	0.000	316.38	0.00	3.21	315.9	0.562
1	8.501	104.501	0.000	318.41	0.00	3.23	317.9	0.565
1	8.584	104.584	0.000	320.42	0.00	3.25	319.9	0.569
1	8.668	104.668	0.000	322.52	0.00	3.27	322.0	0.573
1	8.751	104.751	0.000	324.61	0.00	3.29	324.1	0.576
1	8.834	104.834	0.000	326.78	0.00	3.32	326.2	0.580
1	8.918	104.918	0.000	328.94	0.00	3.34	328.4	0.584
1	9.001	105.001	0.000	331.18	0.00	3.36	330.6	0.588
1	9.084	105.084	0.000	333.42	0.00	3.38	332.8	0.592
1	9.168	105.168	0.000	335.75	0.00	3.41	335.1	0.596
1	9.251	105.251	0.000	338.07	0.00	3.43	337.5	0.600
1	9.334	105.334	0.000	340.48	0.00	3.45	339.9	0.605
1	9.418	105.418	0.000	342.89	0.00	3.48	342.3	0.609
1	9.501	105.501	0.000	345.39	0.00	3.50	344.7	0.613
1	9.584	105.584	0.000	347.89	0.00	3.53	347.3	0.618
1	9.668	105.668	0.000	350.49	0.00	3.56	349.8	0.622
1	9.751	105.751	0.000	353.09	0.00	3.58	352.4	0.627
1	9.834	105.834	0.000	355.80	0.00	3.61	355.1	0.632
1	9.918	105.918	0.000	358.50	0.00	3.64	357.8	0.637
1	10.001	106.001	0.000	361.31	0.00	3.67	360.6	0.642
1	10.084	106.084	0.000	364.13	0.00	3.70	363.4	0.647
1	10.168	106.168	0.000	367.06	0.00	3.73	366.3	0.652
1	10.251	106.251	0.000	370.00	0.00	3.75	369.2	0.657
1	10.334	106.334	0.000	373.06	0.00	3.79	372.3	0.663
1	10.418	106.418	0.000	376.12	0.00	3.82	375.3	0.668
1	10.501	106.501	0.000	379.32	0.00	3.85	378.5	0.674
1	10.584	106.584	0.000	382.51	0.00	3.88	381.7	0.679
1	10.668	106.668	0.000	385.85	0.00	3.92	385.0	0.685
1	10.751	106.751	0.000	389.20	0.00	3.95	388.3	0.691
1	10.834	106.834	0.000	392.69	0.00	3.99	391.8	0.698
1	10.918	106.918	0.000	396.19	0.00	4.01	394.4	0.710
1	11.001	107.001	0.000	399.86	0.00	4.03	395.8	0.738
1	11.084	107.084	0.000	403.53	0.00	4.06	397.2	0.781
1	11.168	107.168	0.000	407.38	0.00	4.10	399.1	0.838
1	11.251	107.251	0.000	411.24	0.00	4.15	401.5	0.905
1	11.334	107.334	0.000	415.28	0.00	4.20	404.3	0.981
1	11.418	107.418	0.000	419.34	0.00	4.26	407.3	1.063
1	11.501	107.501	0.000	423.60	0.00	4.32	410.7	1.152
1	11.584	107.584	0.000	427.88	0.00	4.39	414.2	1.247
1	11.668	107.668	0.000	432.36	0.00	4.46	417.9	1.346
1	11.751	107.751	0.000	436.88	0.00	4.54	421.9	1.449
1	11.834	107.834	0.000	441.62	0.00	4.61	425.9	1.557
1	11.918	107.918	0.000	446.40	0.00	4.69	430.2	1.669
1	12.001	108.001	0.000	451.42	0.00	4.77	434.6	1.785
1	12.084	108.084	0.000	458.21	0.00	4.87	439.3	1.915
1	12.168	108.168	0.000	468.03	0.00	4.98	444.9	2.074
1	12.251	108.251	0.000	480.19	0.00	5.06	449.9	2.283
1	12.334	108.334	0.000	495.10	0.00	5.15	453.9	2.567
1	12.418	108.418	0.000	515.54	0.00	5.27	458.9	2.957
1	12.501	108.501	0.000	550.61	0.00	5.45	466.2	3.538
1	12.584	108.584	0.000	579.32	0.00	5.67	475.9	4.250
1	12.668	108.668	0.000	597.50	0.00	5.91	487.0	5.011
1	12.751	108.751	0.000	612.56	0.00	6.09	496.9	5.808
1	12.834	108.834	0.000	626.67	0.00	6.25	504.7	6.648
1	12.918	108.918	0.000	639.37	0.00	6.41	511.8	7.526
1	13.001	109.001	0.000	651.92	0.00	6.58	519.3	8.440
1	13.084	109.084	0.000	663.96	0.00	6.76	527.0	9.383
1	13.168	109.168	0.000	676.43	0.00	6.94	534.9	10.358
1	13.251	109.251	0.000	689.01	0.00	7.07	541.8	11.372
1	13.334	109.334	0.000	702.61	0.00	7.18	546.9	12.444
1	13.418	109.418	0.000	717.55	0.00	7.30	551.5	13.588
1	13.501	109.501	0.000	735.54	0.00	7.42	556.5	14.821
1	13.584	109.584	0.000	755.09	0.00	7.56	561.9	16.151
1	13.668	109.668	0.000	776.66	0.00	7.71	567.7	17.590
1	13.751	109.751	0.000	799.06	0.00	7.87	574.0	19.140
1	13.834	109.834	0.000	823.23	0.00	8.04	580.8	20.810
1	13.918	109.918	0.000	848.40	0.00	8.23	588.0	22.603
1	14.001	110.001	0.000	875.72	0.00	8.43	595.9	24.531
1	14.084	110.084	0.000	911.09	0.00	8.64	604.3	26.643
1	14.168	110.168	0.000	960.67	0.00	8.89	613.8	29.032
1	14.251	110.251	0.000	1021.19	0.00	9.13	623.3	31.772
1	14.334	110.334	0.000	1094.90	0.00	9.36	632.2	34.959
1	14.418	110.418	0.000	1193.34	0.00	9.65	641.7	38.758
1	14.501	110.501	0.000	1356.53	0.00	10.01	653.5	43.600
1	14.584	110.584	0.000	1492.23	0.00	10.44	667.8	49.278
1	14.668	110.668	0.000	1583.02	0.00	10.90	683.9	55.470
1	14.751	110.751	0.000	1661.17	0.00	11.37	700.3	62.087
1	14.834	110.834	0.000	1737.02	0.00	11.86	716.4	69.117
1	14.918	110.918	0.000	1808.27	0.00	12.37	733.1	76.521
1	15.001	111.001	0.000	1881.49	0.00	12.92	750.7	84.309
1	15.084	111.084	0.000	1953.82	0.00	13.27	765.3	92.494
1	15.168	111.168	0.000	2029.99	0.00	13.60	776.0	101.130
1	15.251	111.251	0.000	2107.09	0.00	13.96	786.7	110.224
1	15.334	111.334	0.000	2190.26	0.00	14.33	797.8	119.814

1	15.418	111.418	0.000	2261.16	0.00	14.71	809.6	129.811
1	15.501	111.501	0.000	2314.61	0.00	15.10	821.3	140.095
1	15.584	111.584	0.000	2353.79	0.00	15.44	832.1	150.575
1	15.668	111.668	0.000	2385.29	0.00	15.79	842.1	161.203
1	15.751	111.751	0.000	2381.42	0.00	16.14	852.1	171.736
1	15.834	111.834	0.000	2270.74	0.00	16.46	861.7	181.440
1	15.918	111.918	0.000	2271.00	0.00	16.78	870.9	191.082
1	16.001	112.001	0.000	2471.00	0.00	17.14	880.5	202.037
1	16.084	112.084	0.000	2991.95	0.00	17.61	891.9	216.500
1	16.168	112.168	0.000	3710.00	0.00	18.23	906.7	235.806
1	16.251	112.251	0.000	4396.52	0.00	19.00	925.7	259.710
1	16.334	112.334	0.000	5191.94	0.00	19.91	948.0	288.939
1	16.418	112.418	0.000	6336.55	0.00	21.06	974.6	325.867
1	16.501	112.501	0.000	8096.49	0.00	22.54	1008.1	374.685
1	16.584	112.584	0.000	6844.24	0.00	23.73	1037.4	414.677
1	16.668	112.668	0.000	4977.55	0.00	24.53	1053.2	441.704
1	16.751	112.751	0.000	4234.69	0.00	25.17	1062.7	463.550
1	16.834	112.834	0.000	3975.03	0.00	25.74	1071.2	483.549
1	16.918	112.918	0.000	3705.36	0.00	26.25	1079.2	501.635
1	17.001	113.001	0.000	3487.65	0.00	26.72	1086.5	518.172
1	17.084	113.084	0.000	3235.76	0.00	27.14	1093.1	532.929
1	17.168	113.168	0.000	3028.04	0.00	27.51	1099.3	546.212
1	17.251	113.251	0.000	2790.18	0.00	27.83	1105.0	557.817
1	17.334	113.334	0.000	2591.97	0.00	28.11	1110.0	568.023
1	17.418	113.418	0.000	2392.77	0.00	28.36	1114.4	576.828
1	17.501	113.501	0.000	2124.86	0.00	28.55	1118.0	583.762
1	17.584	113.584	0.000	1886.69	0.00	28.70	1120.8	589.037
1	17.668	113.668	0.000	1715.04	0.00	28.81	1122.9	593.115
1	17.751	113.751	0.000	1558.98	0.00	28.89	1124.5	596.107
1	17.834	113.834	0.000	1413.20	0.00	28.95	1125.7	598.087
1	17.918	113.918	0.000	1316.13	0.00	28.98	1126.4	599.394
1	18.001	114.001	0.000	1214.79	0.00	29.00	1126.9	599.999
1	18.084	114.084	0.000	1066.59	0.00	28.99	1126.9	599.584
1	18.168	114.168	0.000	980.42	0.00	28.96	1126.6	598.577
1	18.251	114.251	0.000	924.85	0.00	28.92	1126.0	597.192
1	18.334	114.334	0.000	875.77	0.00	28.87	1125.3	595.473
1	18.418	114.418	0.000	822.24	0.00	28.82	1124.5	593.392
1	18.501	114.501	0.000	758.30	0.00	28.75	1123.4	590.878
1	18.584	114.584	0.000	705.67	0.00	28.67	1122.2	588.009
1	18.668	114.668	0.000	667.42	0.00	28.58	1120.8	584.887
1	18.751	114.751	0.000	635.65	0.00	28.49	1119.3	581.556
1	18.834	114.834	0.000	608.22	0.00	28.39	1117.8	578.046
1	18.918	114.918	0.000	583.92	0.00	28.29	1116.1	574.381
1	19.001	115.001	0.000	561.58	0.00	28.18	1114.4	570.574
1	19.084	115.084	0.000	543.39	0.00	28.07	1112.6	566.654
1	19.168	115.168	0.000	527.11	0.00	27.96	1110.8	562.633
1	19.251	115.251	0.000	513.04	0.00	27.85	1109.0	558.529
1	19.335	115.335	0.000	500.38	0.00	27.73	1107.1	554.351
1	19.418	115.418	0.000	488.33	0.00	27.62	1105.1	550.103
1	19.501	115.501	0.000	476.91	0.00	27.50	1103.2	545.790
1	19.585	115.585	0.000	465.84	0.00	27.37	1101.2	541.414
1	19.668	115.668	0.000	454.86	0.00	27.25	1099.2	536.977
1	19.751	115.751	0.000	443.22	0.00	27.13	1097.1	532.473
1	19.835	115.835	0.000	430.23	0.00	27.00	1095.0	527.895
1	19.918	115.918	0.000	406.68	0.00	26.87	1093.0	523.168
1	20.001	116.001	0.000	389.75	0.00	26.73	1091.0	518.339
1	20.085	116.085	0.000	381.46	0.00	26.59	1089.0	513.466
1	20.168	116.168	0.000	374.48	0.00	26.45	1086.9	508.559
1	20.251	116.251	0.000	367.34	0.00	26.31	1084.9	503.618
1	20.335	116.335	0.000	360.20	0.00	26.17	1082.8	498.641
1	20.418	116.418	0.000	353.47	0.00	26.02	1080.7	493.633
1	20.501	116.501	0.000	347.07	0.00	25.88	1078.6	488.595
1	20.585	116.585	0.000	340.98	0.00	25.74	1076.5	483.529
1	20.668	116.668	0.000	335.15	0.00	25.59	1074.4	478.438
1	20.751	116.751	0.000	329.56	0.00	25.45	1072.2	473.324
1	20.835	116.835	0.000	324.20	0.00	25.30	1070.1	468.187
1	20.918	116.918	0.000	319.41	0.00	25.15	1067.9	463.032
1	21.001	117.001	0.000	315.04	0.00	25.00	1065.8	457.862
1	21.085	117.085	0.000	310.85	0.00	24.85	1063.7	452.677
1	21.168	117.168	0.000	306.82	0.00	24.70	1061.7	447.478
1	21.251	117.251	0.000	302.95	0.00	24.55	1059.6	442.267
1	21.335	117.335	0.000	299.22	0.00	24.39	1057.6	437.044
1	21.418	117.418	0.000	295.63	0.00	24.24	1055.6	431.810
1	21.501	117.501	0.000	292.16	0.00	24.08	1053.6	426.566
1	21.585	117.585	0.000	288.80	0.00	23.93	1051.5	421.313
1	21.668	117.668	0.000	285.53	0.00	23.78	1049.5	416.051
1	21.751	117.751	0.000	282.35	0.00	23.62	1047.5	410.782
1	21.835	117.835	0.000	279.25	0.00	23.46	1045.4	405.505
1	21.918	117.918	0.000	276.33	0.00	23.31	1043.4	400.222
1	22.001	118.001	0.000	273.53	0.00	23.15	1041.3	394.934
1	22.085	118.085	0.000	270.81	0.00	23.00	1039.3	389.642
1	22.168	118.168	0.000	268.16	0.00	22.84	1036.2	384.352
1	22.251	118.251	0.000	265.58	0.00	22.68	1032.2	379.072
1	22.335	118.335	0.000	263.06	0.00	22.52	1028.1	373.803
1	22.418	118.418	0.000	260.61	0.00	22.36	1024.1	368.545
1	22.501	118.501	0.000	258.22	0.00	22.20	1020.1	363.298
1	22.585	118.585	0.000	255.88	0.00	22.04	1016.1	358.063
1	22.668	118.668	0.000	253.60	0.00	21.88	1012.1	352.839
1	22.751	118.751	0.000	251.37	0.00	21.72	1008.1	347.628
1	22.835	118.835	0.000	249.19	0.00	21.57	1004.1	342.429
1	22.918	118.918	0.000	247.06	0.00	21.41	1000.1	337.243
1	23.001	119.001	0.000	244.98	0.00	21.25	996.1	332.070
1	23.085	119.085	0.000	242.95	0.00	21.09	992.2	326.910
1	23.168	119.168	0.000	240.95	0.00	20.94	988.2	321.764
1	23.251	119.251	0.000	239.01	0.00	20.78	984.1	316.632
1	23.335	119.335	0.000	237.10	0.00	20.62	980.0	311.516
1	23.418	119.418	0.000	235.23	0.00	20.46	975.9	306.415
1	23.501	119.501	0.000	233.40	0.00	20.30	971.8	301.330
1	23.585	119.585	0.000	231.61	0.00	20.14	967.7	296.261
1	23.668	119.668	0.000	229.85	0.00	19.98	963.6	291.207
1	23.751	119.751	0.000	228.13	0.00	19.83	959.5	286.170
1	23.835	119.835	0.000	226.44	0.00	19.67	955.5	281.149
1	23.918	119.918	0.000	224.79	0.00	19.51	951.5	276.145
1	24.001	120.001	0.000	223.16	0.00	19.36	947.4	271.157
1	24.085	120.085	0.000	219.19	0.00	19.20	943.4	266.169
1	24.168	120.168	0.000	211.46	0.00	19.05	939.4	261.156
1	24.251	120.251	0.000	200.67	0.00	18.88	935.2	256.097
1	24.335	120.335	0.000	186.59	0.00	18.72	930.8	250.972
1	24.418	120.418	0.000	165.13	0.00	18.55	926.2	245.730
1	24.501	120.501	0.000	124.17	0.00	18.37	921.5	240.239
1	24.585	120.585	0.000	92.43	0.00	18.19	916.6	234.562
1	24.668	120.668	0.000	75.96	0.00	18.01	911.6	228.808
1	24.751	120.751	0.000	64.06	0.00	17.82	906.5	223.006
1	24.835	120.835	0.000	54.11	0.00	17.63	901.4	217.171
1	24.918	120.918	0.000	46.31	0.00	17.44	896.2	211.317
1	25.001	121.001	0.000	39.39	0.00	17.25	891.1	205.452
1	25.085	121.085	0.000	33.63	0.00	17.06	885.9	199.582
1	25.168	121.168	0.000	28.51	0.00	16.87	880.6	193.713
1	25.251	121.251	0.000	24.33	0.00	16.68	875.1	187.854
1	25.335	121.335	0.000	20.66	0.00	16.48	869.6	182.007
1	25.418	121.418	0.000	17.33	0.00	16.29	864.1	176.175
1	25.501	121.501	0.000	14.48	0.00	16.10	858.6	170.362
1	25.585	121.585	0.000	12.10	0.00	15.91	853.1	164.570
1	25.668	121.668	0.000	10.05	0.00	15.72	847.6	158.802
1	25.751	121.751	0.000	8.37	0.00	15.53	842.1	153.060
1	25.835	121.835	0.000	7.14	0.00	15.34	836.7	147.347
1	25.918	121.918	0.000	5.91	0.00	15.15	831.3	141.662
1	26.001	122.001	0.000	4.77	0.00	14.95	825.8	136.008
1	26.085	122.085	0.000	4.36	0.00	14.74	819.6	130.393
1	26.168	122.168	0.000	4.14	0.00	14.52	812.9	124.823
1	26.251	122.251	0.000	3.92	0.00	14.31	806.3	119.297
1	26.335	122.335	0.000	3.70	0.00	14.10	799.7	113.815
1	26.418	122.418	0.000	3.49	0.00	13.88	793.1	108.377
1	26.501	122.501	0.000	3.28	0.00	13.68	786.7	102.982

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 1  26.585 122.585        0.000     3.07     0.00     13.47    780.2     97.629
 1  26.668 122.668        0.000     2.86     0.00     13.26    773.8     92.319
 1  26.751 122.751        0.000     2.65     0.00     13.06    767.5     87.052
 1  26.835 122.835        0.000     2.44     0.00     12.74    759.2     81.840
 1  26.918 122.918        0.000     2.24     0.00     12.39    748.1     76.703
 1  27.001 123.001        0.000     2.03     0.00     12.03    736.3     71.647
 1  27.085 123.085        0.000     1.83     0.00     11.69    724.6     66.669
 1  27.168 123.168        0.000     1.63     0.00     11.35    713.2     61.768
 1  27.251 123.251        0.000     1.43     0.00     11.01    701.9     56.944
 1  27.335 123.335        0.000     1.23     0.00     10.66    689.9     52.201
 1  27.418 123.418        0.000     1.03     0.00     10.31    677.1     47.545
 1  27.501 123.501        0.000     0.84     0.00      9.96    664.6     42.973
 1  27.585 123.585        0.000     0.64     0.00      9.63    652.2     38.486
 1  27.668 123.668        0.000     0.45     0.00      9.30    640.1     34.080
 1  27.751 123.751        0.000     0.26     0.00      8.96    628.0     29.757
 1  27.835 123.835        0.000     0.07     0.00      8.53    613.0     25.536
 1  27.918 123.918        0.000     0.00     0.00      8.11    595.5     21.434
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
--------------------------------------------------------------------------------
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   1991.048 AF
    BASIN  STORAGE =      0.000 AF (WITH      0.000 AF INITIALLY FILLED)
    OUTFLOW VOLUME =   1991.475 AF
    LOSS    VOLUME =      0.000 AF
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE    780.00 TO NODE    780.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  4741.3 Ac. ***

            STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
         (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      300.0     600.0     900.0    1200.0
--------------------------------------------------------------------------------
  96.000    524.2714     57.16  .Q        V         .         .         .
 (PEAK DAY 2, HOUR  24.000)
  96.083    524.6703     57.93  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.083)
  96.167    525.0930     61.37  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   0.167)
  96.250    525.5573     67.41  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   0.250)
  96.333    526.0798     75.88  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   0.333)
  96.417    526.6928     89.00  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   0.417)
  96.500    527.4788    114.12  .  Q      V         .         .         .
 (PEAK DAY 1, HOUR   0.500)
  96.583    528.4489    140.86  .   Q     V         .         .         .
 (PEAK DAY 1, HOUR   0.583)
  96.667    529.5198    155.50  .    Q    V         .         .         .
 (PEAK DAY 1, HOUR   0.667)
  96.750    530.6533    164.57  .    Q    V         .         .         .
 (PEAK DAY 1, HOUR   0.750)
  96.833    531.8406    172.41  .    Q    V         .         .         .
 (PEAK DAY 1, HOUR   0.833)
  96.917    533.0718    178.77  .    Q    V         .         .         .
 (PEAK DAY 1, HOUR   0.917)
  97.000    534.3408    184.24  .    Q    V         .         .         .
 (PEAK DAY 1, HOUR   1.000)
  97.083    535.6431    189.10  .    Q    V         .         .         .
 (PEAK DAY 1, HOUR   1.083)
  97.167    536.9748    193.35  .    Q    V         .         .         .
 (PEAK DAY 1, HOUR   1.167)
  97.250    538.3323    197.10  .    Q    V         .         .         .
 (PEAK DAY 1, HOUR   1.250)
  97.333    539.7123    200.37  .    Q    V         .         .         .
 (PEAK DAY 1, HOUR   1.333)
  97.417    541.1134    203.44  .    Q    V         .         .         .
 (PEAK DAY 1, HOUR   1.417)
  97.500    542.5336    206.22  .    Q    V         .         .         .
 (PEAK DAY 1, HOUR   1.500)
  97.583    543.9708    208.67  .    Q    V         .         .         .
 (PEAK DAY 1, HOUR   1.583)
  97.667    545.4231    210.88  .     Q   V         .         .         .
 (PEAK DAY 1, HOUR   1.667)
  97.750    546.8890    212.86  .     Q   V         .         .         .
 (PEAK DAY 1, HOUR   1.750)
  97.833    548.3666    214.54  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   1.833)
  97.917    549.8550    216.12  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   1.917)
  98.000    551.3545    217.72  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   2.000)
  98.083    552.8623    218.94  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   2.083)
  98.167    554.3763    219.84  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   2.167)
  98.250    555.8967    220.76  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   2.250)
  98.333    557.4235    221.69  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   2.333)
  98.417    558.9567    222.63  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   2.417)
  98.500    560.4965    223.57  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   2.500)
  98.583    562.0428    224.52  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   2.583)
  98.667    563.5957    225.49  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   2.667)
  98.750    565.1553    226.46  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   2.750)
  98.833    566.7217    227.44  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   2.833)
  98.917    568.2949    228.43  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   2.917)
  99.000    569.8750    229.43  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   3.000)
  99.083    571.4620    230.44  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   3.083)
  99.167    573.0561    231.46  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   3.167)
  99.250    574.6572    232.49  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   3.250)
  99.333    576.2656    233.53  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   3.333)
  99.417    577.8811    234.58  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   3.417)
  99.500    579.5040    235.64  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   3.500)
  99.583    581.1342    236.71  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   3.583)
  99.667    582.7718    237.79  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   3.667)
  99.750    584.4170    238.88  .     Q   .V        .         .         .
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(PEAK DAY 1, HOUR 3.750)
99.833 586.0698 239.98 . Q .V . . .
(PEAK DAY 1, HOUR 3.833)
99.917 587.7298 241.04 . Q .V . . .
(PEAK DAY 1, HOUR 3.917)
100.000 589.3967 242.03 . Q .V . . .
(PEAK DAY 1, HOUR 4.000)
100.083 591.0704 243.02 . Q .V . . .
(PEAK DAY 1, HOUR 4.083)
100.167 592.7510 244.03 . Q .V . . .
(PEAK DAY 1, HOUR 4.167)
100.250 594.4386 245.04 . Q .V . . .
(PEAK DAY 1, HOUR 4.250)
100.333 596.1333 246.07 . Q .V . . .
(PEAK DAY 1, HOUR 4.333)
100.417 597.8351 247.11 . Q . V . . .
(PEAK DAY 1, HOUR 4.417)
100.500 599.5443 248.16 . Q . V . . .
(PEAK DAY 1, HOUR 4.500)
100.583 601.2606 249.22 . Q . V . . .
(PEAK DAY 1, HOUR 4.583)
100.667 602.9844 250.29 . Q . V . . .
(PEAK DAY 1, HOUR 4.667)
100.750 604.7156 251.38 . Q . V . . .
(PEAK DAY 1, HOUR 4.750)
100.833 606.4545 252.48 . Q . V . . .
(PEAK DAY 1, HOUR 4.833)
100.917 608.2009 253.59 . Q . V . . .
(PEAK DAY 1, HOUR 4.917)
101.000 609.9551 254.71 . Q . V . . .
(PEAK DAY 1, HOUR 5.000)
101.083 611.7172 255.85 . Q . V . . .
(PEAK DAY 1, HOUR 5.083)
101.167 613.4871 257.00 . Q . V . . .
(PEAK DAY 1, HOUR 5.167)
101.250 615.2651 258.16 . Q . V . . .
(PEAK DAY 1, HOUR 5.250)
101.333 617.0513 259.34 . Q . V . . .
(PEAK DAY 1, HOUR 5.333)
101.417 618.8456 260.53 . Q . V . . .
(PEAK DAY 1, HOUR 5.417)
101.500 620.6482 261.74 . Q . V . . .
(PEAK DAY 1, HOUR 5.500)
101.583 622.4592 262.96 . Q . V . . .
(PEAK DAY 1, HOUR 5.583)
101.667 624.2787 264.20 . Q . V . . .
(PEAK DAY 1, HOUR 5.667)
101.750 626.1069 265.45 . Q . V . . .
(PEAK DAY 1, HOUR 5.750)
101.833 627.9437 266.71 . Q . V . . .
(PEAK DAY 1, HOUR 5.833)
101.917 629.7894 267.99 . Q . V . . .
(PEAK DAY 1, HOUR 5.917)
102.000 631.6440 269.29 . Q . V . . .
(PEAK DAY 1, HOUR 6.000)
102.083 633.5078 270.61 . Q. V . . .
(PEAK DAY 1, HOUR 6.083)
102.167 635.3806 271.94 . Q. V . . .
(PEAK DAY 1, HOUR 6.167)
102.250 637.2628 273.29 . Q. V . . .
(PEAK DAY 1, HOUR 6.250)
102.333 639.1543 274.65 . Q. V . . .
(PEAK DAY 1, HOUR 6.333)
102.417 641.0554 276.04 . Q. V . . .
(PEAK DAY 1, HOUR 6.417)
102.500 642.9662 277.44 . Q. V . . .
(PEAK DAY 1, HOUR 6.500)
102.583 644.8867 278.86 . Q. V . . .
(PEAK DAY 1, HOUR 6.583)
102.667 646.8172 280.31 . Q. V . . .
(PEAK DAY 1, HOUR 6.667)
102.750 648.7578 281.77 . Q. V . . .
(PEAK DAY 1, HOUR 6.750)
102.833 650.7085 283.25 . Q. V . . .
(PEAK DAY 1, HOUR 6.833)
102.917 652.6696 284.75 . Q. V . . .
(PEAK DAY 1, HOUR 6.917)
103.000 654.6411 286.27 . Q. V . . .
(PEAK DAY 1, HOUR 7.000)
103.083 656.6233 287.81 . Q. V . . .
(PEAK DAY 1, HOUR 7.083)
103.167 658.6163 289.38 . Q. V . . .
(PEAK DAY 1, HOUR 7.167)
103.250 660.6202 290.97 . Q. V . . .
(PEAK DAY 1, HOUR 7.250)
103.333 662.6352 292.58 . Q. V . . .
(PEAK DAY 1, HOUR 7.333)
103.417 664.6614 294.21 . Q. V . . .
(PEAK DAY 1, HOUR 7.417)
103.500 666.6991 295.87 . Q. V . . .
(PEAK DAY 1, HOUR 7.500)
103.583 668.7484 297.55 . Q. V . . .
(PEAK DAY 1, HOUR 7.583)
103.667 670.8094 299.26 . Q. V . . .
(PEAK DAY 1, HOUR 7.667)
103.750 672.8823 300.99 . Q V . . .
(PEAK DAY 1, HOUR 7.750)
103.833 674.9674 302.76 . Q V . . .
(PEAK DAY 1, HOUR 7.833)
103.917 677.0648 304.54 . Q V . . .
(PEAK DAY 1, HOUR 7.917)
104.000 679.1747 306.36 . Q V . . .
(PEAK DAY 1, HOUR 8.000)
104.083 681.2974 308.20 . Q V . . .
(PEAK DAY 1, HOUR 8.083)
104.167 683.4329 310.08 . Q V . . .
(PEAK DAY 1, HOUR 8.167)
104.250 685.5815 311.98 . Q V . . .
(PEAK DAY 1, HOUR 8.250)
104.333 687.7434 313.91 . Q V . . .
(PEAK DAY 1, HOUR 8.333)
104.417 689.9189 315.88 . Q V . . .
(PEAK DAY 1, HOUR 8.417)
104.500 692.1081 317.88 . Q V . . .
(PEAK DAY 1, HOUR 8.500)
104.583 694.3113 319.91 . Q V . . .
(PEAK DAY 1, HOUR 8.583)
104.667 696.5288 321.97 . Q V . . .
(PEAK DAY 1, HOUR 8.667)
104.750 698.7607 324.07 . Q V . . .
(PEAK DAY 1, HOUR 8.750)
104.833 701.0074 326.21 . Q V . . .
(PEAK DAY 1, HOUR 8.833)
104.917 703.2690 328.38 . Q V . . .
(PEAK DAY 1, HOUR 8.917)
105.000 705.5458 330.60 . .Q V . . .
(PEAK DAY 1, HOUR 9.000)
105.083 707.8382 332.85 . .Q V . . .
(PEAK DAY 1, HOUR 9.083)
105.167 710.1463 335.14 . .Q V . . .
(PEAK DAY 1, HOUR 9.167)
105.250 712.4705 337.47 . .Q V . . .
(PEAK DAY 1, HOUR 9.250)
105.333 714.8111 339.85 . .Q V . . .

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 (PEAK DAY 1, HOUR   9.333)
105.417    717.1683    342.27  .         .Q  V     .         .         .
 (PEAK DAY 1, HOUR   9.417)
105.500    719.5425    344.74  .         .Q  V     .         .         .
 (PEAK DAY 1, HOUR   9.500)
105.583    721.9341    347.25  .         .Q  V     .         .         .
 (PEAK DAY 1, HOUR   9.583)
105.667    724.3433    349.81  .         .Q  V     .         .         .
 (PEAK DAY 1, HOUR   9.667)
105.750    726.7704    352.43  .         .Q  V     .         .         .
 (PEAK DAY 1, HOUR   9.750)
105.833    729.2159    355.09  .         .Q  V     .         .         .
 (PEAK DAY 1, HOUR   9.833)
105.917    731.6802    357.81  .         .Q  V     .         .         .
 (PEAK DAY 1, HOUR   9.917)
106.000    734.1635    360.58  .         . Q V     .         .         .
 (PEAK DAY 1, HOUR  10.000)
106.083    736.6663    363.41  .         . Q V     .         .         .
 (PEAK DAY 1, HOUR  10.083)
106.167    739.1890    366.30  .         . Q V     .         .         .
 (PEAK DAY 1, HOUR  10.167)
106.250    741.7321    369.25  .         . Q V     .         .         .
 (PEAK DAY 1, HOUR  10.250)
106.333    744.2958    372.26  .         . Q V     .         .         .
 (PEAK DAY 1, HOUR  10.333)
106.417    746.8808    375.34  .         . Q  V    .         .         .
 (PEAK DAY 1, HOUR  10.417)
106.500    749.4874    378.48  .         . Q  V    .         .         .
 (PEAK DAY 1, HOUR  10.500)
106.583    752.1161    381.69  .         . Q  V    .         .         .
 (PEAK DAY 1, HOUR  10.583)
106.667    754.7675    384.98  .         . Q  V    .         .         .
 (PEAK DAY 1, HOUR  10.667)
106.750    757.4420    388.34  .         . Q  V    .         .         .
 (PEAK DAY 1, HOUR  10.750)
106.833    760.1402    391.78  .         .  Q V    .         .         .
 (PEAK DAY 1, HOUR  10.833)
106.917    762.8566    394.42  .         .  Q V    .         .         .
 (PEAK DAY 1, HOUR  10.917)
107.000    765.5826    395.82  .         .  Q V    .         .         .
 (PEAK DAY 1, HOUR  11.000)
107.083    768.3181    397.20  .         .  Q V    .         .         .
 (PEAK DAY 1, HOUR  11.083)
107.167    771.0670    399.14  .         .  Q V    .         .         .
 (PEAK DAY 1, HOUR  11.167)
107.250    773.8323    401.53  .         .  Q V    .         .         .
 (PEAK DAY 1, HOUR  11.250)
107.333    776.6166    404.28  .         .  Q V    .         .         .
 (PEAK DAY 1, HOUR  11.333)
107.417    779.4221    407.34  .         .  Q V    .         .         .
 (PEAK DAY 1, HOUR  11.417)
107.500    782.2503    410.66  .         .  Q V    .         .         .
 (PEAK DAY 1, HOUR  11.500)
107.583    785.1030    414.20  .         .  Q V    .         .         .
 (PEAK DAY 1, HOUR  11.583)
107.667    787.9813    417.94  .         .  Q V    .         .         .
 (PEAK DAY 1, HOUR  11.667)
107.750    790.8867    421.86  .         .   QV    .         .         .
 (PEAK DAY 1, HOUR  11.750)
107.833    793.8201    425.94  .         .   QV    .         .         .
 (PEAK DAY 1, HOUR  11.833)
107.917    796.7828    430.19  .         .   Q V   .         .         .
 (PEAK DAY 1, HOUR  11.917)
108.000    799.7759    434.59  .         .   Q V   .         .         .
 (PEAK DAY 1, HOUR  12.000)
108.083    802.8016    439.34  .         .   Q V   .         .         .
 (PEAK DAY 1, HOUR  12.083)
108.167    805.8658    444.92  .         .   Q V   .         .         .
 (PEAK DAY 1, HOUR  12.167)
108.250    808.9641    449.87  .         .   Q V   .         .         .
 (PEAK DAY 1, HOUR  12.250)
108.333    812.0900    453.87  .         .    QV   .         .         .
 (PEAK DAY 1, HOUR  12.333)
108.417    815.2506    458.93  .         .    QV   .         .         .
 (PEAK DAY 1, HOUR  12.417)
108.500    818.4614    466.21  .         .    QV   .         .         .
 (PEAK DAY 1, HOUR  12.500)
108.583    821.7391    475.91  .         .    QV   .         .         .
 (PEAK DAY 1, HOUR  12.583)
108.667    825.0928    486.96  .         .     Q   .         .         .
 (PEAK DAY 1, HOUR  12.667)
108.750    828.5153    496.94  .         .     Q   .         .         .
 (PEAK DAY 1, HOUR  12.750)
108.833    831.9912    504.70  .         .     Q   .         .         .
 (PEAK DAY 1, HOUR  12.833)
108.917    835.5162    511.83  .         .     VQ  .         .         .
 (PEAK DAY 1, HOUR  12.917)
109.000    839.0923    519.26  .         .     VQ  .         .         .
 (PEAK DAY 1, HOUR  13.000)
109.083    842.7216    526.96  .         .     VQ  .         .         .
 (PEAK DAY 1, HOUR  13.083)
109.167    846.4056    534.92  .         .      Q  .         .         .
 (PEAK DAY 1, HOUR  13.167)
109.250    850.1369    541.79  .         .      VQ .         .         .
 (PEAK DAY 1, HOUR  13.250)
109.333    853.9033    546.88  .         .      VQ .         .         .
 (PEAK DAY 1, HOUR  13.333)
109.417    857.7017    551.53  .         .      VQ .         .         .
 (PEAK DAY 1, HOUR  13.417)
109.500    861.5344    556.52  .         .      VQ .         .         .
 (PEAK DAY 1, HOUR  13.500)
109.583    865.4043    561.91  .         .      VQ .         .         .
 (PEAK DAY 1, HOUR  13.583)
109.667    869.3142    567.72  .         .      VQ .         .         .
 (PEAK DAY 1, HOUR  13.667)
109.750    873.2674    574.00  .         .      V Q.         .         .
 (PEAK DAY 1, HOUR  13.750)
109.833    877.2672    580.76  .         .      V Q.         .         .
 (PEAK DAY 1, HOUR  13.833)
109.917    881.3170    588.04  .         .      V Q.         .         .
 (PEAK DAY 1, HOUR  13.917)
110.000    885.4207    595.85  .         .      V Q.         .         .
 (PEAK DAY 1, HOUR  14.000)
110.083    889.5828    604.34  .         .      V  Q         .         .
 (PEAK DAY 1, HOUR  14.083)
110.167    893.8101    613.80  .         .      V  Q         .         .
 (PEAK DAY 1, HOUR  14.167)
110.250    898.1030    623.33  .         .       V Q         .         .
 (PEAK DAY 1, HOUR  14.250)
110.333    902.4569    632.19  .         .       V .Q        .         .
 (PEAK DAY 1, HOUR  14.333)
110.417    906.8763    641.70  .         .       V .Q        .         .
 (PEAK DAY 1, HOUR  14.417)
110.500    911.3768    653.47  .         .       V .Q        .         .
 (PEAK DAY 1, HOUR  14.500)
110.583    915.9759    667.79  .         .       V . Q       .         .
 (PEAK DAY 1, HOUR  14.583)
110.667    920.6863    683.95  .         .       V . Q       .         .
 (PEAK DAY 1, HOUR  14.667)
110.750    925.5094    700.31  .         .       V .  Q      .         .
 (PEAK DAY 1, HOUR  14.750)
110.833    930.4432    716.39  .         .       V .  Q      .         .
 (PEAK DAY 1, HOUR  14.833)
110.917    935.4922    733.12  .         .       V .   Q     .         .
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 (PEAK DAY 1, HOUR  14.917)
111.000    940.6625    750.72  .         .       V .    Q    .         .
 (PEAK DAY 1, HOUR  15.000)
111.083    945.9332    765.31  .         .       V .    Q    .         .
 (PEAK DAY 1, HOUR  15.083)
111.167    951.2778    776.04  .         .        V.    Q    .         .
 (PEAK DAY 1, HOUR  15.167)
111.250    956.6956    786.66  .         .        V.     Q   .         .
 (PEAK DAY 1, HOUR  15.250)
111.333    962.1904    797.84  .         .        V.     Q   .         .
 (PEAK DAY 1, HOUR  15.333)
111.417    967.7659    809.57  .         .        V.     Q   .         .
 (PEAK DAY 1, HOUR  15.417)
111.500    973.4226    821.35  .         .        V.      Q  .         .
 (PEAK DAY 1, HOUR  15.500)
111.583    979.1534    832.10  .         .        V.      Q  .         .
 (PEAK DAY 1, HOUR  15.583)
111.667    984.9529    842.10  .         .        V.       Q .         .
 (PEAK DAY 1, HOUR  15.667)
111.750    990.8215    852.12  .         .        V.       Q .         .
 (PEAK DAY 1, HOUR  15.750)
111.833    996.7561    861.70  .         .         V       Q .         .
 (PEAK DAY 1, HOUR  15.833)
111.917   1002.7538    870.86  .         .         V        Q.         .
 (PEAK DAY 1, HOUR  15.917)
112.000   1008.8176    880.46  .         .         V        Q.         .
 (PEAK DAY 1, HOUR  16.000)
112.083   1014.9598    891.86  .         .         V        Q.         .
 (PEAK DAY 1, HOUR  16.083)
112.167   1021.2043    906.70  .         .         V         Q         .
 (PEAK DAY 1, HOUR  16.167)
112.250   1027.5797    925.70  .         .         V         Q         .
 (PEAK DAY 1, HOUR  16.250)
112.333   1034.1084    947.97  .         .         V         .Q        .
 (PEAK DAY 1, HOUR  16.333)
112.417   1040.8202    974.56  .         .         V         . Q       .
 (PEAK DAY 1, HOUR  16.417)
112.500   1047.7629   1008.09  .         .         .V        .  Q      .
 (PEAK DAY 1, HOUR  16.500)
112.583   1054.9073   1037.38  .         .         .V        .   Q     .
 (PEAK DAY 1, HOUR  16.583)
112.667   1062.1606   1053.19  .         .         .V        .    Q    .
 (PEAK DAY 1, HOUR  16.667)
112.750   1069.4797   1062.73  .         .         .V        .    Q    .
 (PEAK DAY 1, HOUR  16.750)
112.833   1076.8574   1071.24  .         .         .V        .    Q    .
 (PEAK DAY 1, HOUR  16.833)
112.917   1084.2900   1079.21  .         .         .V        .    Q    .
 (PEAK DAY 1, HOUR  16.917)
113.000   1091.7726   1086.46  .         .         .V        .     Q   .
 (PEAK DAY 1, HOUR  17.000)
113.083   1099.3009   1093.11  .         .         . V       .     Q   .
 (PEAK DAY 1, HOUR  17.083)
113.167   1106.8721   1099.34  .         .         . V       .     Q   .
 (PEAK DAY 1, HOUR  17.167)
113.250   1114.4825   1105.04  .         .         . V       .     Q   .
 (PEAK DAY 1, HOUR  17.250)
113.333   1122.1273   1110.03  .         .         . V       .      Q  .
 (PEAK DAY 1, HOUR  17.333)
113.417   1129.8021   1114.38  .         .         . V       .      Q  .
 (PEAK DAY 1, HOUR  17.417)
113.500   1137.5017   1117.98  .         .         . V       .      Q  .
 (PEAK DAY 1, HOUR  17.500)
113.583   1145.2206   1120.78  .         .         .  V      .      Q  .
 (PEAK DAY 1, HOUR  17.583)
113.667   1152.9541   1122.92  .         .         .  V      .      Q  .
 (PEAK DAY 1, HOUR  17.667)
113.750   1160.6989   1124.53  .         .         .  V      .      Q  .
 (PEAK DAY 1, HOUR  17.750)
113.833   1168.4514   1125.67  .         .         .  V      .      Q  .
 (PEAK DAY 1, HOUR  17.833)
113.917   1176.2091   1126.42  .         .         .  V      .      Q  .
 (PEAK DAY 1, HOUR  17.917)
114.000   1183.9698   1126.86  .         .         .  V      .      Q  .
 (PEAK DAY 1, HOUR  18.000)
114.083   1191.7310   1126.90  .         .         .  V      .      Q  .
 (PEAK DAY 1, HOUR  18.083)
114.167   1199.4897   1126.58  .         .         .   V     .      Q  .
 (PEAK DAY 1, HOUR  18.167)
114.250   1207.2448   1126.03  .         .         .   V     .      Q  .
 (PEAK DAY 1, HOUR  18.250)
114.333   1214.9949   1125.32  .         .         .   V     .      Q  .
 (PEAK DAY 1, HOUR  18.333)
114.417   1222.7390   1124.45  .         .         .   V     .      Q  .
 (PEAK DAY 1, HOUR  18.417)
114.500   1230.4760   1123.40  .         .         .   V     .      Q  .
 (PEAK DAY 1, HOUR  18.500)
114.583   1238.2043   1122.17  .         .         .   V     .      Q  .
 (PEAK DAY 1, HOUR  18.583)
114.667   1245.9233   1120.80  .         .         .    V    .      Q  .
 (PEAK DAY 1, HOUR  18.667)
114.750   1253.6322   1119.32  .         .         .    V    .      Q  .
 (PEAK DAY 1, HOUR  18.750)
114.833   1261.3302   1117.76  .         .         .    V    .      Q  .
 (PEAK DAY 1, HOUR  18.833)
114.917   1269.0170   1116.11  .         .         .    V    .      Q  .
 (PEAK DAY 1, HOUR  18.917)
115.000   1276.6919   1114.40  .         .         .    V    .      Q  .
 (PEAK DAY 1, HOUR  19.000)
115.083   1284.3546   1112.63  .         .         .    V    .      Q  .
 (PEAK DAY 1, HOUR  19.083)
115.167   1292.0049   1110.82  .         .         .    V    .      Q  .
 (PEAK DAY 1, HOUR  19.167)
115.250   1299.6423   1108.96  .         .         .     V   .     Q   .
 (PEAK DAY 1, HOUR  19.250)
115.333   1307.2667   1107.06  .         .         .     V   .     Q   .
 (PEAK DAY 1, HOUR  19.333)
115.417   1314.8778   1105.13  .         .         .     V   .     Q   .
 (PEAK DAY 1, HOUR  19.417)
115.500   1322.4755   1103.18  .         .         .     V   .     Q   .
 (PEAK DAY 1, HOUR  19.500)
115.583   1330.0594   1101.19  .         .         .     V   .     Q   .
 (PEAK DAY 1, HOUR  19.583)
115.667   1337.6295   1099.17  .         .         .     V   .     Q   .
 (PEAK DAY 1, HOUR  19.667)
115.750   1345.1854   1097.12  .         .         .      V  .     Q   .
 (PEAK DAY 1, HOUR  19.750)
115.833   1352.7271   1095.05  .         .         .      V  .     Q   .
 (PEAK DAY 1, HOUR  19.833)
115.917   1360.2546   1093.01  .         .         .      V  .     Q   .
 (PEAK DAY 1, HOUR  19.917)
116.000   1367.7684   1091.01  .         .         .      V  .     Q   .
 (PEAK DAY 1, HOUR  20.000)
116.083   1375.2683   1088.98  .         .         .      V  .     Q   .
 (PEAK DAY 1, HOUR  20.083)
116.167   1382.7540   1086.93  .         .         .      V  .     Q   .
 (PEAK DAY 1, HOUR  20.167)
116.250   1390.2256   1084.87  .         .         .      V  .     Q   .
 (PEAK DAY 1, HOUR  20.250)
116.333   1397.6829   1082.79  .         .         .       V .     Q   .
 (PEAK DAY 1, HOUR  20.333)
116.417   1405.1257   1080.70  .         .         .       V .     Q   .
 (PEAK DAY 1, HOUR  20.417)
116.500   1412.5541   1078.59  .         .         .       V .    Q    .
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 (PEAK DAY 1, HOUR  20.500)
116.583   1419.9679   1076.48  .         .         .       V .    Q    .
 (PEAK DAY 1, HOUR  20.583)
116.667   1427.3671   1074.35  .         .         .       V .    Q    .
 (PEAK DAY 1, HOUR  20.667)
116.750   1434.7515   1072.21  .         .         .       V .    Q    .
 (PEAK DAY 1, HOUR  20.750)
116.833   1442.1211   1070.07  .         .         .       V .    Q    .
 (PEAK DAY 1, HOUR  20.833)
116.917   1449.4758   1067.91  .         .         .        V.    Q    .
 (PEAK DAY 1, HOUR  20.917)
117.000   1456.8157   1065.75  .         .         .        V.    Q    .
 (PEAK DAY 1, HOUR  21.000)
117.083   1464.1411   1063.66  .         .         .        V.    Q    .
 (PEAK DAY 1, HOUR  21.083)
117.167   1471.4528   1061.65  .         .         .        V.    Q    .
 (PEAK DAY 1, HOUR  21.167)
117.250   1478.7505   1059.64  .         .         .        V.    Q    .
 (PEAK DAY 1, HOUR  21.250)
117.333   1486.0344   1057.62  .         .         .        V.    Q    .
 (PEAK DAY 1, HOUR  21.333)
117.417   1493.3044   1055.60  .         .         .        V.    Q    .
 (PEAK DAY 1, HOUR  21.417)
117.500   1500.5604   1053.57  .         .         .         V    Q    .
 (PEAK DAY 1, HOUR  21.500)
117.583   1507.8025   1051.54  .         .         .         V    Q    .
 (PEAK DAY 1, HOUR  21.583)
117.667   1515.0305   1049.51  .         .         .         V   Q     .
 (PEAK DAY 1, HOUR  21.667)
117.750   1522.2445   1047.47  .         .         .         V   Q     .
 (PEAK DAY 1, HOUR  21.750)
117.833   1529.4445   1045.43  .         .         .         V   Q     .
 (PEAK DAY 1, HOUR  21.833)
117.917   1536.6304   1043.39  .         .         .         V   Q     .
 (PEAK DAY 1, HOUR  21.917)
118.000   1543.8021   1041.35  .         .         .        .V  Q     .
 (PEAK DAY 1, HOUR  22.000)
118.083   1550.9597   1039.29  .         .         .        .V  Q     .
 (PEAK DAY 1, HOUR  22.083)
118.167   1558.0963   1036.23  .         .         .        .V  Q     .
 (PEAK DAY 1, HOUR  22.167)
118.250   1565.2050   1032.18  .         .         .        .V  Q     .
 (PEAK DAY 1, HOUR  22.250)
118.333   1572.2858   1028.14  .         .         .        .V  Q     .
 (PEAK DAY 1, HOUR  22.333)
118.417   1579.3389   1024.10  .         .         .        .V  Q     .
 (PEAK DAY 1, HOUR  22.417)
118.500   1586.3643   1020.08  .         .         .        .V  Q     .
 (PEAK DAY 1, HOUR  22.500)
118.583   1593.3619   1016.06  .         .         .        . VQ      .
 (PEAK DAY 1, HOUR  22.583)
118.667   1600.3320   1012.05  .         .         .        . VQ      .
 (PEAK DAY 1, HOUR  22.667)
118.750   1607.2745   1008.06  .         .         .        . VQ      .
 (PEAK DAY 1, HOUR  22.750)
118.833   1614.1896   1004.07  .         .         .        . VQ      .
 (PEAK DAY 1, HOUR  22.833)
118.917   1621.0773   1000.09  .         .         .        . VQ      .
 (PEAK DAY 1, HOUR  22.917)
119.000   1627.9376    996.12  .         .         .        . VQ      .
 (PEAK DAY 1, HOUR  23.000)
119.083   1634.7706    992.16  .         .         .        . VQ      .
 (PEAK DAY 1, HOUR  23.083)
119.167   1641.5762    988.17  .         .         .        . Q       .
 (PEAK DAY 1, HOUR  23.167)
119.250   1648.3536    984.10  .         .         .        . QV      .
 (PEAK DAY 1, HOUR  23.250)
119.333   1655.1028    979.97  .         .         .        . QV      .
 (PEAK DAY 1, HOUR  23.333)
119.417   1661.8236    975.86  .         .         .        . QV      .
 (PEAK DAY 1, HOUR  23.417)
119.500   1668.5161    971.76  .         .         .        . QV      .
 (PEAK DAY 1, HOUR  23.500)
119.583   1675.1805    967.67  .         .         .        . QV      .
 (PEAK DAY 1, HOUR  23.583)
119.667   1681.8169    963.60  .         .         .        . QV      .
 (PEAK DAY 1, HOUR  23.667)
119.750   1688.4253    959.54  .         .         .        .Q V      .
 (PEAK DAY 1, HOUR  23.750)
119.833   1695.0057    955.49  .         .         .        .Q  V     .
 (PEAK DAY 1, HOUR  23.833)
119.917   1701.5585    951.45  .         .         .        .Q  V     .
 (PEAK DAY 1, HOUR  23.917)
120.000   1708.0835    947.43  .         .         .        .Q  V     .
 (PEAK DAY 1, HOUR  24.000)
120.083   1714.5808    943.41  .         .         .        .Q  V     .
 (PEAK DAY 1, HOUR  24.083)
120.167   1721.0504    939.39  .         .         .        .Q  V     .
 (PEAK DAY 1, HOUR  24.167)
120.250   1727.4912    935.20  .         .         .        .Q  V     .
 (PEAK DAY 1, HOUR  24.250)
120.333   1733.9015    930.78  .         .         .        .Q  V     .
 (PEAK DAY 1, HOUR  24.333)
120.417   1740.2804    926.22  .         .         .        Q   V     .
 (PEAK DAY 1, HOUR  24.417)
120.500   1746.6268    921.50  .         .         .        Q    V    .
 (PEAK DAY 1, HOUR  24.500)
120.583   1752.9395    916.59  .         .         .        Q    V    .
 (PEAK DAY 1, HOUR  24.583)
120.667   1759.2175    911.57  .         .         .        Q    V    .
 (PEAK DAY 1, HOUR  24.667)
120.750   1765.4606    906.49  .         .         .        Q    V    .
 (PEAK DAY 1, HOUR  24.750)
120.833   1771.6683    901.37  .         .         .        Q    V    .
 (PEAK DAY 1, HOUR  24.833)
120.917   1777.8407    896.23  .         .         .       Q.    V    .
 (PEAK DAY 1, HOUR  24.917)
121.000   1783.9777    891.08  .         .         .       Q.    V    .
 (PEAK DAY 1, HOUR  25.000)
121.083   1790.0791    885.92  .         .         .       Q.    V    .
 (PEAK DAY 1, HOUR  25.083)
121.167   1796.1440    880.63  .         .         .       Q.     V   .
 (PEAK DAY 1, HOUR  25.167)
121.250   1802.1713    875.14  .         .         .       Q.     V   .
 (PEAK DAY 1, HOUR  25.250)
121.333   1808.1603    869.60  .         .         .      Q .     V   .
 (PEAK DAY 1, HOUR  25.333)
121.417   1814.1112    864.07  .         .         .      Q .     V   .
 (PEAK DAY 1, HOUR  25.417)
121.500   1820.0242    858.56  .         .         .      Q .     V   .
 (PEAK DAY 1, HOUR  25.500)
121.583   1825.8993    853.06  .         .         .      Q .     V   .
 (PEAK DAY 1, HOUR  25.583)
121.667   1831.7367    847.59  .         .         .      Q .     V   .
 (PEAK DAY 1, HOUR  25.667)
121.750   1837.5365    842.14  .         .         .      Q .     V   .
 (PEAK DAY 1, HOUR  25.750)
121.833   1843.2990    836.71  .         .         .     Q  .      V  .
 (PEAK DAY 1, HOUR  25.833)
121.917   1849.0243    831.32  .         .         .     Q  .      V  .
 (PEAK DAY 1, HOUR  25.917)
122.000   1854.7117    825.80  .         .         .     Q  .      V  .
 (PEAK DAY 1, HOUR  26.000)
122.083   1860.3563    819.61  .         .         .     Q  .      V  .
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 (PEAK DAY 1, HOUR  26.083)
122.167   1865.9550    812.92  .         .         .      Q  .      V  .
 (PEAK DAY 1, HOUR  26.167)
122.250   1871.5078    806.27  .         .         .     Q   .      V  .
 (PEAK DAY 1, HOUR  26.250)
122.333   1877.0153    799.68  .         .         .     Q   .      V  .
 (PEAK DAY 1, HOUR  26.333)
122.417   1882.4777    793.15  .         .         .     Q   .      V  .
 (PEAK DAY 1, HOUR  26.417)
122.500   1887.8954    786.66  .         .         .     Q   .      V  .
 (PEAK DAY 1, HOUR  26.500)
122.583   1893.2688    780.23  .         .         .     Q   .       V .
 (PEAK DAY 1, HOUR  26.583)
122.667   1898.5983    773.84  .         .         .    Q    .       V .
 (PEAK DAY 1, HOUR  26.667)
122.750   1903.8842    767.51  .         .         .    Q    .       V .
 (PEAK DAY 1, HOUR  26.750)
122.833   1909.1127    759.19  .         .         .    Q    .       V .
 (PEAK DAY 1, HOUR  26.833)
122.917   1914.2646    748.07  .         .         .   Q     .       V .
 (PEAK DAY 1, HOUR  26.917)
123.000   1919.3353    736.26  .         .         .   Q     .       V .
 (PEAK DAY 1, HOUR  27.000)
123.083   1924.3259    724.63  .         .         .   Q     .       V .
 (PEAK DAY 1, HOUR  27.083)
123.167   1929.2377    713.19  .         .         .  Q      .       V .
 (PEAK DAY 1, HOUR  27.167)
123.250   1934.0719    701.92  .         .         .  Q      .       V .
 (PEAK DAY 1, HOUR  27.250)
123.333   1938.8234    689.91  .         .         . Q       .       V .
 (PEAK DAY 1, HOUR  27.333)
123.417   1943.4868    677.14  .         .         . Q       .        V.
 (PEAK DAY 1, HOUR  27.417)
123.500   1948.0638    664.58  .         .         . Q       .        V.
 (PEAK DAY 1, HOUR  27.500)
123.583   1952.5559    652.24  .         .         .Q        .        V.
 (PEAK DAY 1, HOUR  27.583)
123.667   1956.9646    640.14  .         .         .Q        .        V.
 (PEAK DAY 1, HOUR  27.667)
123.750   1961.2897    628.00  .         .         Q         .        V.
 (PEAK DAY 1, HOUR  27.750)
123.833   1965.5114    612.99  .         .         Q         .        V.
 (PEAK DAY 1, HOUR  27.833)
123.917   1969.6127    595.51  .         .        Q.         .        V.
 (PEAK DAY 1, HOUR  27.917)
124.000   1973.5970    578.53  .         .        Q.         .        V.
 (PEAK DAY 1, HOUR  28.000)
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
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  FLOW PROCESS FROM NODE    780.00 TO NODE   6311.00 IS CODE = 5.2
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  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
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         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  4741.3 Ac. ***

         THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
         TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
         INTERVALS(Reference: the National Engineering Handbook,
         Hydrology, Chapter 17, page 17-52, August,1972,
         U.S. Department of Commerce).

         ASSUMED REGULAR CHANNEL INFORMATION:
           BASEWIDTH(FT) =   20.00     CHANNEL Z =  1.00
           UPSTREAM ELEVATION(FT) =     408.00
           DOWNSTREAM ELEVATION(FT) =     382.00
           CHANNEL LENGTH(FT) =    2533.00     MANNING'S FACTOR = 0.040
           CONSTANT LOSS RATE(CFS) =    0.00


         CHANNEL ROUTING COEFFICIENT ESTIMATED:
           MAXIMUM INFLOW(CFS) =  1126.90
           AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =   887.64
           CHANNEL NORMAL VELOCITY FOR Q =   887.64 CFS =   8.33 FPS
           ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.831

         MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
         UNIT INTERVALS IS CSTAR = 0.864


         CONVEX METHOD CHANNEL ROUTING RESULTS:
                                                              OUTFLOW LESS
                    CLOCK        INFLOW      ROUTED      LOSS
PEAK     TIME       TIME       (STREAM 1)    FLOW      (STREAM 1)
 DAY     (HRS)      (HRS)        (CFS)       (CFS)       (CFS)
   2    24.000    96.000         57.16       57.58       57.58
   1     0.083    96.083         57.93       57.32       57.32
   1     0.167    96.167         61.37       58.32       58.32
   1     0.250    96.250         67.41       61.78       61.78
   1     0.333    96.333         75.88       67.80       67.80
   1     0.417    96.417         89.00       76.58       76.58
   1     0.500    96.500        114.12       90.76       90.76
   1     0.583    96.583        140.86      114.61      114.61
   1     0.667    96.667        155.50      139.31      139.31
   1     0.750    96.750        164.57      154.54      154.54
   1     0.833    96.833        172.41      164.28      164.28
   1     0.917    96.917        178.77      172.18      172.18
   1     1.000    97.000        184.24      178.63      178.63
   1     1.083    97.083        189.10      184.15      184.15
   1     1.167    97.167        193.35      189.01      189.01
   1     1.250    97.250        197.10      193.28      193.28
   1     1.333    97.333        200.37      197.03      197.03
   1     1.417    97.417        203.44      200.34      200.34
   1     1.500    97.500        206.22      203.40      203.40
   1     1.583    97.583        208.67      206.17      206.17
   1     1.667    97.667        210.88      208.64      208.64
   1     1.750    97.750        212.86      210.85      210.85
   1     1.833    97.833        214.54      212.82      212.82
   1     1.917    97.917        216.12      214.52      214.52
   1     2.000    98.000        217.72      216.13      216.13
   1     2.083    98.083        218.94      217.67      217.67
   1     2.167    98.167        219.84      218.89      218.89
   1     2.250    98.250        220.76      219.84      219.84
   1     2.333    98.333        221.69      220.76      220.76
   1     2.417    98.417        222.63      221.69      221.69
   1     2.500    98.500        223.57      222.63      222.63
   1     2.583    98.583        224.52      223.57      223.57
   1     2.667    98.667        225.49      224.53      224.53
   1     2.750    98.750        226.46      225.49      225.49
   1     2.833    98.833        227.44      226.46      226.46
   1     2.917    98.917        228.43      227.44      227.44
   1     3.000    99.000        229.43      228.43      228.43
   1     3.083    99.083        230.44      229.43      229.43
   1     3.167    99.167        231.46      230.44      230.44
   1     3.250    99.250        232.49      231.46      231.46
   1     3.333    99.333        233.53      232.49      232.49
   1     3.417    99.417        234.58      233.53      233.53
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1	3.500	99.500	235.64	234.58	234.58
1	3.583	99.583	236.71	235.64	235.64
1	3.667	99.667	237.79	236.71	236.71
1	3.750	99.750	238.88	237.79	237.79
1	3.833	99.833	239.98	238.88	238.88
1	3.917	99.917	241.04	239.98	239.98
1	4.000	100.000	242.03	241.03	241.03
1	4.083	100.083	243.02	242.03	242.03
1	4.167	100.167	244.03	243.02	243.02
1	4.250	100.250	245.04	244.03	244.03
1	4.333	100.333	246.07	245.05	245.05
1	4.417	100.417	247.11	246.07	246.07
1	4.500	100.500	248.16	247.11	247.11
1	4.583	100.583	249.22	248.16	248.16
1	4.667	100.667	250.29	249.22	249.22
1	4.750	100.750	251.38	250.30	250.30
1	4.833	100.833	252.48	251.38	251.38
1	4.917	100.917	253.59	252.48	252.48
1	5.000	101.000	254.71	253.59	253.59
1	5.083	101.083	255.85	254.72	254.72
1	5.167	101.167	257.00	255.85	255.85
1	5.250	101.250	258.16	257.00	257.00
1	5.333	101.333	259.34	258.17	258.17
1	5.417	101.417	260.53	259.35	259.35
1	5.500	101.500	261.74	260.54	260.54
1	5.583	101.583	262.96	261.74	261.74
1	5.667	101.667	264.20	262.97	262.97
1	5.750	101.750	265.45	264.20	264.20
1	5.833	101.833	266.71	265.45	265.45
1	5.917	101.917	267.99	266.72	266.72
1	6.000	102.000	269.29	268.00	268.00
1	6.083	102.083	270.61	269.30	269.30
1	6.167	102.167	271.94	270.61	270.61
1	6.250	102.250	273.29	271.94	271.94
1	6.333	102.333	274.65	273.29	273.29
1	6.417	102.417	276.04	274.66	274.66
1	6.500	102.500	277.44	276.04	276.04
1	6.583	102.583	278.86	277.45	277.45
1	6.667	102.667	280.31	278.87	278.87
1	6.750	102.750	281.77	280.31	280.31
1	6.833	102.833	283.25	281.77	281.77
1	6.917	102.917	284.75	283.25	283.25
1	7.000	103.000	286.27	284.75	284.75
1	7.083	103.083	287.81	286.28	286.28
1	7.167	103.167	289.38	287.82	287.82
1	7.250	103.250	290.97	289.38	289.38
1	7.333	103.333	292.58	290.97	290.97
1	7.417	103.417	294.21	292.58	292.58
1	7.500	103.500	295.87	294.22	294.22
1	7.583	103.583	297.55	295.88	295.88
1	7.667	103.667	299.26	297.56	297.56
1	7.750	103.750	300.99	299.27	299.27
1	7.833	103.833	302.76	301.00	301.00
1	7.917	103.917	304.54	302.76	302.76
1	8.000	104.000	306.36	304.55	304.55
1	8.083	104.083	308.20	306.37	306.37
1	8.167	104.167	310.08	308.21	308.21
1	8.250	104.250	311.98	310.08	310.08
1	8.333	104.333	313.91	311.99	311.99
1	8.417	104.417	315.88	313.92	313.92
1	8.500	104.500	317.88	315.89	315.89
1	8.583	104.583	319.91	317.88	317.88
1	8.667	104.667	321.97	319.92	319.92
1	8.750	104.750	324.07	321.98	321.98
1	8.833	104.833	326.21	324.08	324.08
1	8.917	104.917	328.38	326.22	326.22
1	9.000	105.000	330.60	328.39	328.39
1	9.083	105.083	332.85	330.60	330.60
1	9.167	105.167	335.14	332.86	332.86
1	9.250	105.250	337.47	335.15	335.15
1	9.333	105.333	339.85	337.48	337.48
1	9.417	105.417	342.27	339.86	339.86
1	9.500	105.500	344.74	342.28	342.28
1	9.583	105.583	347.25	344.75	344.75
1	9.667	105.667	349.81	347.26	347.26
1	9.750	105.750	352.43	349.83	349.83
1	9.833	105.833	355.09	352.44	352.44
1	9.917	105.917	357.81	355.10	355.10
1	10.000	106.000	360.58	357.82	357.82
1	10.083	106.083	363.41	360.59	360.59
1	10.167	106.167	366.30	363.42	363.42
1	10.250	106.250	369.25	366.31	366.31
1	10.333	106.333	372.26	369.26	369.26
1	10.417	106.417	375.34	372.27	372.27
1	10.500	106.500	378.48	375.35	375.35
1	10.583	106.583	381.69	378.50	378.50
1	10.667	106.667	384.98	381.71	381.71
1	10.750	106.750	388.34	385.00	385.00
1	10.833	106.833	391.78	388.36	388.36
1	10.917	106.917	394.42	391.68	391.68
1	11.000	107.000	395.82	394.24	394.24
1	11.083	107.083	397.20	395.79	395.79
1	11.167	107.167	399.14	397.27	397.27
1	11.250	107.250	401.53	399.21	399.21
1	11.333	107.333	404.28	401.59	401.59
1	11.417	107.417	407.34	404.34	404.34
1	11.500	107.500	410.66	407.39	407.39
1	11.583	107.583	414.20	410.70	410.70
1	11.667	107.667	417.94	414.24	414.24
1	11.750	107.750	421.86	417.97	417.97
1	11.833	107.833	425.94	421.89	421.89
1	11.917	107.917	430.19	425.97	425.97
1	12.000	108.000	434.59	430.22	430.22
1	12.083	108.083	439.34	434.64	434.64
1	12.167	108.167	444.92	439.47	439.47
1	12.250	108.250	449.87	444.86	444.86
1	12.333	108.333	453.87	449.74	449.74
1	12.417	108.417	458.93	454.00	454.00
1	12.500	108.500	466.21	459.26	459.26
1	12.583	108.583	475.91	466.59	466.59
1	12.667	108.667	486.96	476.16	476.16
1	12.750	108.750	496.94	486.86	486.86
1	12.833	108.833	504.70	496.64	496.64
1	12.917	108.917	511.83	504.58	504.58
1	13.000	109.000	519.26	511.86	511.86
1	13.083	109.083	526.96	519.31	519.31
1	13.167	109.167	534.92	527.01	527.01
1	13.250	109.250	541.79	534.79	534.79
1	13.333	109.333	546.88	541.54	541.54
1	13.417	109.417	551.53	546.79	546.79
1	13.500	109.500	556.52	551.57	551.57
1	13.583	109.583	561.91	556.59	556.59
1	13.667	109.667	567.72	561.98	561.98
1	13.750	109.750	574.00	567.80	567.80
1	13.833	109.833	580.76	574.09	574.09
1	13.917	109.917	588.04	580.85	580.85
1	14.000	110.000	595.85	588.13	588.13
1	14.083	110.083	604.34	595.97	595.97
1	14.167	110.167	613.80	604.50	604.50
1	14.250	110.250	623.33	613.84	613.84
1	14.333	110.333	632.19	623.26	623.26
1	14.417	110.417	641.70	632.28	632.28
1	14.500	110.500	653.47	642.03	642.03
1	14.583	110.583	667.79	653.88	653.88

1	14.667	110.667	683.95	668.11	668.11
1	14.750	110.750	700.31	684.04	684.04
1	14.833	110.833	716.39	700.31	700.31
1	14.917	110.917	733.12	716.50	716.50
1	15.000	111.000	750.72	733.27	733.27
1	15.083	111.083	765.31	750.35	750.35
1	15.167	111.167	776.04	764.75	764.75
1	15.250	111.250	786.66	775.96	775.96
1	15.333	111.333	797.84	786.74	786.74
1	15.417	111.417	809.57	797.94	797.94
1	15.500	111.500	821.35	809.60	809.60
1	15.583	111.583	832.10	821.23	821.23
1	15.667	111.667	842.10	832.00	832.00
1	15.750	111.750	852.12	842.10	842.10
1	15.833	111.833	861.70	852.07	852.07
1	15.917	111.917	870.86	861.65	861.65
1	16.000	112.000	880.46	870.93	870.93
1	16.083	112.083	891.86	880.73	880.73
1	16.167	112.167	906.70	892.38	892.38
1	16.250	112.250	925.70	907.36	907.36
1	16.333	112.333	947.97	926.26	926.26
1	16.417	112.417	974.56	948.66	948.66
1	16.500	112.500	1008.09	975.63	975.63
1	16.583	112.583	1037.38	1007.69	1007.69
1	16.667	112.667	1053.19	1035.51	1035.51
1	16.750	112.750	1062.73	1052.10	1052.10
1	16.833	112.833	1071.24	1062.45	1062.45
1	16.917	112.917	1079.21	1071.14	1071.14
1	17.000	113.000	1086.46	1079.11	1079.11
1	17.083	113.083	1093.11	1086.38	1086.38
1	17.167	113.167	1099.34	1093.05	1093.05
1	17.250	113.250	1105.04	1099.27	1099.27
1	17.333	113.333	1110.03	1104.94	1104.94
1	17.417	113.417	1114.38	1109.93	1109.93
1	17.500	113.500	1117.98	1114.27	1114.27
1	17.583	113.583	1120.78	1117.86	1117.86
1	17.667	113.667	1122.92	1120.67	1120.67
1	17.750	113.750	1124.53	1122.83	1122.83
1	17.833	113.833	1125.67	1124.46	1124.46
1	17.917	113.917	1126.42	1125.61	1125.61
1	18.000	114.000	1126.86	1126.37	1126.37
1	18.083	114.083	1126.90	1126.80	1126.80
1	18.167	114.167	1126.58	1126.85	1126.85
1	18.250	114.250	1126.03	1126.54	1126.54
1	18.333	114.333	1125.32	1126.00	1126.00
1	18.417	114.417	1124.45	1125.29	1125.29
1	18.500	114.500	1123.40	1124.42	1124.42
1	18.583	114.583	1122.17	1123.37	1123.37
1	18.667	114.667	1120.80	1122.14	1122.14
1	18.750	114.750	1119.32	1120.78	1120.78
1	18.833	114.833	1117.76	1119.30	1119.30
1	18.917	114.917	1116.11	1117.74	1117.74
1	19.000	115.000	1114.40	1116.10	1116.10
1	19.083	115.083	1112.63	1114.39	1114.39
1	19.167	115.167	1110.82	1112.62	1112.62
1	19.250	115.250	1108.96	1110.81	1110.81
1	19.333	115.333	1107.06	1108.95	1108.95
1	19.417	115.417	1105.13	1107.05	1107.05
1	19.500	115.500	1103.18	1105.13	1105.13
1	19.583	115.583	1101.19	1103.17	1103.17
1	19.667	115.667	1099.17	1101.18	1101.18
1	19.750	115.750	1097.12	1099.16	1099.16
1	19.833	115.833	1095.05	1097.12	1097.12
1	19.917	115.917	1093.01	1095.05	1095.05
1	20.000	116.000	1091.01	1093.01	1093.01
1	20.083	116.083	1088.98	1091.00	1091.00
1	20.167	116.167	1086.93	1088.97	1088.97
1	20.250	116.250	1084.87	1086.92	1086.92
1	20.333	116.333	1082.79	1084.86	1084.86
1	20.417	116.417	1080.70	1082.78	1082.78
1	20.500	116.500	1078.59	1080.69	1080.69
1	20.583	116.583	1076.48	1078.59	1078.59
1	20.667	116.667	1074.35	1076.47	1076.47
1	20.750	116.750	1072.21	1074.35	1074.35
1	20.833	116.833	1070.07	1072.21	1072.21
1	20.917	116.917	1067.91	1070.06	1070.06
1	21.000	117.000	1065.75	1067.91	1067.91
1	21.083	117.083	1063.66	1065.76	1065.76
1	21.167	117.167	1061.65	1063.67	1063.67
1	21.250	117.250	1059.64	1061.65	1061.65
1	21.333	117.333	1057.62	1059.64	1059.64
1	21.417	117.417	1055.60	1057.62	1057.62
1	21.500	117.500	1053.57	1055.60	1055.60
1	21.583	117.583	1051.54	1053.57	1053.57
1	21.667	117.667	1049.51	1051.54	1051.54
1	21.750	117.750	1047.47	1049.51	1049.51
1	21.833	117.833	1045.43	1047.47	1047.47
1	21.917	117.917	1043.39	1045.43	1045.43
1	22.000	118.000	1041.35	1043.39	1043.39
1	22.083	118.083	1039.29	1041.34	1041.34
1	22.167	118.167	1036.23	1039.15	1039.15
1	22.250	118.250	1032.18	1036.07	1036.07
1	22.333	118.333	1028.14	1032.15	1032.15
1	22.417	118.417	1024.10	1028.13	1028.13
1	22.500	118.500	1020.08	1024.10	1024.10
1	22.583	118.583	1016.06	1020.07	1020.07
1	22.667	118.667	1012.05	1016.06	1016.06
1	22.750	118.750	1008.06	1012.05	1012.05
1	22.833	118.833	1004.07	1008.05	1008.05
1	22.917	118.917	1000.09	1004.06	1004.06
1	23.000	119.000	996.12	1000.08	1000.08
1	23.083	119.083	992.16	996.12	996.12
1	23.167	119.167	988.17	992.15	992.15
1	23.250	119.250	984.10	988.15	988.15
1	23.333	119.333	979.97	984.08	984.08
1	23.417	119.417	975.86	979.97	979.97
1	23.500	119.500	971.76	975.85	975.85
1	23.583	119.583	967.67	971.76	971.76
1	23.667	119.667	963.60	967.67	967.67
1	23.750	119.750	959.54	963.59	963.59
1	23.833	119.833	955.49	959.53	959.53
1	23.917	119.917	951.45	955.48	955.48
1	24.000	120.000	947.43	951.45	951.45
1	24.083	120.083	943.41	947.43	947.43
1	24.167	120.167	939.39	943.41	943.41
1	24.250	120.250	935.20	939.36	939.36
1	24.333	120.333	930.78	935.16	935.16
1	24.417	120.417	926.22	930.75	930.75
1	24.500	120.500	921.50	926.19	926.19
1	24.583	120.583	916.59	921.47	921.47
1	24.667	120.667	911.57	916.57	916.57
1	24.750	120.750	906.49	911.55	911.55
1	24.833	120.833	901.37	906.47	906.47
1	24.917	120.917	896.23	901.36	901.36
1	25.000	121.000	891.08	896.22	896.22
1	25.083	121.083	885.92	891.07	891.07
1	25.167	121.167	880.63	885.90	885.90
1	25.250	121.250	875.14	880.59	880.59
1	25.333	121.333	869.60	875.13	875.13
1	25.417	121.417	864.07	869.59	869.59
1	25.500	121.500	858.56	864.07	864.07
1	25.583	121.583	853.06	858.55	858.55
1	25.667	121.667	847.59	853.06	853.06
1	25.750	121.750	842.14	847.59	847.59

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  1   25.833 121.833       836.71      842.14      842.14
  1   25.917 121.917       831.32      836.71      836.71
  1   26.000 122.000       825.80      831.29      831.29
  1   26.083 122.083       819.61      825.70      825.70
  1   26.167 122.167       812.92      819.52      819.52
  1   26.250 122.250       806.27      812.90      812.90
  1   26.333 122.333       799.68      806.27      806.27
  1   26.417 122.417       793.15      799.68      799.68
  1   26.500 122.500       786.66      793.15      793.15
  1   26.583 122.583       780.23      786.66      786.66
  1   26.667 122.667       773.84      780.23      780.23
  1   26.750 122.750       767.51      773.84      773.84
  1   26.833 122.833       759.19      767.23      767.23
  1   26.917 122.917       748.07      758.76      758.76
  1   27.000 123.000       736.26      747.90      747.90
  1   27.083 123.083       724.63      736.25      736.25
  1   27.167 123.167       713.19      724.64      724.64
  1   27.250 123.250       701.92      713.20      713.20
  1   27.333 123.333       689.91      701.81      701.81
  1   27.417 123.417       677.14      689.77      689.77
  1   27.500 123.500       664.58      677.13      677.13
  1   27.583 123.583       652.24      664.59      664.59
  1   27.667 123.667       640.14      652.26      652.26
  1   27.750 123.750       628.00      640.12      640.12
  1   27.833 123.833       612.99      627.59      627.59
  1   27.917 123.917       595.51      612.58      612.58
  1   28.000 124.000       578.53      595.50      595.50
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
================================================================================
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   1991.475 AF
    OUTFLOW VOLUME =   1991.475 AF
    LOSS    VOLUME =      0.000 AF
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6300.00 TO NODE   6311.00 IS CODE =   1
--------------------------------------------------------------------------------

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of   299.3 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
================================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #2)

         WATERSHED AREA =     299.300 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.250 HOURS
          CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
          THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
          MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.250
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.750
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:
         +------------------+--------+--------+--------+--------+--------+
         | RAINFALL DEPTHS & |        |        |        |        |        |
         |    LOSS RATES     |  DAY 1 |  DAY 2 |  DAY 3 |  DAY 4 |  DAY 5 |
         |==================+========+========+========+========+========|
         | 5-MINUTE (INCHES) |    0.58|    0.27|    0.12|    0.06|    0.04|
         |30-MINUTE (INCHES) |    1.22|    0.56|    0.24|    0.13|    0.09|
         |   1-HOUR (INCHES) |    1.62|    0.75|    0.33|    0.17|    0.12|
         |   3-HOUR (INCHES) |    2.71|    1.25|    0.54|    0.28|    0.21|
         |   6-HOUR (INCHES) |    3.75|    1.73|    0.75|    0.39|    0.29|
         |  24-HOUR (INCHES) |    6.28|    2.89|    1.26|    0.66|    0.48|
         |==================+========+========+========+========+========|
         | LOSS RATE(IN/HR)  |   0.260|   0.260|   0.260|   0.260|   0.260|
         | LOW LOSS FRACTION |   0.500|   0.730|   0.930|   0.990|   0.990|
         +------------------+--------+--------+--------+--------+--------+
           5-MINUTE FACTOR = 0.987
          30-MINUTE FACTOR = 0.987
           1-HOUR FACTOR = 0.987
           3-HOUR FACTOR = 0.998
           6-HOUR FACTOR = 0.999
          24-HOUR FACTOR = 0.999

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  33.333


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  96.00
         MODEL TIME(HOURS) FOR END OF RESULTS = 124.00


================================================================================
                      UNIT HYDROGRAPH DETERMINATION

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     INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
      NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------------
         1                3.852               139.411
         2               18.445               528.231
         3               39.624               766.604
         4               55.845               587.160
         5               64.124               299.680
         6               70.038               214.036
         7               74.639               166.538
         8               78.230               130.017
         9               81.158               105.957
        10               83.587                87.936
        11               85.638                74.235
        12               87.267                58.971
        13               88.619                48.932
        14               89.699                39.084
        15               90.702                36.306
        16               91.629                33.565
        17               92.506                31.749
        18               93.325                29.632
        19               94.080                27.335
        20               94.768                24.914
        21               95.424                23.727
        22               95.971                19.796
        23               96.509                19.477
        24               97.020                18.507
        25               97.406                13.985
        26               97.766                13.021
        27               98.126                13.018
        28               98.458                12.019
        29               98.594                 4.931
        30               98.692                 3.557
        31               98.791                 3.557
        32               98.889                 3.550
        33               98.987                 3.557
        34               99.085                 3.551
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35	99.183	3.557
36	99.281	3.550
37	99.380	3.550
38	99.478	3.550
39	99.576	3.550
40	99.674	3.550
41	99.772	3.550
42	99.870	3.550
43	99.968	3.550
44	100.000	1.157

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 162.2768
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 126.0595

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5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	175.0	350.0	525.0	700.0
96.000	32.8756	3.82	Q	V	.	.	.
(PEAK DAY 2, HOUR 24.000)							
96.083	32.9046	4.22	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.083)							
96.167	32.9446	5.81	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.167)							
96.250	33.0007	8.14	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.250)							
96.333	33.0691	9.93	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.333)							
96.417	33.1439	10.86	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.417)							
96.500	33.2233	11.53	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.500)							
96.583	33.3064	12.07	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.583)							
96.667	33.3925	12.50	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.667)							
96.750	33.4810	12.85	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.750)							
96.833	33.5716	13.16	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.833)							
96.917	33.6640	13.42	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.917)							
97.000	33.7579	13.64	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.000)							
97.083	33.8532	13.83	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.083)							
97.167	33.9496	13.99	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.167)							
97.250	34.0470	14.15	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.250)							
97.333	34.1455	14.30	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.333)							
97.417	34.2449	14.44	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.417)							
97.500	34.3453	14.58	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.500)							
97.583	34.4466	14.71	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.583)							
97.667	34.5487	14.83	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.667)							
97.750	34.6517	14.96	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.750)							
97.833	34.7555	15.07	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.833)							
97.917	34.8601	15.18	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.917)							
98.000	34.9654	15.29	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.000)							
98.083	35.0714	15.39	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.083)							
98.167	35.1780	15.48	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.167)							
98.250	35.2853	15.58	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.250)							
98.333	35.3933	15.67	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.333)							
98.417	35.5017	15.75	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.417)							
98.500	35.6106	15.81	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.500)							
98.583	35.7200	15.88	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.583)							
98.667	35.8299	15.95	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.667)							
98.750	35.9403	16.03	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.750)							
98.833	36.0511	16.10	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.833)							
98.917	36.1625	16.17	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.917)							
99.000	36.2744	16.24	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.000)							
99.083	36.3867	16.32	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.083)							
99.167	36.4996	16.39	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.167)							
99.250	36.6130	16.47	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.250)							
99.333	36.7270	16.54	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.333)							
99.417	36.8414	16.62	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.417)							
99.500	36.9564	16.70	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.500)							
99.583	37.0720	16.78	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.583)							
99.667	37.1880	16.85	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.667)							
99.750	37.3045	16.92	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.750)							
99.833	37.4215	16.99	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.833)							
99.917	37.5390	17.06	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.917)							
100.000	37.6569	17.13	Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.000)							
100.083	37.7754	17.20	Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.083)							
100.167	37.8943	17.27	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.167)							
100.250	38.0138	17.35	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.250)							
100.333	38.1338	17.42	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.333)							
100.417	38.2543	17.50	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.417)							
100.500	38.3753	17.57	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.500)							
100.583	38.4969	17.65	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.583)							
100.667	38.6190	17.73	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.667)							
100.750	38.7416	17.81	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.750)							
100.833	38.8648	17.89	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.833)							
100.917	38.9885	17.97	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.917)							
101.000	39.1128	18.05	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 5.000)							
101.083	39.2377	18.13	.Q	. V	.	.	.

(PEAK DAY 1, HOUR 5.083)
101.167 39.3632 18.22 .Q . V . . .
(PEAK DAY 1, HOUR 5.167)
101.250 39.4892 18.30 .Q . V . . .
(PEAK DAY 1, HOUR 5.250)
101.333 39.6158 18.39 .Q . V . . .
(PEAK DAY 1, HOUR 5.333)
101.417 39.7430 18.47 .Q . V . . .
(PEAK DAY 1, HOUR 5.417)
101.500 39.8709 18.56 .Q . V . . .
(PEAK DAY 1, HOUR 5.500)
101.583 39.9993 18.65 .Q . V . . .
(PEAK DAY 1, HOUR 5.583)
101.667 40.1283 18.74 .Q . V . . .
(PEAK DAY 1, HOUR 5.667)
101.750 40.2580 18.83 .Q . V . . .
(PEAK DAY 1, HOUR 5.750)
101.833 40.3883 18.92 .Q . V . . .
(PEAK DAY 1, HOUR 5.833)
101.917 40.5193 19.02 .Q . V . . .
(PEAK DAY 1, HOUR 5.917)
102.000 40.6509 19.11 .Q . V . . .
(PEAK DAY 1, HOUR 6.000)
102.083 40.7832 19.21 .Q . V . . .
(PEAK DAY 1, HOUR 6.083)
102.167 40.9161 19.30 .Q . V . . .
(PEAK DAY 1, HOUR 6.167)
102.250 41.0497 19.40 .Q . V . . .
(PEAK DAY 1, HOUR 6.250)
102.333 41.1841 19.50 .Q . V . . .
(PEAK DAY 1, HOUR 6.333)
102.417 41.3191 19.60 .Q . V . . .
(PEAK DAY 1, HOUR 6.417)
102.500 41.4548 19.71 .Q . V . . .
(PEAK DAY 1, HOUR 6.500)
102.583 41.5912 19.81 .Q . V . . .
(PEAK DAY 1, HOUR 6.583)
102.667 41.7283 19.91 .Q . V . . .
(PEAK DAY 1, HOUR 6.667)
102.750 41.8662 20.02 .Q . V . . .
(PEAK DAY 1, HOUR 6.750)
102.833 42.0048 20.13 .Q . V . . .
(PEAK DAY 1, HOUR 6.833)
102.917 42.1442 20.24 .Q . V . . .
(PEAK DAY 1, HOUR 6.917)
103.000 42.2844 20.35 .Q . V . . .
(PEAK DAY 1, HOUR 7.000)
103.083 42.4253 20.46 .Q . V . . .
(PEAK DAY 1, HOUR 7.083)
103.167 42.5670 20.58 .Q . V . . .
(PEAK DAY 1, HOUR 7.167)
103.250 42.7096 20.69 .Q . V . . .
(PEAK DAY 1, HOUR 7.250)
103.333 42.8529 20.81 .Q . V . . .
(PEAK DAY 1, HOUR 7.333)
103.417 42.9970 20.93 .Q . V . . .
(PEAK DAY 1, HOUR 7.417)
103.500 43.1420 21.05 .Q . V . . .
(PEAK DAY 1, HOUR 7.500)
103.583 43.2879 21.18 .Q . V . . .
(PEAK DAY 1, HOUR 7.583)
103.667 43.4346 21.30 .Q . V . . .
(PEAK DAY 1, HOUR 7.667)
103.750 43.5822 21.43 .Q . V . . .
(PEAK DAY 1, HOUR 7.750)
103.833 43.7307 21.56 .Q . V . . .
(PEAK DAY 1, HOUR 7.833)
103.917 43.8801 21.69 .Q . V . . .
(PEAK DAY 1, HOUR 7.917)
104.000 44.0304 21.82 .Q . V . . .
(PEAK DAY 1, HOUR 8.000)
104.083 44.1816 21.96 .Q . V . . .
(PEAK DAY 1, HOUR 8.083)
104.167 44.3338 22.10 .Q . V . . .
(PEAK DAY 1, HOUR 8.167)
104.250 44.4869 22.24 .Q . V . . .
(PEAK DAY 1, HOUR 8.250)
104.333 44.6411 22.38 .Q . V . . .
(PEAK DAY 1, HOUR 8.333)
104.417 44.7962 22.52 .Q . V . . .
(PEAK DAY 1, HOUR 8.417)
104.500 44.9523 22.67 .Q . V . . .
(PEAK DAY 1, HOUR 8.500)
104.583 45.1095 22.82 .Q . V . . .
(PEAK DAY 1, HOUR 8.583)
104.667 45.2677 22.97 .Q . V . . .
(PEAK DAY 1, HOUR 8.667)
104.750 45.4270 23.13 .Q . V . . .
(PEAK DAY 1, HOUR 8.750)
104.833 45.5874 23.29 .Q . V . . .
(PEAK DAY 1, HOUR 8.833)
104.917 45.7489 23.45 .Q . V . . .
(PEAK DAY 1, HOUR 8.917)
105.000 45.9115 23.61 .Q . V . . .
(PEAK DAY 1, HOUR 9.000)
105.083 46.0752 23.78 .Q . V . . .
(PEAK DAY 1, HOUR 9.083)
105.167 46.2402 23.95 .Q . V . . .
(PEAK DAY 1, HOUR 9.167)
105.250 46.4063 24.12 .Q . V . . .
(PEAK DAY 1, HOUR 9.250)
105.333 46.5736 24.30 .Q . V . . .
(PEAK DAY 1, HOUR 9.333)
105.417 46.7422 24.48 .Q . V . . .
(PEAK DAY 1, HOUR 9.417)
105.500 46.9120 24.66 .Q . V . . .
(PEAK DAY 1, HOUR 9.500)
105.583 47.0831 24.85 .Q . V . . .
(PEAK DAY 1, HOUR 9.583)
105.667 47.2556 25.04 .Q . V . . .
(PEAK DAY 1, HOUR 9.667)
105.750 47.4293 25.23 .Q . V . . .
(PEAK DAY 1, HOUR 9.750)
105.833 47.6045 25.43 .Q . V . . .
(PEAK DAY 1, HOUR 9.833)
105.917 47.7810 25.63 .Q . V . . .
(PEAK DAY 1, HOUR 9.917)
106.000 47.9590 25.84 .Q . V . . .
(PEAK DAY 1, HOUR 10.000)
106.083 48.1383 26.05 .Q . V . . .
(PEAK DAY 1, HOUR 10.083)
106.167 48.3192 26.26 .Q . V . . .
(PEAK DAY 1, HOUR 10.167)
106.250 48.5016 26.48 .Q . V . . .
(PEAK DAY 1, HOUR 10.250)
106.333 48.6856 26.71 .Q . V . . .
(PEAK DAY 1, HOUR 10.333)
106.417 48.8711 26.94 .Q . V . . .
(PEAK DAY 1, HOUR 10.417)
106.500 49.0583 27.18 .Q . V . . .
(PEAK DAY 1, HOUR 10.500)
106.583 49.2471 27.42 .Q . V . . .
(PEAK DAY 1, HOUR 10.583)
106.667 49.4376 27.66 .Q . V . . .

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 (PEAK DAY 1, HOUR  10.667)
106.750     49.6299     27.91  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.750)
106.833     49.8239     28.17  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.833)
106.917     50.0198     28.44  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.917)
107.000     50.2175     28.71  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.000)
107.083     50.4171     28.99  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.083)
107.167     50.6187     29.27  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.167)
107.250     50.8223     29.57  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.250)
107.333     51.0280     29.87  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.333)
107.417     51.2359     30.17  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.417)
107.500     51.4459     30.49  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.500)
107.583     51.6581     30.82  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.583)
107.667     51.8727     31.15  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.667)
107.750     52.0896     31.50  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.750)
107.833     52.3090     31.85  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.833)
107.917     52.5309     32.22  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.917)
108.000     52.7554     32.60  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  12.000)
108.083     52.9850     33.34  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  12.083)
108.167     53.2266     35.09  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.167)
108.250     53.4846     37.46  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.250)
108.333     53.7559     39.39  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.333)
108.417     54.0356     40.62  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.417)
108.500     54.3224     41.64  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.500)
108.583     54.6155     42.56  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.583)
108.667     54.9144     43.40  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.667)
108.750     55.2188     44.20  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.750)
108.833     55.5286     44.98  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.833)
108.917     55.8436     45.74  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.917)
109.000     56.1638     46.49  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.000)
109.083     56.4890     47.23  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.083)
109.167     56.8194     47.97  . Q       .       V .         .         .
 (PEAK DAY 1, HOUR  13.167)
109.250     57.1551     48.73  . Q       .       V .         .         .
 (PEAK DAY 1, HOUR  13.250)
109.333     57.4961     49.52  . Q       .       V .         .         .
 (PEAK DAY 1, HOUR  13.333)
109.417     57.8427     50.33  . Q       .       V .         .         .
 (PEAK DAY 1, HOUR  13.417)
109.500     58.1951     51.16  . Q       .       V .         .         .
 (PEAK DAY 1, HOUR  13.500)
109.583     58.5534     52.03  . Q       .       V .         .         .
 (PEAK DAY 1, HOUR  13.583)
109.667     58.9178     52.92  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.667)
109.750     59.2887     53.85  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.750)
109.833     59.6663     54.82  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.833)
109.917     60.0508     55.83  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  13.917)
110.000     60.4427     56.90  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  14.000)
110.083     60.8424     58.05  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  14.083)
110.167     61.2514     59.39  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  14.167)
110.250     61.6706     60.87  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  14.250)
110.333     62.1002     62.37  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  14.333)
110.417     62.5398     63.84  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  14.417)
110.500     62.9900     65.37  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  14.500)
110.583     63.4513     66.98  .  Q      .         V         .         .
 (PEAK DAY 1, HOUR  14.583)
110.667     63.9245     68.71  .  Q      .         V         .         .
 (PEAK DAY 1, HOUR  14.667)
110.750     64.4112     70.66  .   Q     .         V         .         .
 (PEAK DAY 1, HOUR  14.750)
110.833     64.9150     73.15  .   Q     .         V         .         .
 (PEAK DAY 1, HOUR  14.833)
110.917     65.4407     76.34  .   Q     .         V         .         .
 (PEAK DAY 1, HOUR  14.917)
111.000     65.9935     80.25  .   Q     .         V         .         .
 (PEAK DAY 1, HOUR  15.000)
111.083     66.5774     84.78  .   Q     .         .V        .         .
 (PEAK DAY 1, HOUR  15.083)
111.167     67.1973     90.01  .    Q    .         .V        .         .
 (PEAK DAY 1, HOUR  15.167)
111.250     67.8580     95.94  .    Q    .         .V        .         .
 (PEAK DAY 1, HOUR  15.250)
111.333     68.5659    102.79  .    Q    .         .V        .         .
 (PEAK DAY 1, HOUR  15.333)
111.417     69.3190    109.35  .     Q   .         .V        .         .
 (PEAK DAY 1, HOUR  15.417)
111.500     70.1017    113.65  .     Q   .         . V       .         .
 (PEAK DAY 1, HOUR  15.500)
111.583     70.9099    117.35  .     Q   .         . V       .         .
 (PEAK DAY 1, HOUR  15.583)
111.667     71.7709    125.02  .      Q  .         . V       .         .
 (PEAK DAY 1, HOUR  15.667)
111.750     72.7266    138.77  .      Q  .         .  V      .         .
 (PEAK DAY 1, HOUR  15.750)
111.833     73.8217    159.00  .        Q.         .  V      .         .
 (PEAK DAY 1, HOUR  15.833)
111.917     75.1262    189.42  .         Q         .  V      .         .
 (PEAK DAY 1, HOUR  15.917)
112.000     76.7812    240.31  .          . Q      .   V     .         .
 (PEAK DAY 1, HOUR  16.000)
112.083     79.3056    366.54  .          .        Q   V     .         .
 (PEAK DAY 1, HOUR  16.083)
112.167     83.2784    576.85  .          .         .    V   . Q       .
 (PEAK DAY 1, HOUR  16.167)
112.250     87.9056    671.87  .          .         .     V  .       Q .
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(PEAK DAY 1, HOUR 16.250)
112.333 91.7172 553.44 . . . V.Q .
(PEAK DAY 1, HOUR 16.333)
112.417 94.3714 385.40 . . . Q V. .
(PEAK DAY 1, HOUR 16.417)
112.500 96.5294 313.35 . . Q . V .
(PEAK DAY 1, HOUR 16.500)
112.583 98.3808 268.82 . . Q . .V .
(PEAK DAY 1, HOUR 16.583)
112.667 99.9869 233.20 . . Q . .V .
(PEAK DAY 1, HOUR 16.667)
112.750 101.3946 204.39 . .Q . . V .
(PEAK DAY 1, HOUR 16.750)
112.833 102.6383 180.59 . Q . . V .
(PEAK DAY 1, HOUR 16.833)
112.917 103.7472 161.01 . Q. . . V .
(PEAK DAY 1, HOUR 16.917)
113.000 104.7342 143.32 . Q . . . V .
(PEAK DAY 1, HOUR 17.000)
113.083 105.6298 130.03 . Q . . . V .
(PEAK DAY 1, HOUR 17.083)
113.167 106.4471 118.67 . Q . . . V .
(PEAK DAY 1, HOUR 17.167)
113.250 107.2151 111.51 . Q . . . V .
(PEAK DAY 1, HOUR 17.250)
113.333 107.9404 105.32 . Q . . . V .
(PEAK DAY 1, HOUR 17.333)
113.417 108.6304 100.18 . Q . . . V .
(PEAK DAY 1, HOUR 17.417)
113.500 109.2865 95.26 . Q . . . V .
(PEAK DAY 1, HOUR 17.500)
113.583 109.9104 90.59 . Q . . . V .
(PEAK DAY 1, HOUR 17.583)
113.667 110.5035 86.13 . Q . . . V .
(PEAK DAY 1, HOUR 17.667)
113.750 111.0709 82.38 . Q . . . V .
(PEAK DAY 1, HOUR 17.750)
113.833 111.6069 77.82 . Q . . . V .
(PEAK DAY 1, HOUR 17.833)
113.917 112.1224 74.86 . Q . . . V .
(PEAK DAY 1, HOUR 17.917)
114.000 112.6157 71.63 . Q . . . V .
(PEAK DAY 1, HOUR 18.000)
114.083 113.0756 66.78 . Q . . . V .
(PEAK DAY 1, HOUR 18.083)
114.167 113.5071 62.65 . Q . . . V .
(PEAK DAY 1, HOUR 18.167)
114.250 113.9085 58.29 . Q . . . V .
(PEAK DAY 1, HOUR 18.250)
114.333 114.2791 53.80 . Q . . . V .
(PEAK DAY 1, HOUR 18.333)
114.417 114.6084 47.83 . Q . . . V .
(PEAK DAY 1, HOUR 18.417)
114.500 114.9178 44.92 . Q . . . V .
(PEAK DAY 1, HOUR 18.500)
114.583 115.2148 43.12 . Q . . . V .
(PEAK DAY 1, HOUR 18.583)
114.667 115.5015 41.63 . Q . . . V .
(PEAK DAY 1, HOUR 18.667)
114.750 115.7791 40.30 . Q . . . V .
(PEAK DAY 1, HOUR 18.750)
114.833 116.0483 39.09 . Q . . . V .
(PEAK DAY 1, HOUR 18.833)
114.917 116.3100 38.00 . Q . . . V .
(PEAK DAY 1, HOUR 18.917)
115.000 116.5650 37.02 . Q . . . V .
(PEAK DAY 1, HOUR 19.000)
115.083 116.8138 36.13 . Q . . . V .
(PEAK DAY 1, HOUR 19.083)
115.167 117.0569 35.29 . Q . . . V .
(PEAK DAY 1, HOUR 19.167)
115.250 117.2943 34.47 .Q . . . V .
(PEAK DAY 1, HOUR 19.250)
115.333 117.5261 33.65 .Q . . . V .
(PEAK DAY 1, HOUR 19.333)
115.417 117.7521 32.82 .Q . . . V .
(PEAK DAY 1, HOUR 19.417)
115.500 117.9719 31.91 .Q . . . V .
(PEAK DAY 1, HOUR 19.500)
115.583 118.1844 30.86 .Q . . . V .
(PEAK DAY 1, HOUR 19.583)
115.667 118.3832 28.87 .Q . . . V .
(PEAK DAY 1, HOUR 19.667)
115.750 118.5730 27.55 .Q . . . V .
(PEAK DAY 1, HOUR 19.750)
115.833 118.7582 26.88 .Q . . . V .
(PEAK DAY 1, HOUR 19.833)
115.917 118.9394 26.31 .Q . . . V .
(PEAK DAY 1, HOUR 19.917)
116.000 119.1169 25.78 .Q . . . V .
(PEAK DAY 1, HOUR 20.000)
116.083 119.2911 25.29 .Q . . . V .
(PEAK DAY 1, HOUR 20.083)
116.167 119.4621 24.83 .Q . . . V .
(PEAK DAY 1, HOUR 20.167)
116.250 119.6301 24.40 .Q . . . V .
(PEAK DAY 1, HOUR 20.250)
116.333 119.7954 24.00 .Q . . . V .
(PEAK DAY 1, HOUR 20.333)
116.417 119.9582 23.64 .Q . . . V .
(PEAK DAY 1, HOUR 20.417)
116.500 120.1186 23.29 .Q . . . V .
(PEAK DAY 1, HOUR 20.500)
116.583 120.2767 22.96 .Q . . . V .
(PEAK DAY 1, HOUR 20.583)
116.667 120.4326 22.64 .Q . . . V .
(PEAK DAY 1, HOUR 20.667)
116.750 120.5864 22.33 .Q . . . V .
(PEAK DAY 1, HOUR 20.750)
116.833 120.7382 22.03 .Q . . . V .
(PEAK DAY 1, HOUR 20.833)
116.917 120.8879 21.75 .Q . . . V .
(PEAK DAY 1, HOUR 20.917)
117.000 121.0358 21.47 .Q . . . V .
(PEAK DAY 1, HOUR 21.000)
117.083 121.1818 21.20 .Q . . . V .
(PEAK DAY 1, HOUR 21.083)
117.167 121.3261 20.94 .Q . . . V .
(PEAK DAY 1, HOUR 21.167)
117.250 121.4686 20.69 .Q . . . V .
(PEAK DAY 1, HOUR 21.250)
117.333 121.6094 20.45 .Q . . . V .
(PEAK DAY 1, HOUR 21.333)
117.417 121.7486 20.21 .Q . . . V .
(PEAK DAY 1, HOUR 21.417)
117.500 121.8862 19.98 .Q . . . V .
(PEAK DAY 1, HOUR 21.500)
117.583 122.0223 19.76 .Q . . . V .
(PEAK DAY 1, HOUR 21.583)
117.667 122.1569 19.55 .Q . . . V .
(PEAK DAY 1, HOUR 21.667)
117.750 122.2902 19.34 .Q . . . V .
(PEAK DAY 1, HOUR 21.750)
117.833 122.4220 19.15 .Q . . . V .

(PEAK DAY 1, HOUR 21.833)
117.917 122.5526 18.96 .Q . . . V .
(PEAK DAY 1, HOUR 21.917)
118.000 122.6818 18.77 .Q . . . V .
(PEAK DAY 1, HOUR 22.000)
118.083 122.8099 18.59 .Q . . . V .
(PEAK DAY 1, HOUR 22.083)
118.167 122.9367 18.41 .Q . . . V.
(PEAK DAY 1, HOUR 22.167)
118.250 123.0623 18.24 .Q . . . V.
(PEAK DAY 1, HOUR 22.250)
118.333 123.1867 18.07 .Q . . . V.
(PEAK DAY 1, HOUR 22.333)
118.417 123.3100 17.90 .Q . . . V.
(PEAK DAY 1, HOUR 22.417)
118.500 123.4322 17.74 .Q . . . V.
(PEAK DAY 1, HOUR 22.500)
118.583 123.5533 17.59 .Q . . . V.
(PEAK DAY 1, HOUR 22.583)
118.667 123.6734 17.43 Q . . . V.
(PEAK DAY 1, HOUR 22.667)
118.750 123.7924 17.28 Q . . . V.
(PEAK DAY 1, HOUR 22.750)
118.833 123.9104 17.14 Q . . . V.
(PEAK DAY 1, HOUR 22.833)
118.917 124.0275 16.99 Q . . . V.
(PEAK DAY 1, HOUR 22.917)
119.000 124.1436 16.85 Q . . . V.
(PEAK DAY 1, HOUR 23.000)
119.083 124.2587 16.72 Q . . . V.
(PEAK DAY 1, HOUR 23.083)
119.167 124.3729 16.58 Q . . . V.
(PEAK DAY 1, HOUR 23.167)
119.250 124.4862 16.45 Q . . . V.
(PEAK DAY 1, HOUR 23.250)
119.333 124.5986 16.32 Q . . . V.
(PEAK DAY 1, HOUR 23.333)
119.417 124.7101 16.20 Q . . . V.
(PEAK DAY 1, HOUR 23.417)
119.500 124.8208 16.07 Q . . . V.
(PEAK DAY 1, HOUR 23.500)
119.583 124.9307 15.95 Q . . . V.
(PEAK DAY 1, HOUR 23.583)
119.667 125.0397 15.83 Q . . . V.
(PEAK DAY 1, HOUR 23.667)
119.750 125.1480 15.72 Q . . . V.
(PEAK DAY 1, HOUR 23.750)
119.833 125.2554 15.60 Q . . . V.
(PEAK DAY 1, HOUR 23.833)
119.917 125.3621 15.49 Q . . . V.
(PEAK DAY 1, HOUR 23.917)
120.000 125.4680 15.38 Q . . . V.
(PEAK DAY 1, HOUR 24.000)
120.083 125.5693 14.71 Q . . . V.
(PEAK DAY 1, HOUR 24.083)
120.167 125.6552 12.46 Q . . . V.
(PEAK DAY 1, HOUR 24.167)
120.250 125.7190 9.27 Q . . . V.
(PEAK DAY 1, HOUR 24.250)
120.333 125.7661 6.83 Q . . . V.
(PEAK DAY 1, HOUR 24.333)
120.417 125.8044 5.57 Q . . . V.
(PEAK DAY 1, HOUR 24.417)
120.500 125.8365 4.66 Q . . . V.
(PEAK DAY 1, HOUR 24.500)
120.583 125.8637 3.95 Q . . . V.
(PEAK DAY 1, HOUR 24.583)
120.667 125.8871 3.40 Q . . . V.
(PEAK DAY 1, HOUR 24.667)
120.750 125.9073 2.94 Q . . . V.
(PEAK DAY 1, HOUR 24.750)
120.833 125.9250 2.56 Q . . . V.
(PEAK DAY 1, HOUR 24.833)
120.917 125.9405 2.25 Q . . . V.
(PEAK DAY 1, HOUR 24.917)
121.000 125.9542 1.99 Q . . . V.
(PEAK DAY 1, HOUR 25.000)
121.083 125.9664 1.78 Q . . . V.
(PEAK DAY 1, HOUR 25.083)
121.167 125.9775 1.61 Q . . . V.
(PEAK DAY 1, HOUR 25.167)
121.250 125.9874 1.45 Q . . . V.
(PEAK DAY 1, HOUR 25.250)
121.333 125.9964 1.30 Q . . . V.
(PEAK DAY 1, HOUR 25.333)
121.417 126.0044 1.16 Q . . . V.
(PEAK DAY 1, HOUR 25.417)
121.500 126.0116 1.04 Q . . . V.
(PEAK DAY 1, HOUR 25.500)
121.583 126.0179 0.92 Q . . . V.
(PEAK DAY 1, HOUR 25.583)
121.667 126.0234 0.81 Q . . . V.
(PEAK DAY 1, HOUR 25.667)
121.750 126.0283 0.71 Q . . . V.
(PEAK DAY 1, HOUR 25.750)
121.833 126.0326 0.62 Q . . . V.
(PEAK DAY 1, HOUR 25.833)
121.917 126.0363 0.54 Q . . . V.
(PEAK DAY 1, HOUR 25.917)
122.000 126.0395 0.46 Q . . . V.
(PEAK DAY 1, HOUR 26.000)
122.083 126.0423 0.40 Q . . . V.
(PEAK DAY 1, HOUR 26.083)
122.167 126.0446 0.35 Q . . . V.
(PEAK DAY 1, HOUR 26.167)
122.250 126.0466 0.29 Q . . . V.
(PEAK DAY 1, HOUR 26.250)
122.333 126.0483 0.24 Q . . . V.
(PEAK DAY 1, HOUR 26.333)
122.417 126.0498 0.22 Q . . . V.
(PEAK DAY 1, HOUR 26.417)
122.500 126.0512 0.20 Q . . . V.
(PEAK DAY 1, HOUR 26.500)
122.583 126.0524 0.19 Q . . . V.
(PEAK DAY 1, HOUR 26.583)
122.667 126.0536 0.17 Q . . . V.
(PEAK DAY 1, HOUR 26.667)
122.750 126.0547 0.15 Q . . . V.
(PEAK DAY 1, HOUR 26.750)
122.833 126.0556 0.14 Q . . . V.
(PEAK DAY 1, HOUR 26.833)
122.917 126.0565 0.12 Q . . . V.
(PEAK DAY 1, HOUR 26.917)
123.000 126.0572 0.11 Q . . . V.
(PEAK DAY 1, HOUR 27.000)
123.083 126.0579 0.09 Q . . . V.
(PEAK DAY 1, HOUR 27.083)
123.167 126.0584 0.08 Q . . . V.
(PEAK DAY 1, HOUR 27.167)
123.250 126.0588 0.06 Q . . . V.
(PEAK DAY 1, HOUR 27.250)
123.333 126.0592 0.05 Q . . . V.
(PEAK DAY 1, HOUR 27.333)
123.417 126.0594 0.03 Q . . . V.

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 (PEAK DAY 1, HOUR  27.417)
 123.500    126.0595      0.02  Q          .          .          .          V
 (PEAK DAY 1, HOUR  27.500)
 123.583    126.0596      0.00  Q          .          .          .          V
 (PEAK DAY 1, HOUR  27.583)
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********************************************************************************
  FLOW PROCESS FROM NODE   6311.00 TO NODE   6311.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  5040.6 Ac. ***
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6311.00 TO NODE   6311.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  5040.6 Ac. ***

            STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
         (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      400.0     800.0    1200.0    1600.0
--------------------------------------------------------------------------------
  96.000    556.7531     61.40  .Q         V          .          .          .
 (PEAK DAY 2, HOUR  24.000)
  96.083    557.1769     61.54  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.083)
  96.167    557.6186     64.13  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.167)
  96.250    558.1001     69.92  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.250)
  96.333    558.6354     77.73  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.333)
  96.417    559.2376     87.44  . Q        V          .          .          .
 (PEAK DAY 1, HOUR   0.417)
  96.500    559.9421    102.29  . Q        V          .          .          .
 (PEAK DAY 1, HOUR   0.500)
  96.583    560.8145    126.68  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   0.583)
  96.667    561.8600    151.80  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   0.667)
  96.750    563.0128    167.40  .   Q      V          .          .          .
 (PEAK DAY 1, HOUR   0.750)
  96.833    564.2349    177.44  .   Q      V          .          .          .
 (PEAK DAY 1, HOUR   0.833)
  96.917    565.5131    185.60  .   Q      V          .          .          .
 (PEAK DAY 1, HOUR   0.917)
  97.000    566.8372    192.27  .   Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.000)
  97.083    568.2007    197.98  .   Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.083)
  97.167    569.5988    203.00  .    Q     V          .          .          .
 (PEAK DAY 1, HOUR   1.167)
  97.250    571.0273    207.43  .    Q     V          .          .          .
 (PEAK DAY 1, HOUR   1.250)
  97.333    572.4828    211.33  .    Q     V          .          .          .
 (PEAK DAY 1, HOUR   1.333)
  97.417    573.9620    214.78  .    Q     V          .          .          .
 (PEAK DAY 1, HOUR   1.417)
  97.500    575.4632    217.98  .    Q     V          .          .          .
 (PEAK DAY 1, HOUR   1.500)
  97.583    576.9844    220.88  .    Q     V          .          .          .
 (PEAK DAY 1, HOUR   1.583)
  97.667    578.5235    223.47  .    Q     V          .          .          .
 (PEAK DAY 1, HOUR   1.667)
  97.750    580.0786    225.80  .    Q     V          .          .          .
 (PEAK DAY 1, HOUR   1.750)
  97.833    581.6481    227.88  .    Q     V          .          .          .
 (PEAK DAY 1, HOUR   1.833)
  97.917    583.2300    229.70  .    Q    .V          .          .          .
 (PEAK DAY 1, HOUR   1.917)
  98.000    584.8239    231.42  .    Q    .V          .          .          .
 (PEAK DAY 1, HOUR   2.000)
  98.083    586.4290    233.06  .    Q    .V          .          .          .
 (PEAK DAY 1, HOUR   2.083)
  98.167    588.0431    234.37  .    Q    .V          .          .          .
 (PEAK DAY 1, HOUR   2.167)
  98.250    589.6644    235.41  .    Q    .V          .          .          .
 (PEAK DAY 1, HOUR   2.250)
  98.333    591.2928    236.43  .    Q    .V          .          .          .
 (PEAK DAY 1, HOUR   2.333)
  98.417    592.9280    237.44  .    Q    .V          .          .          .
 (PEAK DAY 1, HOUR   2.417)
  98.500    594.5702    238.44  .    Q    .V          .          .          .
 (PEAK DAY 1, HOUR   2.500)
  98.583    596.2194    239.46  .    Q    .V          .          .          .
 (PEAK DAY 1, HOUR   2.583)
  98.667    597.8755    240.48  .     Q   .V          .          .          .
 (PEAK DAY 1, HOUR   2.667)
  98.750    599.5389    241.52  .     Q   .V          .          .          .
 (PEAK DAY 1, HOUR   2.750)
  98.833    601.2094    242.56  .     Q   .V          .          .          .
 (PEAK DAY 1, HOUR   2.833)
  98.917    602.8871    243.61  .     Q   .V          .          .          .
 (PEAK DAY 1, HOUR   2.917)
  99.000    604.5723    244.68  .     Q   .V          .          .          .
 (PEAK DAY 1, HOUR   3.000)
  99.083    606.2648    245.75  .     Q   .V          .          .          .
 (PEAK DAY 1, HOUR   3.083)
  99.167    607.9647    246.83  .     Q   .V          .          .          .
 (PEAK DAY 1, HOUR   3.167)
  99.250    609.6722    247.93  .     Q   .V          .          .          .
 (PEAK DAY 1, HOUR   3.250)
  99.333    611.3874    249.04  .     Q   .V          .          .          .
 (PEAK DAY 1, HOUR   3.333)
  99.417    613.1102    250.15  .     Q   .V          .          .          .
 (PEAK DAY 1, HOUR   3.417)
  99.500    614.8408    251.28  .     Q   .V          .          .          .
 (PEAK DAY 1, HOUR   3.500)
  99.583    616.5792    252.42  .     Q   .V          .          .          .
 (PEAK DAY 1, HOUR   3.583)
  99.667    618.3255    253.56  .     Q   .V          .          .          .
 (PEAK DAY 1, HOUR   3.667)
  99.750    620.0797    254.71  .     Q   .V          .          .          .
 (PEAK DAY 1, HOUR   3.750)
  99.833    621.8419    255.87  .     Q   .V          .          .          .
 (PEAK DAY 1, HOUR   3.833)
  99.917    623.6121    257.04  .     Q   .V          .          .          .
 (PEAK DAY 1, HOUR   3.917)
 100.000    625.3901    258.16  .     Q   .V          .          .          .
 (PEAK DAY 1, HOUR   4.000)
 100.083    627.1754    259.23  .     Q   .V          .          .          .
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(PEAK DAY 1, HOUR   4.083)
100.167    628.9681    260.30  .     Q   .V        .         .         .
(PEAK DAY 1, HOUR   4.167)
100.250    630.7682    261.38  .     Q   .V        .         .         .
(PEAK DAY 1, HOUR   4.250)
100.333    632.5758    262.47  .     Q   .V        .         .         .
(PEAK DAY 1, HOUR   4.333)
100.417    634.3911    263.57  .     Q   .V        .         .         .
(PEAK DAY 1, HOUR   4.417)
100.500    636.2139    264.68  .     Q   . V       .         .         .
(PEAK DAY 1, HOUR   4.500)
100.583    638.0446    265.81  .     Q   . V       .         .         .
(PEAK DAY 1, HOUR   4.583)
100.667    639.8831    266.95  .     Q   . V       .         .         .
(PEAK DAY 1, HOUR   4.667)
100.750    641.7296    268.10  .     Q   . V       .         .         .
(PEAK DAY 1, HOUR   4.750)
100.833    643.5840    269.27  .     Q   . V       .         .         .
(PEAK DAY 1, HOUR   4.833)
100.917    645.4467    270.45  .     Q   . V       .         .         .
(PEAK DAY 1, HOUR   4.917)
101.000    647.3174    271.64  .     Q   . V       .         .         .
(PEAK DAY 1, HOUR   5.000)
101.083    649.1966    272.85  .     Q   . V       .         .         .
(PEAK DAY 1, HOUR   5.083)
101.167    651.0841    274.07  .     Q   . V       .         .         .
(PEAK DAY 1, HOUR   5.167)
101.250    652.9801    275.30  .     Q   . V       .         .         .
(PEAK DAY 1, HOUR   5.250)
101.333    654.8848    276.55  .     Q   . V       .         .         .
(PEAK DAY 1, HOUR   5.333)
101.417    656.7981    277.82  .     Q   . V       .         .         .
(PEAK DAY 1, HOUR   5.417)
101.500    658.7203    279.10  .     Q   . V       .         .         .
(PEAK DAY 1, HOUR   5.500)
101.583    660.6514    280.39  .      Q  . V       .         .         .
(PEAK DAY 1, HOUR   5.583)
101.667    662.5915    281.70  .      Q  . V       .         .         .
(PEAK DAY 1, HOUR   5.667)
101.750    664.5408    283.03  .      Q  . V       .         .         .
(PEAK DAY 1, HOUR   5.750)
101.833    666.4993    284.37  .      Q  . V       .         .         .
(PEAK DAY 1, HOUR   5.833)
101.917    668.4671    285.73  .      Q  . V       .         .         .
(PEAK DAY 1, HOUR   5.917)
102.000    670.4445    287.11  .      Q  . V       .         .         .
(PEAK DAY 1, HOUR   6.000)
102.083    672.4314    288.50  .      Q  . V       .         .         .
(PEAK DAY 1, HOUR   6.083)
102.167    674.4280    289.92  .      Q  . V       .         .         .
(PEAK DAY 1, HOUR   6.167)
102.250    676.4346    291.35  .      Q  . V       .         .         .
(PEAK DAY 1, HOUR   6.250)
102.333    678.4510    292.79  .      Q  . V       .         .         .
(PEAK DAY 1, HOUR   6.333)
102.417    680.4777    294.26  .      Q  . V       .         .         .
(PEAK DAY 1, HOUR   6.417)
102.500    682.5145    295.75  .      Q  . V       .         .         .
(PEAK DAY 1, HOUR   6.500)
102.583    684.5618    297.26  .      Q  . V       .         .         .
(PEAK DAY 1, HOUR   6.583)
102.667    686.6195    298.78  .      Q  . V       .         .         .
(PEAK DAY 1, HOUR   6.667)
102.750    688.6879    300.33  .      Q  .  V      .         .         .
(PEAK DAY 1, HOUR   6.750)
102.833    690.7672    301.90  .      Q  .  V      .         .         .
(PEAK DAY 1, HOUR   6.833)
102.917    692.8573    303.49  .      Q  . V       .         .         .
(PEAK DAY 1, HOUR   6.917)
103.000    694.9586    305.10  .      Q  . V       .         .         .
(PEAK DAY 1, HOUR   7.000)
103.083    697.0711    306.74  .      Q  . V       .         .         .
(PEAK DAY 1, HOUR   7.083)
103.167    699.1951    308.40  .      Q  . V       .         .         .
(PEAK DAY 1, HOUR   7.167)
103.250    701.3306    310.08  .      Q  . V       .         .         .
(PEAK DAY 1, HOUR   7.250)
103.333    703.4779    311.78  .      Q  . V       .         .         .
(PEAK DAY 1, HOUR   7.333)
103.417    705.6371    313.51  .      Q  . V       .         .         .
(PEAK DAY 1, HOUR   7.417)
103.500    707.8083    315.27  .      Q  . V       .         .         .
(PEAK DAY 1, HOUR   7.500)
103.583    709.9919    317.05  .      Q  . V       .         .         .
(PEAK DAY 1, HOUR   7.583)
103.667    712.1879    318.86  .      Q  . V       .         .         .
(PEAK DAY 1, HOUR   7.667)
103.750    714.3965    320.70  .       Q . V       .         .         .
(PEAK DAY 1, HOUR   7.750)
103.833    716.6180    322.56  .       Q . V       .         .         .
(PEAK DAY 1, HOUR   7.833)
103.917    718.8525    324.45  .       Q . V       .         .         .
(PEAK DAY 1, HOUR   7.917)
104.000    721.1002    326.37  .       Q . V       .         .         .
(PEAK DAY 1, HOUR   8.000)
104.083    723.3614    328.33  .       Q . V       .         .         .
(PEAK DAY 1, HOUR   8.083)
104.167    725.6362    330.31  .       Q . V       .         .         .
(PEAK DAY 1, HOUR   8.167)
104.250    727.9249    332.32  .       Q . V       .         .         .
(PEAK DAY 1, HOUR   8.250)
104.333    730.2277    334.37  .       Q . V       .         .         .
(PEAK DAY 1, HOUR   8.333)
104.417    732.5449    336.45  .       Q . V       .         .         .
(PEAK DAY 1, HOUR   8.417)
104.500    734.8765    338.56  .       Q . V       .         .         .
(PEAK DAY 1, HOUR   8.500)
104.583    737.2230    340.71  .       Q . V       .         .         .
(PEAK DAY 1, HOUR   8.583)
104.667    739.5845    342.89  .       Q . V       .         .         .
(PEAK DAY 1, HOUR   8.667)
104.750    741.9612    345.11  .       Q .  V      .         .         .
(PEAK DAY 1, HOUR   8.750)
104.833    744.3536    347.37  .       Q .  V      .         .         .
(PEAK DAY 1, HOUR   8.833)
104.917    746.7617    349.67  .       Q .  V      .         .         .
(PEAK DAY 1, HOUR   8.917)
105.000    749.1860    352.00  .       Q .  V      .         .         .
(PEAK DAY 1, HOUR   9.000)
105.083    751.6266    354.38  .       Q .  V      .         .         .
(PEAK DAY 1, HOUR   9.083)
105.167    754.0840    356.80  .       Q .  V      .         .         .
(PEAK DAY 1, HOUR   9.167)
105.250    756.5583    359.27  .       Q .  V      .         .         .
(PEAK DAY 1, HOUR   9.250)
105.333    759.0499    361.78  .        Q.  V      .         .         .
(PEAK DAY 1, HOUR   9.333)
105.417    761.5591    364.34  .        Q.  V      .         .         .
(PEAK DAY 1, HOUR   9.417)
105.500    764.0862    366.94  .        Q.  V      .         .         .
(PEAK DAY 1, HOUR   9.500)
105.583    766.6317    369.59  .        Q.  V      .         .         .
(PEAK DAY 1, HOUR   9.583)
105.667    769.1957    372.30  .        Q.  V      .         .         .
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 (PEAK DAY 1, HOUR   9.667)
105.750    771.7787    375.06  .        Q.   V     .         .         .
 (PEAK DAY 1, HOUR   9.750)
105.833    774.3811    377.87  .        Q.   V     .         .         .
 (PEAK DAY 1, HOUR   9.833)
105.917    777.0032    380.73  .        Q.   V     .         .         .
 (PEAK DAY 1, HOUR   9.917)
106.000    779.6455    383.66  .        Q.   V     .         .         .
 (PEAK DAY 1, HOUR  10.000)
106.083    782.3083    386.64  .        Q.   V     .         .         .
 (PEAK DAY 1, HOUR  10.083)
106.167    784.9921    389.69  .        Q.   V     .         .         .
 (PEAK DAY 1, HOUR  10.167)
106.250    787.6973    392.79  .        Q.   V     .         .         .
 (PEAK DAY 1, HOUR  10.250)
106.333    790.4244    395.97  .        Q.   V     .         .         .
 (PEAK DAY 1, HOUR  10.333)
106.417    793.1738    399.21  .        Q.   V     .         .         .
 (PEAK DAY 1, HOUR  10.417)
106.500    795.9460    402.53  .         Q    V    .         .         .
 (PEAK DAY 1, HOUR  10.500)
106.583    798.7415    405.91  .         Q    V    .         .         .
 (PEAK DAY 1, HOUR  10.583)
106.667    801.5609    409.37  .         Q    V    .         .         .
 (PEAK DAY 1, HOUR  10.667)
106.750    804.4047    412.91  .         Q    V    .         .         .
 (PEAK DAY 1, HOUR  10.750)
106.833    807.2733    416.53  .         Q    V    .         .         .
 (PEAK DAY 1, HOUR  10.833)
106.917    810.1667    420.11  .         Q    V    .         .         .
 (PEAK DAY 1, HOUR  10.917)
107.000    813.0795    422.95  .         Q    V    .         .         .
 (PEAK DAY 1, HOUR  11.000)
107.083    816.0050    424.78  .         Q    V    .         .         .
 (PEAK DAY 1, HOUR  11.083)
107.167    818.9426    426.55  .         Q    V    .         .         .
 (PEAK DAY 1, HOUR  11.167)
107.250    821.8956    428.78  .         Q    V    .         .         .
 (PEAK DAY 1, HOUR  11.250)
107.333    824.8671    431.46  .         Q    V    .         .         .
 (PEAK DAY 1, HOUR  11.333)
107.417    827.8596    434.51  .         Q    V    .         .         .
 (PEAK DAY 1, HOUR  11.417)
107.500    830.8753    437.88  .         Q    V    .         .         .
 (PEAK DAY 1, HOUR  11.500)
107.583    833.9161    441.52  .         .Q   V    .         .         .
 (PEAK DAY 1, HOUR  11.583)
107.667    836.9835    445.39  .         .Q   V    .         .         .
 (PEAK DAY 1, HOUR  11.667)
107.750    840.0790    449.47  .         .Q   V    .         .         .
 (PEAK DAY 1, HOUR  11.750)
107.833    843.2040    453.74  .         .Q   V    .         .         .
 (PEAK DAY 1, HOUR  11.833)
107.917    846.3596    458.19  .         .Q   V    .         .         .
 (PEAK DAY 1, HOUR  11.917)
108.000    849.5470    462.81  .         .Q    V   .         .         .
 (PEAK DAY 1, HOUR  12.000)
108.083    852.7700    467.98  .         .Q    V   .         .         .
 (PEAK DAY 1, HOUR  12.083)
108.167    856.0383    474.55  .         .Q    V   .         .         .
 (PEAK DAY 1, HOUR  12.167)
108.250    859.3600    482.32  .         . Q   V   .         .         .
 (PEAK DAY 1, HOUR  12.250)
108.333    862.7288    489.13  .         . Q   V   .         .         .
 (PEAK DAY 1, HOUR  12.333)
108.417    866.1353    494.62  .         . Q   V   .         .         .
 (PEAK DAY 1, HOUR  12.417)
108.500    869.5850    500.89  .         . Q   V   .         .         .
 (PEAK DAY 1, HOUR  12.500)
108.583    873.0915    509.15  .         . Q   V   .         .         .
 (PEAK DAY 1, HOUR  12.583)
108.667    876.6697    519.56  .         . Q   V   .         .         .
 (PEAK DAY 1, HOUR  12.667)
108.750    880.3272    531.06  .         .  Q  V   .         .         .
 (PEAK DAY 1, HOUR  12.750)
108.833    884.0574    541.62  .         .  Q  V   .         .         .
 (PEAK DAY 1, HOUR  12.833)
108.917    887.8475    550.32  .         .  Q  V   .         .         .
 (PEAK DAY 1, HOUR  12.917)
109.000    891.6928    558.35  .         .  Q  V   .         .         .
 (PEAK DAY 1, HOUR  13.000)
109.083    895.5946    566.54  .         .   Q V   .         .         .
 (PEAK DAY 1, HOUR  13.083)
109.167    899.5546    574.99  .         .   Q V   .         .         .
 (PEAK DAY 1, HOUR  13.167)
109.250    903.5733    583.52  .         .   Q  V  .         .         .
 (PEAK DAY 1, HOUR  13.250)
109.333    907.6439    591.06  .         .   Q  V  .         .         .
 (PEAK DAY 1, HOUR  13.333)
109.417    911.7563    597.11  .         .   Q  V  .         .         .
 (PEAK DAY 1, HOUR  13.417)
109.500    915.9073    602.73  .         .    Q V  .         .         .
 (PEAK DAY 1, HOUR  13.500)
109.583    920.0989    608.61  .         .    Q V  .         .         .
 (PEAK DAY 1, HOUR  13.583)
109.667    924.3337    614.90  .         .    Q V  .         .         .
 (PEAK DAY 1, HOUR  13.667)
109.750    928.6151    621.66  .         .    Q V  .         .         .
 (PEAK DAY 1, HOUR  13.750)
109.833    932.9464    628.91  .         .    Q V  .         .         .
 (PEAK DAY 1, HOUR  13.833)
109.917    937.3313    636.69  .         .    Q V  .         .         .
 (PEAK DAY 1, HOUR  13.917)
110.000    941.7737    645.03  .         .     QV  .         .         .
 (PEAK DAY 1, HOUR  14.000)
110.083    946.2779    654.01  .         .     QV  .         .         .
 (PEAK DAY 1, HOUR  14.083)
110.167    950.8501    663.89  .         .     QV  .         .         .
 (PEAK DAY 1, HOUR  14.167)
110.250    955.4968    674.71  .         .     Q V .         .         .
 (PEAK DAY 1, HOUR  14.250)
110.333    960.2188    685.63  .         .      QV .         .         .
 (PEAK DAY 1, HOUR  14.333)
110.417    965.0129    696.12  .         .      QV .         .         .
 (PEAK DAY 1, HOUR  14.417)
110.500    969.8849    707.40  .         .      QV .         .         .
 (PEAK DAY 1, HOUR  14.500)
110.583    974.8495    720.86  .         .       Q .         .         .
 (PEAK DAY 1, HOUR  14.583)
110.667    979.9240    736.82  .         .       Q .         .         .
 (PEAK DAY 1, HOUR  14.667)
110.750    985.1217    754.70  .         .       Q .         .         .
 (PEAK DAY 1, HOUR  14.750)
110.833    990.4485    773.46  .         .       VQ.         .         .
 (PEAK DAY 1, HOUR  14.833)
110.917    995.9089    792.84  .         .       VQ.         .         .
 (PEAK DAY 1, HOUR  14.917)
111.000   1001.5117    813.53  .         .       V Q         .         .
 (PEAK DAY 1, HOUR  15.000)
111.083   1007.2632    835.13  .         .        VQ         .         .
 (PEAK DAY 1, HOUR  15.083)
111.167   1013.1500    854.75  .         .        V.Q        .         .
 (PEAK DAY 1, HOUR  15.167)
111.250   1019.1548    871.91  .         .        V.Q        .         .
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 (PEAK DAY 1, HOUR  15.250)
111.333   1025.2810    889.53  .         .        V. Q       .         .
 (PEAK DAY 1, HOUR  15.333)
111.417   1031.5295    907.29  .         .        V. Q       .         .
 (PEAK DAY 1, HOUR  15.417)
111.500   1037.8881    923.25  .         .        V.  Q      .         .
 (PEAK DAY 1, HOUR  15.500)
111.583   1044.3521    938.58  .         .        V.  Q      .         .
 (PEAK DAY 1, HOUR  15.583)
111.667   1050.9431    957.02  .         .        V.  Q      .         .
 (PEAK DAY 1, HOUR  15.667)
111.750   1057.6984    980.87  .         .        V.   Q     .         .
 (PEAK DAY 1, HOUR  15.750)
111.833   1064.6616   1011.07  .         .         V    Q    .         .
 (PEAK DAY 1, HOUR  15.833)
111.917   1071.9004   1051.06  .         .         V     Q   .         .
 (PEAK DAY 1, HOUR  15.917)
112.000   1079.5536   1111.24  .         .         V      Q  .         .
 (PEAK DAY 1, HOUR  16.000)
112.083   1088.1436   1247.27  .         .         V         .Q        .
 (PEAK DAY 1, HOUR  16.083)
112.167   1098.2622   1469.23  .         .         V         .     Q   .
 (PEAK DAY 1, HOUR  16.167)
112.250   1109.1384   1579.23  .         .         V         .        Q.
 (PEAK DAY 1, HOUR  16.250)
112.333   1119.3292   1479.70  .         .        .V         .     Q   .
 (PEAK DAY 1, HOUR  16.333)
112.417   1128.5170   1334.06  .         .        .V         .  Q      .
 (PEAK DAY 1, HOUR  16.417)
112.500   1137.3943   1288.98  .         .        .V         . Q       .
 (PEAK DAY 1, HOUR  16.500)
112.583   1146.1857   1276.51  .         .        .V         .Q        .
 (PEAK DAY 1, HOUR  16.583)
112.667   1154.9233   1268.71  .         .        .V         .Q        .
 (PEAK DAY 1, HOUR  16.667)
112.750   1163.5769   1256.49  .         .        .V         .Q        .
 (PEAK DAY 1, HOUR  16.750)
112.833   1172.1378   1243.04  .         .        . V        .Q        .
 (PEAK DAY 1, HOUR  16.833)
112.917   1180.6237   1232.14  .         .        . V        Q         .
 (PEAK DAY 1, HOUR  16.917)
113.000   1189.0426   1222.43  .         .        . V        Q         .
 (PEAK DAY 1, HOUR  17.000)
113.083   1197.4200   1216.41  .         .        . V        Q         .
 (PEAK DAY 1, HOUR  17.083)
113.167   1205.7653   1211.72  .         .        . V        Q         .
 (PEAK DAY 1, HOUR  17.167)
113.250   1214.1040   1210.78  .         .        . V        Q         .
 (PEAK DAY 1, HOUR  17.250)
113.333   1222.4391   1210.26  .         .        .  V       Q         .
 (PEAK DAY 1, HOUR  17.333)
113.417   1230.7732   1210.11  .         .        .  V       Q         .
 (PEAK DAY 1, HOUR  17.417)
113.500   1239.1033   1209.53  .         .        .  V       Q         .
 (PEAK DAY 1, HOUR  17.500)
113.583   1247.4259   1208.45  .         .        .  V       Q         .
 (PEAK DAY 1, HOUR  17.583)
113.667   1255.7372   1206.80  .         .        .  V       Q         .
 (PEAK DAY 1, HOUR  17.667)
113.750   1264.0376   1205.21  .         .        .  V       Q         .
 (PEAK DAY 1, HOUR  17.750)
113.833   1272.3177   1202.28  .         .        .   V      Q         .
 (PEAK DAY 1, HOUR  17.833)
113.917   1280.5854   1200.47  .         .        .   V      Q         .
 (PEAK DAY 1, HOUR  17.917)
114.000   1288.8362   1198.00  .         .        .   V    Q.          .
 (PEAK DAY 1, HOUR  18.000)
114.083   1297.0564   1193.58  .         .        .   V    Q.          .
 (PEAK DAY 1, HOUR  18.083)
114.167   1305.2485   1189.49  .         .        .   V    Q.          .
 (PEAK DAY 1, HOUR  18.167)
114.250   1313.4086   1184.83  .         .        .   V    Q.          .
 (PEAK DAY 1, HOUR  18.250)
114.333   1321.5339   1179.80  .         .        .   V    Q.          .
 (PEAK DAY 1, HOUR  18.333)
114.417   1329.6133   1173.12  .         .        .    V   Q.          .
 (PEAK DAY 1, HOUR  18.417)
114.500   1337.6666   1169.34  .         .        .    V   Q.          .
 (PEAK DAY 1, HOUR  18.500)
114.583   1345.7003   1166.49  .         .        .    V   Q.          .
 (PEAK DAY 1, HOUR  18.583)
114.667   1353.7153   1163.78  .         .        .    V   Q.          .
 (PEAK DAY 1, HOUR  18.667)
114.750   1361.7117   1161.07  .         .        .    V   Q.          .
 (PEAK DAY 1, HOUR  18.750)
114.833   1369.6896   1158.39  .         .        .    V  Q .          .
 (PEAK DAY 1, HOUR  18.833)
114.917   1377.6492   1155.74  .         .        .     V Q .          .
 (PEAK DAY 1, HOUR  18.917)
115.000   1385.5908   1153.12  .         .        .     V Q .          .
 (PEAK DAY 1, HOUR  19.000)
115.083   1393.5145   1150.53  .         .        .     V Q .          .
 (PEAK DAY 1, HOUR  19.083)
115.167   1401.4203   1147.92  .         .        .     V Q .          .
 (PEAK DAY 1, HOUR  19.167)
115.250   1409.3079   1145.28  .         .        .     V Q .          .
 (PEAK DAY 1, HOUR  19.250)
115.333   1417.1770   1142.60  .         .        .     V Q .          .
 (PEAK DAY 1, HOUR  19.333)
115.417   1425.0273   1139.88  .         .        .     V Q .          .
 (PEAK DAY 1, HOUR  19.417)
115.500   1432.8582   1137.04  .         .        .      VQ .          .
 (PEAK DAY 1, HOUR  19.500)
115.583   1440.6683   1134.03  .         .        .      VQ .          .
 (PEAK DAY 1, HOUR  19.583)
115.667   1448.4510   1130.05  .         .        .      VQ .          .
 (PEAK DAY 1, HOUR  19.667)
115.750   1456.2108   1126.72  .         .        .      VQ .          .
 (PEAK DAY 1, HOUR  19.750)
115.833   1463.9519   1124.00  .         .        .      VQ .          .
 (PEAK DAY 1, HOUR  19.833)
115.917   1471.6748   1121.36  .         .        .      VQ .          .
 (PEAK DAY 1, HOUR  19.917)
116.000   1479.3800   1118.79  .         .        .      Q  .          .
 (PEAK DAY 1, HOUR  20.000)
116.083   1487.0679   1116.29  .         .        .      QV .          .
 (PEAK DAY 1, HOUR  20.083)
116.167   1494.7386   1113.80  .         .        .      QV .          .
 (PEAK DAY 1, HOUR  20.167)
116.250   1502.3923   1111.32  .         .        .      QV .          .
 (PEAK DAY 1, HOUR  20.250)
116.333   1510.0291   1108.86  .         .        .      QV .          .
 (PEAK DAY 1, HOUR  20.333)
116.417   1517.6490   1106.42  .         .        .      QV .          .
 (PEAK DAY 1, HOUR  20.417)
116.500   1525.2522   1103.98  .         .        .      QV .          .
 (PEAK DAY 1, HOUR  20.500)
116.583   1532.8386   1101.55  .         .        .      QV .          .
 (PEAK DAY 1, HOUR  20.583)
116.667   1540.4082   1099.11  .         .        .      Q V.          .
 (PEAK DAY 1, HOUR  20.667)
116.750   1547.9611   1096.68  .         .        .      Q V.          .
 (PEAK DAY 1, HOUR  20.750)
116.833   1555.4972   1094.24  .         .        .      Q V.          .
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 (PEAK DAY 1, HOUR  20.833)
116.917   1563.0166   1091.81  .         .         .      Q V.         .
 (PEAK DAY 1, HOUR  20.917)
117.000   1570.5192   1089.38  .         .         .      Q V.         .
 (PEAK DAY 1, HOUR  21.000)
117.083   1578.0051   1086.96  .         .         .      Q V.         .
 (PEAK DAY 1, HOUR  21.083)
117.167   1585.4750   1084.62  .         .         .      Q V.         .
 (PEAK DAY 1, HOUR  21.167)
117.250   1592.9291   1082.34  .         .         .      Q  V         .
 (PEAK DAY 1, HOUR  21.250)
117.333   1600.3677   1080.08  .         .         .      Q  V         .
 (PEAK DAY 1, HOUR  21.333)
117.417   1607.7908   1077.83  .         .         .     Q   V         .
 (PEAK DAY 1, HOUR  21.417)
117.500   1615.1984   1075.58  .         .         .     Q   V         .
 (PEAK DAY 1, HOUR  21.500)
117.583   1622.5905   1073.33  .         .         .     Q   V         .
 (PEAK DAY 1, HOUR  21.583)
117.667   1629.9670   1071.09  .         .         .     Q   V         .
 (PEAK DAY 1, HOUR  21.667)
117.750   1637.3282   1068.85  .         .         .     Q   V         .
 (PEAK DAY 1, HOUR  21.750)
117.833   1644.6741   1066.62  .         .         .     Q   .V        .
 (PEAK DAY 1, HOUR  21.833)
117.917   1652.0045   1064.39  .         .         .     Q   .V        .
 (PEAK DAY 1, HOUR  21.917)
118.000   1659.3197   1062.16  .         .         .     Q   .V        .
 (PEAK DAY 1, HOUR  22.000)
118.083   1666.6195   1059.93  .         .         .     Q   .V        .
 (PEAK DAY 1, HOUR  22.083)
118.167   1673.9030   1057.56  .         .         .     Q   .V        .
 (PEAK DAY 1, HOUR  22.167)
118.250   1681.1641   1054.31  .         .         .     Q   .V        .
 (PEAK DAY 1, HOUR  22.250)
118.333   1688.3970   1050.22  .         .         .     Q   .V        .
 (PEAK DAY 1, HOUR  22.333)
118.417   1695.6011   1046.03  .         .         .     Q   . V       .
 (PEAK DAY 1, HOUR  22.417)
118.500   1702.7762   1041.84  .         .         .     Q   . V       .
 (PEAK DAY 1, HOUR  22.500)
118.583   1709.9227   1037.66  .         .         .    Q    . V       .
 (PEAK DAY 1, HOUR  22.583)
118.667   1717.0404   1033.49  .         .         .    Q    . V       .
 (PEAK DAY 1, HOUR  22.667)
118.750   1724.1295   1029.33  .         .         .    Q    . V       .
 (PEAK DAY 1, HOUR  22.750)
118.833   1731.1901   1025.19  .         .         .    Q    . V       .
 (PEAK DAY 1, HOUR  22.833)
118.917   1738.2222   1021.06  .         .         .    Q    . V       .
 (PEAK DAY 1, HOUR  22.917)
119.000   1745.2258   1016.94  .         .         .    Q    . V       .
 (PEAK DAY 1, HOUR  23.000)
119.083   1752.2013   1012.83  .         .         .    Q    .  V      .
 (PEAK DAY 1, HOUR  23.083)
119.167   1759.1484   1008.73  .         .         .    Q    .  V      .
 (PEAK DAY 1, HOUR  23.167)
119.250   1766.0673   1004.60  .         .         .    Q    .  V      .
 (PEAK DAY 1, HOUR  23.250)
119.333   1772.9572   1000.40  .         .         .    Q    .  V      .
 (PEAK DAY 1, HOUR  23.333)
119.417   1779.8177    996.16  .         .         .   Q     .  V      .
 (PEAK DAY 1, HOUR  23.417)
119.500   1786.6492    991.93  .         .         .   Q     .  V      .
 (PEAK DAY 1, HOUR  23.500)
119.583   1793.4515    987.71  .         .         .   Q     .  V      .
 (PEAK DAY 1, HOUR  23.583)
119.667   1800.2250    983.50  .         .         .   Q     .  V      .
 (PEAK DAY 1, HOUR  23.667)
119.750   1806.9695    979.31  .         .         .   Q     .  V      .
 (PEAK DAY 1, HOUR  23.750)
119.833   1813.6853    975.13  .         .         .   Q     .  V      .
 (PEAK DAY 1, HOUR  23.833)
119.917   1820.3724    970.97  .         .         .   Q     .  V      .
 (PEAK DAY 1, HOUR  23.917)
120.000   1827.0310    966.83  .         .         .   Q     .  V      .
 (PEAK DAY 1, HOUR  24.000)
120.083   1833.6572    962.13  .         .         .   Q     .  V      .
 (PEAK DAY 1, HOUR  24.083)
120.167   1840.2404    955.87  .         .         .  Q      .  V      .
 (PEAK DAY 1, HOUR  24.167)
120.250   1846.7737    948.63  .         .         .  Q      .  V      .
 (PEAK DAY 1, HOUR  24.250)
120.333   1853.2612    941.99  .         .         .  Q      .   V     .
 (PEAK DAY 1, HOUR  24.333)
120.417   1859.7097    936.32  .         .         .  Q      .   V     .
 (PEAK DAY 1, HOUR  24.417)
120.500   1866.1205    930.85  .         .         .  Q      .   V     .
 (PEAK DAY 1, HOUR  24.500)
120.583   1872.4939    925.42  .         .         .  Q      .   V     .
 (PEAK DAY 1, HOUR  24.583)
120.667   1878.8297    919.96  .         .         . Q       .   V     .
 (PEAK DAY 1, HOUR  24.667)
120.750   1885.1279    914.49  .         .         . Q       .   V     .
 (PEAK DAY 1, HOUR  24.750)
120.833   1891.3885    909.04  .         .         . Q       .   V     .
 (PEAK DAY 1, HOUR  24.833)
120.917   1897.6117    903.61  .         .         . Q       .   V     .
 (PEAK DAY 1, HOUR  24.917)
121.000   1903.7977    898.21  .         .         . Q       .   V     .
 (PEAK DAY 1, HOUR  25.000)
121.083   1909.9469    892.85  .         .         . Q       .    V    .
 (PEAK DAY 1, HOUR  25.083)
121.167   1916.0592    887.50  .         .         . Q       .    V    .
 (PEAK DAY 1, HOUR  25.167)
121.250   1922.1339    882.04  .         .         . Q       .    V    .
 (PEAK DAY 1, HOUR  25.250)
121.333   1928.1699    876.43  .         .         .Q        .    V    .
 (PEAK DAY 1, HOUR  25.333)
121.417   1934.1669    870.76  .         .         .Q        .    V    .
 (PEAK DAY 1, HOUR  25.417)
121.500   1940.1249    865.10  .         .         .Q        .    V    .
 (PEAK DAY 1, HOUR  25.500)
121.583   1946.0441    859.47  .         .         .Q        .    V    .
 (PEAK DAY 1, HOUR  25.583)
121.667   1951.9247    853.87  .         .         .Q        .    V    .
 (PEAK DAY 1, HOUR  25.667)
121.750   1957.7670    848.29  .         .         .Q        .    V    .
 (PEAK DAY 1, HOUR  25.750)
121.833   1963.5710    842.76  .         .         .Q        .     V   .
 (PEAK DAY 1, HOUR  25.833)
121.917   1969.3373    837.25  .         .         Q         .     V   .
 (PEAK DAY 1, HOUR  25.917)
122.000   1975.0657    831.75  .         .         Q         .     V   .
 (PEAK DAY 1, HOUR  26.000)
122.083   1980.7550    826.10  .         .         Q         .     V   .
 (PEAK DAY 1, HOUR  26.083)
122.167   1986.4015    819.87  .         .         Q         .     V   .
 (PEAK DAY 1, HOUR  26.167)
122.250   1992.0020    813.19  .         .         Q         .     V   .
 (PEAK DAY 1, HOUR  26.250)
122.333   1997.5564    806.51  .         .         Q         .     V   .
 (PEAK DAY 1, HOUR  26.333)
122.417   2003.0653    799.90  .         .        Q.         .     V   .
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 (PEAK DAY 1, HOUR  26.417)
122.500   2008.5292    793.35  .         .        Q.         .      V  .
 (PEAK DAY 1, HOUR  26.500)
122.583   2013.9482    786.85  .         .        Q.         .       V .
 (PEAK DAY 1, HOUR  26.583)
122.667   2019.3229    780.40  .         .        Q.         .       V .
 (PEAK DAY 1, HOUR  26.667)
122.750   2024.6534    774.00  .         .        Q.         .       V .
 (PEAK DAY 1, HOUR  26.750)
122.833   2029.9384    767.37  .         .        Q.         .       V .
 (PEAK DAY 1, HOUR  26.833)
122.917   2035.1648    758.88  .         .       Q .         .       V .
 (PEAK DAY 1, HOUR  26.917)
123.000   2040.3164    748.01  .         .       Q .         .       V .
 (PEAK DAY 1, HOUR  27.000)
123.083   2045.3876    736.34  .         .       Q .         .       V .
 (PEAK DAY 1, HOUR  27.083)
123.167   2050.3787    724.72  .         .       Q .         .       V .
 (PEAK DAY 1, HOUR  27.167)
123.250   2055.2910    713.27  .         .      Q  .         .       V .
 (PEAK DAY 1, HOUR  27.250)
123.333   2060.1248    701.86  .         .      Q  .         .       V .
 (PEAK DAY 1, HOUR  27.333)
123.417   2064.8755    689.81  .         .      Q  .         .        V.
 (PEAK DAY 1, HOUR  27.417)
123.500   2069.5391    677.15  .         .     Q   .         .        V.
 (PEAK DAY 1, HOUR  27.500)
123.583   2074.1162    664.60  .         .     Q   .         .        V.
 (PEAK DAY 1, HOUR  27.583)
123.667   2078.6084    652.26  .         .     Q   .         .        V.
 (PEAK DAY 1, HOUR  27.667)
123.750   2083.0168    640.12  .         .     Q   .         .        V.
 (PEAK DAY 1, HOUR  27.750)
123.833   2087.3391    627.59  .         .    Q    .         .        V.
 (PEAK DAY 1, HOUR  27.833)
123.917   2091.5581    612.58  .         .    Q    .         .        V.
 (PEAK DAY 1, HOUR  27.917)
124.000   2095.6594    595.50  .         .   Q     .         .        V.
 (PEAK DAY 1, HOUR  28.000)
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6311.00 TO NODE   6330.00 IS CODE = 5.2
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  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  5040.6 Ac. ***

         THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
         TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
         INTERVALS(Reference: the National Engineering Handbook,
         Hydrology, Chapter 17, page 17-52, August,1972,
         U.S. Department of Commerce).


         ASSUMED REGULAR CHANNEL INFORMATION:
           BASEWIDTH(FT) =   20.00     CHANNEL Z =  1.00
           UPSTREAM ELEVATION(FT) =     382.00
           DOWNSTREAM ELEVATION(FT) =     375.00
           CHANNEL LENGTH(FT) =    1141.00     MANNING'S FACTOR = 0.040
           CONSTANT LOSS RATE(CFS) =    0.00
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         CHANNEL ROUTING COEFFICIENT ESTIMATED:
           MAXIMUM INFLOW(CFS) =  1579.23
           AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  1028.80
           CHANNEL NORMAL VELOCITY FOR Q =  1028.80 CFS =   7.28 FPS
           ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.811

         MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
         UNIT INTERVALS IS CSTAR = 0.958


         CONVEX METHOD CHANNEL ROUTING RESULTS:
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PEAK DAY	TIME (HRS)	CLOCK TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
2	24.000	96.000	61.40	61.61	61.61
1	0.083	96.083	61.54	61.49	61.49
1	0.167	96.167	64.13	62.97	62.97
1	0.250	96.250	69.92	67.28	67.28
1	0.333	96.333	77.73	74.13	74.13
1	0.417	96.417	87.44	82.95	82.95
1	0.500	96.500	102.29	95.46	95.46
1	0.583	96.583	126.68	115.48	115.48
1	0.667	96.667	151.80	140.10	140.10
1	0.750	96.750	167.40	159.93	159.93
1	0.833	96.833	177.44	172.63	172.63
1	0.917	96.917	185.60	181.75	181.75
1	1.000	97.000	192.27	189.12	189.12
1	1.083	97.083	197.98	195.29	195.29
1	1.167	97.167	203.00	200.64	200.64
1	1.250	97.250	207.43	205.35	205.35
1	1.333	97.333	211.33	209.50	209.50
1	1.417	97.417	214.78	213.16	213.16
1	1.500	97.500	217.98	216.48	216.48
1	1.583	97.583	220.88	219.52	219.52
1	1.667	97.667	223.47	222.26	222.26
1	1.750	97.750	225.80	224.71	224.71
1	1.833	97.833	227.88	226.91	226.91
1	1.917	97.917	229.70	228.85	228.85
1	2.000	98.000	231.42	230.62	230.62
1	2.083	98.083	233.06	232.29	232.29
1	2.167	98.167	234.37	233.75	233.75
1	2.250	98.250	235.41	234.92	234.92
1	2.333	98.333	236.43	235.96	235.96
1	2.417	98.417	237.44	236.97	236.97
1	2.500	98.500	238.44	237.97	237.97
1	2.583	98.583	239.46	238.98	238.98
1	2.667	98.667	240.48	240.00	240.00
1	2.750	98.750	241.52	241.03	241.03
1	2.833	98.833	242.56	242.07	242.07
1	2.917	98.917	243.61	243.12	243.12
1	3.000	99.000	244.68	244.18	244.18
1	3.083	99.083	245.75	245.25	245.25
1	3.167	99.167	246.83	246.33	246.33
1	3.250	99.250	247.93	247.42	247.42
1	3.333	99.333	249.04	248.52	248.52
1	3.417	99.417	250.15	249.63	249.63
1	3.500	99.500	251.28	250.75	250.75
1	3.583	99.583	252.42	251.89	251.89
1	3.667	99.667	253.56	253.03	253.03
1	3.750	99.750	254.71	254.17	254.17
1	3.833	99.833	255.87	255.33	255.33
1	3.917	99.917	257.04	256.49	256.49
1	4.000	100.000	258.16	257.63	257.63
1	4.083	100.083	259.23	258.73	258.73

1	4.167 100.167	260.30	259.80	259.80
1	4.250 100.250	261.38	260.87	260.87
1	4.333 100.333	262.47	261.96	261.96
1	4.417 100.417	263.57	263.06	263.06
1	4.500 100.500	264.68	264.16	264.16
1	4.583 100.583	265.81	265.29	265.29
1	4.667 100.667	266.95	266.42	266.42
1	4.750 100.750	268.10	267.57	267.57
1	4.833 100.833	269.27	268.73	268.73
1	4.917 100.917	270.45	269.90	269.90
1	5.000 101.000	271.64	271.09	271.09
1	5.083 101.083	272.85	272.29	272.29
1	5.167 101.167	274.07	273.50	273.50
1	5.250 101.250	275.30	274.73	274.73
1	5.333 101.333	276.55	275.97	275.97
1	5.417 101.417	277.82	277.23	277.23
1	5.500 101.500	279.10	278.50	278.50
1	5.583 101.583	280.39	279.79	279.79
1	5.667 101.667	281.70	281.09	281.09
1	5.750 101.750	283.03	282.41	282.41
1	5.833 101.833	284.37	283.75	283.75
1	5.917 101.917	285.73	285.10	285.10
1	6.000 102.000	287.11	286.47	286.47
1	6.083 102.083	288.50	287.85	287.85
1	6.167 102.167	289.92	289.26	289.26
1	6.250 102.250	291.35	290.68	290.68
1	6.333 102.333	292.79	292.12	292.12
1	6.417 102.417	294.26	293.58	293.58
1	6.500 102.500	295.75	295.06	295.06
1	6.583 102.583	297.26	296.55	296.55
1	6.667 102.667	298.78	298.07	298.07
1	6.750 102.750	300.33	299.61	299.61
1	6.833 102.833	301.90	301.17	301.17
1	6.917 102.917	303.49	302.75	302.75
1	7.000 103.000	305.10	304.35	304.35
1	7.083 103.083	306.74	305.98	305.98
1	7.167 103.167	308.40	307.62	307.62
1	7.250 103.250	310.08	309.29	309.29
1	7.333 103.333	311.78	310.99	310.99
1	7.417 103.417	313.51	312.71	312.71
1	7.500 103.500	315.27	314.45	314.45
1	7.583 103.583	317.05	316.22	316.22
1	7.667 103.667	318.86	318.02	318.02
1	7.750 103.750	320.70	319.84	319.84
1	7.833 103.833	322.56	321.69	321.69
1	7.917 103.917	324.45	323.57	323.57
1	8.000 104.000	326.37	325.48	325.48
1	8.083 104.083	328.33	327.41	327.41
1	8.167 104.167	330.31	329.38	329.38
1	8.250 104.250	332.32	331.38	331.38
1	8.333 104.333	334.37	333.41	333.41
1	8.417 104.417	336.45	335.48	335.48
1	8.500 104.500	338.56	337.57	337.57
1	8.583 104.583	340.71	339.70	339.70
1	8.667 104.667	342.89	341.87	341.87
1	8.750 104.750	345.11	344.08	344.08
1	8.833 104.833	347.37	346.32	346.32
1	8.917 104.917	349.67	348.59	348.59
1	9.000 105.000	352.00	350.91	350.91
1	9.083 105.083	354.38	353.27	353.27
1	9.167 105.167	356.80	355.67	355.67
1	9.250 105.250	359.27	358.12	358.12
1	9.333 105.333	361.78	360.61	360.61
1	9.417 105.417	364.34	363.14	363.14
1	9.500 105.500	366.94	365.73	365.73
1	9.583 105.583	369.59	368.36	368.36
1	9.667 105.667	372.30	371.04	371.04
1	9.750 105.750	375.06	373.77	373.77
1	9.833 105.833	377.87	376.56	376.56
1	9.917 105.917	380.73	379.40	379.40
1	10.000 106.000	383.66	382.29	382.29
1	10.083 106.083	386.64	385.25	385.25
1	10.167 106.167	389.69	388.27	388.27
1	10.250 106.250	392.79	391.34	391.34
1	10.333 106.333	395.97	394.49	394.49
1	10.417 106.417	399.21	397.70	397.70
1	10.500 106.500	402.53	400.98	400.98
1	10.583 106.583	405.91	404.33	404.33
1	10.667 106.667	409.37	407.76	407.76
1	10.750 106.750	412.91	411.26	411.26
1	10.833 106.833	416.53	414.84	414.84
1	10.917 106.917	420.11	418.44	418.44
1	11.000 107.000	422.95	421.61	421.61
1	11.083 107.083	424.78	423.90	423.90
1	11.167 107.167	426.55	425.72	425.72
1	11.250 107.250	428.78	427.75	427.75
1	11.333 107.333	431.46	430.22	430.22
1	11.417 107.417	434.51	433.09	433.09
1	11.500 107.500	437.88	436.31	436.31
1	11.583 107.583	441.52	439.83	439.83
1	11.667 107.667	445.39	443.59	443.59
1	11.750 107.750	449.47	447.57	447.57
1	11.833 107.833	453.74	451.75	451.75
1	11.917 107.917	458.19	456.12	456.12
1	12.000 108.000	462.81	460.66	460.66
1	12.083 108.083	467.98	465.58	465.58
1	12.167 108.167	474.55	471.51	471.51
1	12.250 108.250	482.32	478.72	478.72
1	12.333 108.333	489.13	485.93	485.93
1	12.417 108.417	494.62	492.03	492.03
1	12.500 108.500	500.89	497.98	497.98
1	12.583 108.583	509.15	505.34	505.34
1	12.667 108.667	519.56	514.74	514.74
1	12.750 108.750	531.06	525.72	525.72
1	12.833 108.833	541.62	536.67	536.67
1	12.917 108.917	550.32	546.22	546.22
1	13.000 109.000	558.35	554.58	554.58
1	13.083 109.083	566.54	562.72	562.72
1	13.167 109.167	574.99	571.05	571.05
1	13.250 109.250	583.52	579.54	579.54
1	13.333 109.333	591.06	587.52	587.52
1	13.417 109.417	597.11	594.26	594.26
1	13.500 109.500	602.73	600.10	600.10
1	13.583 109.583	608.61	605.87	605.87
1	13.667 109.667	614.90	611.97	611.97
1	13.750 109.750	621.66	618.51	618.51
1	13.833 109.833	628.91	625.53	625.53
1	13.917 109.917	636.69	633.07	633.07
1	14.000 110.000	645.03	641.15	641.15
1	14.083 110.083	654.01	649.83	649.83
1	14.167 110.167	663.89	659.29	659.29
1	14.250 110.250	674.71	669.67	669.67
1	14.333 110.333	685.63	680.53	680.53
1	14.417 110.417	696.12	691.21	691.21
1	14.500 110.500	707.40	702.15	702.15
1	14.583 110.583	720.86	714.62	714.62
1	14.667 110.667	736.82	729.42	729.42
1	14.750 110.750	754.70	746.39	746.39
1	14.833 110.833	773.46	764.72	764.72
1	14.917 110.917	792.84	783.80	783.80
1	15.000 111.000	813.53	803.90	803.90
1	15.083 111.083	835.13	825.06	825.06
1	15.167 111.167	854.75	845.56	845.56
1	15.250 111.250	871.91	863.85	863.85

1	15.333	111.333	889.53	881.31	881.31
1	15.417	111.417	907.29	899.00	899.00
1	15.500	111.500	923.25	915.76	915.76
1	15.583	111.583	938.58	931.41	931.41
1	15.667	111.667	957.02	948.47	948.47
1	15.750	111.750	980.87	969.84	969.84
1	15.833	111.833	1011.07	997.10	997.10
1	15.917	111.917	1051.06	1032.59	1032.59
1	16.000	112.000	1111.24	1083.55	1083.55
1	16.083	112.083	1247.27	1185.26	1185.26
1	16.167	112.167	1469.23	1367.35	1367.35
1	16.250	112.250	1579.23	1525.77	1525.77
1	16.333	112.333	1479.70	1522.00	1522.00
1	16.417	112.417	1334.06	1400.98	1400.98
1	16.500	112.500	1288.98	1311.94	1311.94
1	16.583	112.583	1276.51	1283.05	1283.05
1	16.667	112.667	1268.71	1272.48	1272.48
1	16.750	112.750	1256.49	1262.12	1262.12
1	16.833	112.833	1243.04	1249.29	1249.29
1	16.917	112.917	1232.14	1237.28	1237.28
1	17.000	113.000	1222.43	1226.99	1226.99
1	17.083	113.083	1216.41	1219.29	1219.29
1	17.167	113.167	1211.72	1213.94	1213.94
1	17.250	113.250	1210.78	1211.29	1211.29
1	17.333	113.333	1210.26	1210.52	1210.52
1	17.417	113.417	1210.11	1210.19	1210.19
1	17.500	113.500	1209.53	1209.80	1209.80
1	17.583	113.583	1208.45	1208.95	1208.95
1	17.667	113.667	1206.80	1207.56	1207.56
1	17.750	113.750	1205.21	1205.96	1205.96
1	17.833	113.833	1202.28	1203.62	1203.62
1	17.917	113.917	1200.47	1201.34	1201.34
1	18.000	114.000	1198.00	1199.14	1199.14
1	18.083	114.083	1193.58	1195.60	1195.60
1	18.167	114.167	1189.49	1191.40	1191.40
1	18.250	114.250	1184.83	1187.00	1187.00
1	18.333	114.333	1179.80	1182.14	1182.14
1	18.417	114.417	1173.12	1176.21	1176.21
1	18.500	114.500	1169.34	1171.16	1171.16
1	18.583	114.583	1166.49	1167.84	1167.84
1	18.667	114.667	1163.78	1165.05	1165.05
1	18.750	114.750	1161.07	1162.34	1162.34
1	18.833	114.833	1158.39	1159.65	1159.65
1	18.917	114.917	1155.74	1156.98	1156.98
1	19.000	115.000	1153.12	1154.35	1154.35
1	19.083	115.083	1150.53	1151.74	1151.74
1	19.167	115.167	1147.92	1149.13	1149.13
1	19.250	115.250	1145.28	1146.51	1146.51
1	19.333	115.333	1142.60	1143.85	1143.85
1	19.417	115.417	1139.88	1141.15	1141.15
1	19.500	115.500	1137.04	1138.36	1138.36
1	19.583	115.583	1134.03	1135.43	1135.43
1	19.667	115.667	1130.05	1131.89	1131.89
1	19.750	115.750	1126.72	1128.28	1128.28
1	19.833	115.833	1124.00	1125.28	1125.28
1	19.917	115.917	1121.36	1122.60	1122.60
1	20.000	116.000	1118.79	1119.99	1119.99
1	20.083	116.083	1116.29	1117.46	1117.46
1	20.167	116.167	1113.80	1114.96	1114.96
1	20.250	116.250	1111.32	1112.48	1112.48
1	20.333	116.333	1108.86	1110.01	1110.01
1	20.417	116.417	1106.42	1107.56	1107.56
1	20.500	116.500	1103.98	1105.12	1105.12
1	20.583	116.583	1101.55	1102.68	1102.68
1	20.667	116.667	1099.11	1100.25	1100.25
1	20.750	116.750	1096.68	1097.81	1097.81
1	20.833	116.833	1094.24	1095.38	1095.38
1	20.917	116.917	1091.81	1092.95	1092.95
1	21.000	117.000	1089.38	1090.51	1090.51
1	21.083	117.083	1086.96	1088.09	1088.09
1	21.167	117.167	1084.62	1085.71	1085.71
1	21.250	117.250	1082.34	1083.41	1083.41
1	21.333	117.333	1080.08	1081.14	1081.14
1	21.417	117.417	1077.83	1078.88	1078.88
1	21.500	117.500	1075.58	1076.63	1076.63
1	21.583	117.583	1073.33	1074.38	1074.38
1	21.667	117.667	1071.09	1072.13	1072.13
1	21.750	117.750	1068.85	1069.89	1069.89
1	21.833	117.833	1066.62	1067.66	1067.66
1	21.917	117.917	1064.39	1065.43	1065.43
1	22.000	118.000	1062.16	1063.20	1063.20
1	22.083	118.083	1059.93	1060.97	1060.97
1	22.167	118.167	1057.56	1058.66	1058.66
1	22.250	118.250	1054.31	1055.81	1055.81
1	22.333	118.333	1050.22	1052.11	1052.11
1	22.417	118.417	1046.03	1047.99	1047.99
1	22.500	118.500	1041.84	1043.80	1043.80
1	22.583	118.583	1037.66	1039.61	1039.61
1	22.667	118.667	1033.49	1035.44	1035.44
1	22.750	118.750	1029.33	1031.27	1031.27
1	22.833	118.833	1025.19	1027.12	1027.12
1	22.917	118.917	1021.06	1022.99	1022.99
1	23.000	119.000	1016.94	1018.86	1018.86
1	23.083	119.083	1012.83	1014.75	1014.75
1	23.167	119.167	1008.73	1010.65	1010.65
1	23.250	119.250	1004.60	1006.53	1006.53
1	23.333	119.333	1000.40	1002.36	1002.36
1	23.417	119.417	996.16	998.14	998.14
1	23.500	119.500	991.93	993.90	993.90
1	23.583	119.583	987.71	989.68	989.68
1	23.667	119.667	983.50	985.46	985.46
1	23.750	119.750	979.31	981.27	981.27
1	23.833	119.833	975.13	977.08	977.08
1	23.917	119.917	970.97	972.92	972.92
1	24.000	120.000	966.83	968.76	968.76
1	24.083	120.083	962.13	964.31	964.31
1	24.167	120.167	955.87	958.76	958.76
1	24.250	120.250	948.63	951.99	951.99
1	24.333	120.333	941.99	945.10	945.10
1	24.417	120.417	936.32	938.98	938.98
1	24.500	120.500	930.85	933.41	933.41
1	24.583	120.583	925.42	927.95	927.95
1	24.667	120.667	919.96	922.51	922.51
1	24.750	120.750	914.49	917.05	917.05
1	24.833	120.833	909.04	911.59	911.59
1	24.917	120.917	903.61	906.14	906.14
1	25.000	121.000	898.21	900.73	900.73
1	25.083	121.083	892.85	895.36	895.36
1	25.167	121.167	887.50	890.00	890.00
1	25.250	121.250	882.04	884.59	884.59
1	25.333	121.333	876.43	879.05	879.05
1	25.417	121.417	870.76	873.40	873.40
1	25.500	121.500	865.10	867.74	867.74
1	25.583	121.583	859.47	862.10	862.10
1	25.667	121.667	853.87	856.48	856.48
1	25.750	121.750	848.29	850.90	850.90
1	25.833	121.833	842.76	845.34	845.34
1	25.917	121.917	837.25	839.82	839.82
1	26.000	122.000	831.75	834.32	834.32
1	26.083	122.083	826.10	828.74	828.74
1	26.167	122.167	819.87	822.76	822.76
1	26.250	122.250	813.19	816.30	816.30
1	26.333	122.333	806.51	809.63	809.63
1	26.417	122.417	799.90	802.99	802.99

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  1   26.500 122.500       793.35      796.41      796.41
  1   26.583 122.583       786.85      789.88      789.88
  1   26.667 122.667       780.40      783.41      783.41
  1   26.750 122.750       774.00      776.99      776.99
  1   26.833 122.833       767.37      770.46      770.46
  1   26.917 122.917       758.88      762.81      762.81
  1   27.000 123.000       748.01      753.04      753.04
  1   27.083 123.083       736.34      741.77      741.77
  1   27.167 123.167       724.72      730.15      730.15
  1   27.250 123.250       713.27      718.62      718.62
  1   27.333 123.333       701.86      707.18      707.18
  1   27.417 123.417       689.81      695.42      695.42
  1   27.500 123.500       677.15      683.05      683.05
  1   27.583 123.583       664.60      670.46      670.46
  1   27.667 123.667       652.26      658.02      658.02
  1   27.750 123.750       640.12      645.79      645.79
  1   27.833 123.833       627.59      633.43      633.43
  1   27.917 123.917       612.58      619.54      619.54
  1   28.000 124.000       595.50      603.43      603.43
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
================================================================================
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   2117.534 AF
    OUTFLOW VOLUME =   2117.534 AF
    LOSS    VOLUME =      0.000 AF
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6320.00 TO NODE   6330.00 IS CODE =   1
--------------------------------------------------------------------------------

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of   300.7 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
================================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #2)

        WATERSHED AREA =     300.700 ACRES
        BASEFLOW =   0.000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    0.290 HOURS
         CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
         THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
         MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
        VALLEY(DEVELOPED):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.250
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.750
        VALLEY(UNDEVELOPED)/DESERT:
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:
        +------------------+--------+--------+--------+--------+--------+
        | RAINFALL DEPTHS & |        |        |        |        |        |
        |    LOSS RATES     |  DAY 1 |  DAY 2 |  DAY 3 |  DAY 4 |  DAY 5 |
        |==================+========+========+========+========+========|
        | 5-MINUTE (INCHES) |    0.58|    0.27|    0.12|    0.06|    0.04|
        |30-MINUTE (INCHES) |    1.22|    0.56|    0.24|    0.13|    0.09|
        |   1-HOUR (INCHES) |    1.62|    0.75|    0.33|    0.17|    0.12|
        |   3-HOUR (INCHES) |    2.71|    1.25|    0.54|    0.28|    0.21|
        |   6-HOUR (INCHES) |    3.75|    1.73|    0.75|    0.39|    0.29|
        |  24-HOUR (INCHES) |    6.28|    2.89|    1.26|    0.66|    0.48|
        |==================+========+========+========+========+========|
        | LOSS RATE(IN/HR)  |   0.240|   0.240|   0.240|   0.240|   0.240|
        | LOW LOSS FRACTION |   0.430|   0.670|   0.900|   0.990|   0.990|
        +------------------+--------+--------+--------+--------+--------+
          5-MINUTE FACTOR = 0.987
         30-MINUTE FACTOR = 0.987
          1-HOUR FACTOR = 0.987
          3-HOUR FACTOR = 0.998
          6-HOUR FACTOR = 0.999
         24-HOUR FACTOR = 0.999

        UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
        UNIT INTERVAL PERCENTAGE OF LAG-TIME =  28.736


        RUNOFF HYDROGRAPH LISTING LIMITS:
        MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  96.00
        MODEL TIME(HOURS) FOR END OF RESULTS = 124.00


================================================================================
                      UNIT HYDROGRAPH DETERMINATION

--------------------------------------------------------------------------------
     INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
      NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------------
         1                3.181               115.682
         2               14.148               398.807
         3               32.649               672.813
         4               49.391               608.859
         5               59.445               365.623
         6               65.754               229.414
         7               70.572               175.227
         8               74.508               143.109
         9               77.679               115.331
        10               80.307                95.584
        11               82.561                81.961
        12               84.486                69.998
        13               86.124                59.571
        14               87.475                49.137
        15               88.623                41.748
        16               89.558                33.981
        17               90.435                31.907
        18               91.248                29.581
        19               92.036                28.658
        20               92.761                26.336
        21               93.465                25.630
        22               94.104                23.223
        23               94.697                21.573
        24               95.280                21.195
        25               95.767                17.699
        26               96.231                16.876
        27               96.695                16.868
        28               97.112                15.192
        29               97.431                11.595
        30               97.741                11.275
        31               98.051                11.279
        32               98.361                11.271
        33               98.547                 6.740
        34               98.632                 3.085
        35               98.716                 3.070
        36               98.801                 3.077
        37               98.885                 3.077
        38               98.970                 3.077
        39               99.054                 3.077
        40               99.139                 3.077
        41               99.224                 3.085
        42               99.308                 3.070
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43	99.393	3.070
44	99.477	3.070
45	99.562	3.070
46	99.646	3.070
47	99.730	3.070
48	99.815	3.070
49	99.899	3.070
50	99.984	3.070
51	100.000	0.594

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 150.1466

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 139.5311

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5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	175.0	350.0	525.0	700.0
96.000	37.7332	4.73	Q	V	.	.	.
(PEAK DAY 2, HOUR 24.000)							
96.083	37.7682	5.09	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.083)							
96.167	37.8124	6.41	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.167)							
96.250	37.8721	8.68	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.250)							
96.333	37.9461	10.74	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.333)							
96.417	38.0287	11.99	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.417)							
96.500	38.1168	12.79	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.500)							
96.583	38.2091	13.41	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.583)							
96.667	38.3050	13.93	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.667)							
96.750	38.4039	14.35	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.750)							
96.833	38.5052	14.71	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.833)							
96.917	38.6087	15.03	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.917)							
97.000	38.7141	15.31	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.000)							
97.083	38.8213	15.56	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.083)							
97.167	38.9299	15.77	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.167)							
97.250	39.0398	15.96	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.250)							
97.333	39.1508	16.12	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.333)							
97.417	39.2630	16.28	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.417)							
97.500	39.3762	16.44	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.500)							
97.583	39.4904	16.59	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.583)							
97.667	39.6056	16.73	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.667)							
97.750	39.7218	16.87	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.750)							
97.833	39.8390	17.01	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.833)							
97.917	39.9570	17.14	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.917)							
98.000	40.0760	17.27	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.000)							
98.083	40.1957	17.39	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.083)							
98.167	40.3163	17.51	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.167)							
98.250	40.4377	17.63	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.250)							
98.333	40.5599	17.74	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.333)							
98.417	40.6829	17.85	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.417)							
98.500	40.8065	17.95	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.500)							
98.583	40.9308	18.06	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.583)							
98.667	41.0559	18.16	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.667)							
98.750	41.1816	18.25	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.750)							
98.833	41.3079	18.33	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.833)							
98.917	41.4347	18.41	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.917)							
99.000	41.5620	18.49	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.000)							
99.083	41.6899	18.57	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.083)							
99.167	41.8184	18.66	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.167)							
99.250	41.9475	18.74	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.250)							
99.333	42.0771	18.82	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.333)							
99.417	42.2074	18.91	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.417)							
99.500	42.3382	18.99	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.500)							
99.583	42.4696	19.08	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.583)							
99.667	42.6016	19.17	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.667)							
99.750	42.7342	19.26	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.750)							
99.833	42.8675	19.35	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.833)							
99.917	43.0013	19.44	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.917)							
100.000	43.1358	19.53	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.000)							
100.083	43.2709	19.62	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.083)							
100.167	43.4067	19.71	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.167)							
100.250	43.5431	19.80	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.250)							
100.333	43.6800	19.88	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.333)							
100.417	43.8175	19.97	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.417)							
100.500	43.9556	20.06	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.500)							
100.583	44.0944	20.14	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.583)							
100.667	44.2337	20.23	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.667)							
100.750	44.3737	20.32	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.750)							
100.833	44.5142	20.41	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.833)							
100.917	44.6554	20.50	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.917)							
101.000	44.7973	20.60	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 5.000)							
101.083	44.9398	20.69	.Q	. V	.	.	.

(PEAK DAY 1, HOUR 5.083)
101.167 45.0829 20.78 .Q . V . . .
(PEAK DAY 1, HOUR 5.167)
101.250 45.2267 20.88 .Q . V . . .
(PEAK DAY 1, HOUR 5.250)
101.333 45.3712 20.98 .Q . V . . .
(PEAK DAY 1, HOUR 5.333)
101.417 45.5163 21.08 .Q . V . . .
(PEAK DAY 1, HOUR 5.417)
101.500 45.6622 21.18 .Q . V . . .
(PEAK DAY 1, HOUR 5.500)
101.583 45.8087 21.28 .Q . V . . .
(PEAK DAY 1, HOUR 5.583)
101.667 45.9559 21.38 .Q . V . . .
(PEAK DAY 1, HOUR 5.667)
101.750 46.1039 21.48 .Q . V . . .
(PEAK DAY 1, HOUR 5.750)
101.833 46.2525 21.59 .Q . V . . .
(PEAK DAY 1, HOUR 5.833)
101.917 46.4019 21.69 .Q . V . . .
(PEAK DAY 1, HOUR 5.917)
102.000 46.5520 21.80 .Q . V . . .
(PEAK DAY 1, HOUR 6.000)
102.083 46.7029 21.91 .Q . V . . .
(PEAK DAY 1, HOUR 6.083)
102.167 46.8546 22.02 .Q . V . . .
(PEAK DAY 1, HOUR 6.167)
102.250 47.0070 22.13 .Q . V . . .
(PEAK DAY 1, HOUR 6.250)
102.333 47.1602 22.24 .Q . V . . .
(PEAK DAY 1, HOUR 6.333)
102.417 47.3141 22.36 .Q . V . . .
(PEAK DAY 1, HOUR 6.417)
102.500 47.4689 22.47 .Q . V . . .
(PEAK DAY 1, HOUR 6.500)
102.583 47.6245 22.59 .Q . V . . .
(PEAK DAY 1, HOUR 6.583)
102.667 47.7809 22.71 .Q . V . . .
(PEAK DAY 1, HOUR 6.667)
102.750 47.9381 22.83 .Q . V . . .
(PEAK DAY 1, HOUR 6.750)
102.833 48.0962 22.95 .Q . V . . .
(PEAK DAY 1, HOUR 6.833)
102.917 48.2552 23.08 .Q . V . . .
(PEAK DAY 1, HOUR 6.917)
103.000 48.4150 23.20 .Q . V . . .
(PEAK DAY 1, HOUR 7.000)
103.083 48.5757 23.33 .Q . V . . .
(PEAK DAY 1, HOUR 7.083)
103.167 48.7373 23.46 .Q . V . . .
(PEAK DAY 1, HOUR 7.167)
103.250 48.8998 23.59 .Q . V . . .
(PEAK DAY 1, HOUR 7.250)
103.333 49.0632 23.73 .Q . V . . .
(PEAK DAY 1, HOUR 7.333)
103.417 49.2275 23.86 .Q . V . . .
(PEAK DAY 1, HOUR 7.417)
103.500 49.3928 24.00 .Q . V . . .
(PEAK DAY 1, HOUR 7.500)
103.583 49.5591 24.14 .Q . V . . .
(PEAK DAY 1, HOUR 7.583)
103.667 49.7263 24.28 .Q . V . . .
(PEAK DAY 1, HOUR 7.667)
103.750 49.8946 24.43 .Q . V . . .
(PEAK DAY 1, HOUR 7.750)
103.833 50.0638 24.57 .Q . V . . .
(PEAK DAY 1, HOUR 7.833)
103.917 50.2341 24.72 .Q . V . . .
(PEAK DAY 1, HOUR 7.917)
104.000 50.4054 24.87 .Q . V . . .
(PEAK DAY 1, HOUR 8.000)
104.083 50.5777 25.03 .Q . V . . .
(PEAK DAY 1, HOUR 8.083)
104.167 50.7512 25.18 .Q . V . . .
(PEAK DAY 1, HOUR 8.167)
104.250 50.9257 25.34 .Q . V . . .
(PEAK DAY 1, HOUR 8.250)
104.333 51.1013 25.50 .Q . V . . .
(PEAK DAY 1, HOUR 8.333)
104.417 51.2781 25.67 .Q . V . . .
(PEAK DAY 1, HOUR 8.417)
104.500 51.4560 25.83 .Q . V . . .
(PEAK DAY 1, HOUR 8.500)
104.583 51.6351 26.00 .Q . V . . .
(PEAK DAY 1, HOUR 8.583)
104.667 51.8154 26.17 .Q . V . . .
(PEAK DAY 1, HOUR 8.667)
104.750 51.9968 26.35 .Q . V . . .
(PEAK DAY 1, HOUR 8.750)
104.833 52.1795 26.53 .Q . V . . .
(PEAK DAY 1, HOUR 8.833)
104.917 52.3635 26.71 .Q . V . . .
(PEAK DAY 1, HOUR 8.917)
105.000 52.5487 26.90 .Q . V . . .
(PEAK DAY 1, HOUR 9.000)
105.083 52.7353 27.08 .Q . V . . .
(PEAK DAY 1, HOUR 9.083)
105.167 52.9231 27.28 .Q . V . . .
(PEAK DAY 1, HOUR 9.167)
105.250 53.1123 27.47 .Q . V . . .
(PEAK DAY 1, HOUR 9.250)
105.333 53.3029 27.67 .Q . V . . .
(PEAK DAY 1, HOUR 9.333)
105.417 53.4948 27.87 .Q . V . . .
(PEAK DAY 1, HOUR 9.417)
105.500 53.6882 28.08 .Q . V . . .
(PEAK DAY 1, HOUR 9.500)
105.583 53.8830 28.29 .Q . V . . .
(PEAK DAY 1, HOUR 9.583)
105.667 54.0794 28.51 .Q . V . . .
(PEAK DAY 1, HOUR 9.667)
105.750 54.2772 28.72 .Q . V . . .
(PEAK DAY 1, HOUR 9.750)
105.833 54.4766 28.95 .Q . V . . .
(PEAK DAY 1, HOUR 9.833)
105.917 54.6775 29.18 .Q . V . . .
(PEAK DAY 1, HOUR 9.917)
106.000 54.8800 29.41 .Q . V . . .
(PEAK DAY 1, HOUR 10.000)
106.083 55.0842 29.65 .Q . V . . .
(PEAK DAY 1, HOUR 10.083)
106.167 55.2901 29.89 .Q . V . . .
(PEAK DAY 1, HOUR 10.167)
106.250 55.4977 30.14 .Q . V . . .
(PEAK DAY 1, HOUR 10.250)
106.333 55.7070 30.39 .Q . V . . .
(PEAK DAY 1, HOUR 10.333)
106.417 55.9181 30.65 .Q . V . . .
(PEAK DAY 1, HOUR 10.417)
106.500 56.1310 30.92 .Q . V . . .
(PEAK DAY 1, HOUR 10.500)
106.583 56.3458 31.19 .Q . V . . .
(PEAK DAY 1, HOUR 10.583)
106.667 56.5625 31.47 .Q . V . . .

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(PEAK DAY 1, HOUR  10.667)
106.750     56.7812     31.75  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.750)
106.833     57.0019     32.04  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.833)
106.917     57.2246     32.34  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.917)
107.000     57.4494     32.65  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.000)
107.083     57.6764     32.96  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.083)
107.167     57.9056     33.28  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.167)
107.250     58.1371     33.61  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.250)
107.333     58.3709     33.95  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.333)
107.417     58.6071     34.29  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.417)
107.500     58.8457     34.65  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.500)
107.583     59.0869     35.02  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  11.583)
107.667     59.3307     35.39  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.667)
107.750     59.5771     35.78  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.750)
107.833     59.8263     36.18  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.833)
107.917     60.0783     36.59  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.917)
108.000     60.3332     37.01  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.000)
108.083     60.5935     37.79  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.083)
108.167     60.8648     39.40  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.167)
108.250     61.1528     41.82  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.250)
108.333     61.4563     44.08  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.333)
108.417     61.7707     45.65  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.417)
108.500     62.0934     46.85  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.500)
108.583     62.4233     47.91  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.583)
108.667     62.7601     48.90  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.667)
108.750     63.1033     49.83  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  12.750)
108.833     63.4526     50.72  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  12.833)
108.917     63.8080     51.60  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  12.917)
109.000     64.1694     52.47  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  13.000)
109.083     64.5367     53.33  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.083)
109.167     64.9099     54.19  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.167)
109.250     65.2892     55.06  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.250)
109.333     65.6744     55.94  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.333)
109.417     66.0659     56.85  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.417)
109.500     66.4638     57.78  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.500)
109.583     66.8684     58.75  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.583)
109.667     67.2799     59.75  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.667)
109.750     67.6986     60.80  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.750)
109.833     68.1248     61.88  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.833)
109.917     68.5588     63.01  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.917)
110.000     69.0009     64.20  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  14.000)
110.083     69.4519     65.49  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  14.083)
110.167     69.9129     66.94  .  Q      .        V          .         .
(PEAK DAY 1, HOUR  14.167)
110.250     70.3852     68.57  .  Q      .        V          .         .
(PEAK DAY 1, HOUR  14.250)
110.333     70.8690     70.25  .   Q     .        V          .         .
(PEAK DAY 1, HOUR  14.333)
110.417     71.3644     71.93  .   Q     .        V          .         .
(PEAK DAY 1, HOUR  14.417)
110.500     71.8716     73.65  .   Q     .        V          .         .
(PEAK DAY 1, HOUR  14.500)
110.583     72.3913     75.46  .   Q     .        V          .         .
(PEAK DAY 1, HOUR  14.583)
110.667     72.9242     77.39  .   Q     .        V          .         .
(PEAK DAY 1, HOUR  14.667)
110.750     73.4713     79.44  .   Q     .        .V         .         .
(PEAK DAY 1, HOUR  14.750)
110.833     74.0334     81.62  .   Q     .        .V         .         .
(PEAK DAY 1, HOUR  14.833)
110.917     74.6125     84.08  .   Q     .        .V         .         .
(PEAK DAY 1, HOUR  14.917)
111.000     75.2118     87.01  .   Q     .        .V         .         .
(PEAK DAY 1, HOUR  15.000)
111.083     75.8365     90.71  .    Q    .        .V         .         .
(PEAK DAY 1, HOUR  15.083)
111.167     76.4923     95.22  .    Q    .        .V         .         .
(PEAK DAY 1, HOUR  15.167)
111.250     77.1851    100.60  .    Q    .        . V        .         .
(PEAK DAY 1, HOUR  15.250)
111.333     77.9209    106.84  .     Q   .        . V        .         .
(PEAK DAY 1, HOUR  15.333)
111.417     78.6996    113.06  .     Q   .        . V        .         .
(PEAK DAY 1, HOUR  15.417)
111.500     79.5111    117.83  .     Q   .        . V        .         .
(PEAK DAY 1, HOUR  15.500)
111.583     80.3491    121.68  .     Q   .        .  V       .         .
(PEAK DAY 1, HOUR  15.583)
111.667     81.2314    128.10  .      Q  .        .  V       .         .
(PEAK DAY 1, HOUR  15.667)
111.750     82.1957    140.01  .       Q .        .  V       .         .
(PEAK DAY 1, HOUR  15.750)
111.833     83.2834    157.93  .        Q.        .  V       .         .
(PEAK DAY 1, HOUR  15.833)
111.917     84.5593    185.26  .         Q        .   V      .         .
(PEAK DAY 1, HOUR  15.917)
112.000     86.1399    229.51  .          . Q     .   V      .         .
(PEAK DAY 1, HOUR  16.000)
112.083     88.4661    337.76  .          .       Q.   V     .         .
(PEAK DAY 1, HOUR  16.083)
112.167     91.9571    506.90  .          .        .    V Q  .         .
(PEAK DAY 1, HOUR  16.167)
112.250     96.3002    630.61  .          .        .     V   .     Q   .
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(PEAK DAY 1, HOUR  16.250)
112.333    100.2459    572.92  .         .         .       V . Q       .
(PEAK DAY 1, HOUR  16.333)
112.417    103.1874    427.11  .         .         .   Q    V.         .
(PEAK DAY 1, HOUR  16.417)
112.500    105.4805    332.96  .         .        Q.         V         .
(PEAK DAY 1, HOUR  16.500)
112.583    107.4393    284.42  .         .     Q   .         V         .
(PEAK DAY 1, HOUR  16.583)
112.667    109.1666    250.80  .         .   Q     .         .V        .
(PEAK DAY 1, HOUR  16.667)
112.750    110.6897    221.16  .         . Q       .         .V        .
(PEAK DAY 1, HOUR  16.750)
112.833    112.0484    197.28  .         .Q        .         . V       .
(PEAK DAY 1, HOUR  16.833)
112.917    113.2786    178.63  .         Q         .         . V       .
(PEAK DAY 1, HOUR  16.917)
113.000    114.3999    162.81  .        Q.         .         . V       .
(PEAK DAY 1, HOUR  17.000)
113.083    115.4265    149.07  .       Q .         .         .  V      .
(PEAK DAY 1, HOUR  17.083)
113.167    116.3665    136.48  .      Q  .         .         .  V      .
(PEAK DAY 1, HOUR  17.167)
113.250    117.2360    126.24  .      Q  .         .         .  V      .
(PEAK DAY 1, HOUR  17.250)
113.333    118.0425    117.11  .     Q   .         .         .  V      .
(PEAK DAY 1, HOUR  17.333)
113.417    118.8097    111.40  .     Q   .         .         .   V     .
(PEAK DAY 1, HOUR  17.417)
113.500    119.5417    106.29  .     Q   .         .         .   V     .
(PEAK DAY 1, HOUR  17.500)
113.583    120.2453    102.15  .    Q    .         .         .   V     .
(PEAK DAY 1, HOUR  17.583)
113.667    120.9185     97.75  .    Q    .         .         .   V     .
(PEAK DAY 1, HOUR  17.667)
113.750    121.5674     94.22  .    Q    .         .         .   V     .
(PEAK DAY 1, HOUR  17.750)
113.833    122.1886     90.20  .    Q    .         .         .    V    .
(PEAK DAY 1, HOUR  17.833)
113.917    122.7854     86.66  .   Q     .         .         .    V    .
(PEAK DAY 1, HOUR  17.917)
114.000    123.3617     83.68  .   Q     .         .         .    V    .
(PEAK DAY 1, HOUR  18.000)
114.083    123.9081     79.33  .   Q     .         .         .    V    .
(PEAK DAY 1, HOUR  18.083)
114.167    124.4278     75.48  .   Q     .         .         .    V    .
(PEAK DAY 1, HOUR  18.167)
114.250    124.9180     71.17  .   Q     .         .         .    V    .
(PEAK DAY 1, HOUR  18.250)
114.333    125.3749     66.35  .  Q      .         .         .    V    .
(PEAK DAY 1, HOUR  18.333)
114.417    125.7995     61.64  .  Q      .         .         .     V   .
(PEAK DAY 1, HOUR  18.417)
114.500    126.2051     58.90  .  Q      .         .         .     V   .
(PEAK DAY 1, HOUR  18.500)
114.583    126.5940     56.47  .  Q      .         .         .     V   .
(PEAK DAY 1, HOUR  18.583)
114.667    126.9651     53.89  .  Q      .         .         .     V   .
(PEAK DAY 1, HOUR  18.667)
114.750    127.3064     49.55  . Q       .         .         .     V   .
(PEAK DAY 1, HOUR  18.750)
114.833    127.6234     46.02  . Q       .         .         .     V   .
(PEAK DAY 1, HOUR  18.833)
114.917    127.9294     44.44  . Q       .         .         .     V   .
(PEAK DAY 1, HOUR  18.917)
115.000    128.2266     43.15  . Q       .         .         .     V   .
(PEAK DAY 1, HOUR  19.000)
115.083    128.5158     41.99  . Q       .         .         .     V   .
(PEAK DAY 1, HOUR  19.083)
115.167    128.7977     40.93  . Q       .         .         .     V   .
(PEAK DAY 1, HOUR  19.167)
115.250    129.0729     39.96  . Q       .         .         .      V  .
(PEAK DAY 1, HOUR  19.250)
115.333    129.3420     39.07  . Q       .         .         .      V  .
(PEAK DAY 1, HOUR  19.333)
115.417    129.6053     38.24  . Q       .         .         .      V  .
(PEAK DAY 1, HOUR  19.417)
115.500    129.8631     37.43  . Q       .         .         .      V  .
(PEAK DAY 1, HOUR  19.500)
115.583    130.1157     36.68  . Q       .         .         .      V  .
(PEAK DAY 1, HOUR  19.583)
115.667    130.3634     35.96  . Q       .         .         .      V  .
(PEAK DAY 1, HOUR  19.667)
115.750    130.6062     35.25  . Q       .         .         .      V  .
(PEAK DAY 1, HOUR  19.750)
115.833    130.8441     34.56  .Q        .         .         .      V  .
(PEAK DAY 1, HOUR  19.833)
115.917    131.0773     33.85  .Q        .         .         .      V  .
(PEAK DAY 1, HOUR  19.917)
116.000    131.3054     33.13  .Q        .         .         .      V  .
(PEAK DAY 1, HOUR  20.000)
116.083    131.5281     32.33  .Q        .         .         .      V  .
(PEAK DAY 1, HOUR  20.083)
116.167    131.7443     31.40  .Q        .         .         .      V  .
(PEAK DAY 1, HOUR  20.167)
116.250    131.9476     29.51  .Q        .         .         .      V  .
(PEAK DAY 1, HOUR  20.250)
116.333    132.1442     28.55  .Q        .         .         .      V  .
(PEAK DAY 1, HOUR  20.333)
116.417    132.3369     27.98  .Q        .         .         .      V  .
(PEAK DAY 1, HOUR  20.417)
116.500    132.5261     27.48  .Q        .         .         .      V  .
(PEAK DAY 1, HOUR  20.500)
116.583    132.7121     27.00  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  20.583)
116.667    132.8950     26.56  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  20.667)
116.750    133.0751     26.15  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  20.750)
116.833    133.2526     25.78  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  20.833)
116.917    133.4277     25.42  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  20.917)
117.000    133.6004     25.08  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  21.000)
117.083    133.7708     24.75  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  21.083)
117.167    133.9391     24.43  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  21.167)
117.250    134.1053     24.13  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  21.250)
117.333    134.2694     23.83  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  21.333)
117.417    134.4316     23.55  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  21.417)
117.500    134.5918     23.27  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  21.500)
117.583    134.7503     23.00  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  21.583)
117.667    134.9069     22.74  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  21.667)
117.750    135.0618     22.49  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  21.750)
117.833    135.2150     22.25  .Q        .         .         .       V .
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(PEAK DAY 1, HOUR 21.833)
117.917 135.3666 22.01 .Q . . . V .
(PEAK DAY 1, HOUR 21.917)
118.000 135.5165 21.77 .Q . . . V .
(PEAK DAY 1, HOUR 22.000)
118.083 135.6649 21.55 .Q . . . V .
(PEAK DAY 1, HOUR 22.083)
118.167 135.8118 21.33 .Q . . . V .
(PEAK DAY 1, HOUR 22.167)
118.250 135.9573 21.12 .Q . . . V .
(PEAK DAY 1, HOUR 22.250)
118.333 136.1014 20.92 .Q . . . V.
(PEAK DAY 1, HOUR 22.333)
118.417 136.2441 20.73 .Q . . . V.
(PEAK DAY 1, HOUR 22.417)
118.500 136.3856 20.54 .Q . . . V.
(PEAK DAY 1, HOUR 22.500)
118.583 136.5257 20.35 .Q . . . V.
(PEAK DAY 1, HOUR 22.583)
118.667 136.6646 20.17 .Q . . . V.
(PEAK DAY 1, HOUR 22.667)
118.750 136.8023 19.99 .Q . . . V.
(PEAK DAY 1, HOUR 22.750)
118.833 136.9388 19.82 .Q . . . V.
(PEAK DAY 1, HOUR 22.833)
118.917 137.0741 19.65 .Q . . . V.
(PEAK DAY 1, HOUR 22.917)
119.000 137.2083 19.48 .Q . . . V.
(PEAK DAY 1, HOUR 23.000)
119.083 137.3414 19.32 .Q . . . V.
(PEAK DAY 1, HOUR 23.083)
119.167 137.4734 19.16 .Q . . . V.
(PEAK DAY 1, HOUR 23.167)
119.250 137.6043 19.01 .Q . . . V.
(PEAK DAY 1, HOUR 23.250)
119.333 137.7341 18.86 .Q . . . V.
(PEAK DAY 1, HOUR 23.333)
119.417 137.8630 18.71 .Q . . . V.
(PEAK DAY 1, HOUR 23.417)
119.500 137.9908 18.56 .Q . . . V.
(PEAK DAY 1, HOUR 23.500)
119.583 138.1177 18.42 .Q . . . V.
(PEAK DAY 1, HOUR 23.583)
119.667 138.2436 18.28 .Q . . . V.
(PEAK DAY 1, HOUR 23.667)
119.750 138.3686 18.15 .Q . . . V.
(PEAK DAY 1, HOUR 23.750)
119.833 138.4927 18.01 .Q . . . V.
(PEAK DAY 1, HOUR 23.833)
119.917 138.6158 17.88 .Q . . . V.
(PEAK DAY 1, HOUR 23.917)
120.000 138.7381 17.75 .Q . . . V.
(PEAK DAY 1, HOUR 24.000)
120.083 138.8558 17.09 Q . . . V.
(PEAK DAY 1, HOUR 24.083)
120.167 138.9599 15.13 Q . . . V.
(PEAK DAY 1, HOUR 24.167)
120.250 139.0420 11.91 Q . . . V.
(PEAK DAY 1, HOUR 24.250)
120.333 139.1041 9.02 Q . . . V.
(PEAK DAY 1, HOUR 24.333)
120.417 139.1541 7.26 Q . . . V.
(PEAK DAY 1, HOUR 24.417)
120.500 139.1965 6.15 Q . . . V.
(PEAK DAY 1, HOUR 24.500)
120.583 139.2330 5.30 Q . . . V.
(PEAK DAY 1, HOUR 24.583)
120.667 139.2646 4.60 Q . . . V.
(PEAK DAY 1, HOUR 24.667)
120.750 139.2924 4.03 Q . . . V.
(PEAK DAY 1, HOUR 24.750)
120.833 139.3169 3.56 Q . . . V.
(PEAK DAY 1, HOUR 24.833)
120.917 139.3386 3.15 Q . . . V.
(PEAK DAY 1, HOUR 24.917)
121.000 139.3580 2.81 Q . . . V.
(PEAK DAY 1, HOUR 25.000)
121.083 139.3753 2.51 Q . . . V.
(PEAK DAY 1, HOUR 25.083)
121.167 139.3909 2.27 Q . . . V.
(PEAK DAY 1, HOUR 25.167)
121.250 139.4051 2.06 Q . . . V.
(PEAK DAY 1, HOUR 25.250)
121.333 139.4180 1.89 Q . . . V.
(PEAK DAY 1, HOUR 25.333)
121.417 139.4299 1.72 Q . . . V.
(PEAK DAY 1, HOUR 25.417)
121.500 139.4408 1.58 Q . . . V.
(PEAK DAY 1, HOUR 25.500)
121.583 139.4506 1.43 Q . . . V.
(PEAK DAY 1, HOUR 25.583)
121.667 139.4596 1.30 Q . . . V.
(PEAK DAY 1, HOUR 25.667)
121.750 139.4676 1.17 Q . . . V.
(PEAK DAY 1, HOUR 25.750)
121.833 139.4749 1.06 Q . . . V.
(PEAK DAY 1, HOUR 25.833)
121.917 139.4814 0.95 Q . . . V.
(PEAK DAY 1, HOUR 25.917)
122.000 139.4873 0.84 Q . . . V.
(PEAK DAY 1, HOUR 26.000)
122.083 139.4925 0.76 Q . . . V.
(PEAK DAY 1, HOUR 26.083)
122.167 139.4971 0.67 Q . . . V.
(PEAK DAY 1, HOUR 26.167)
122.250 139.5012 0.59 Q . . . V.
(PEAK DAY 1, HOUR 26.250)
122.333 139.5047 0.52 Q . . . V.
(PEAK DAY 1, HOUR 26.333)
122.417 139.5079 0.46 Q . . . V.
(PEAK DAY 1, HOUR 26.417)
122.500 139.5107 0.40 Q . . . V.
(PEAK DAY 1, HOUR 26.500)
122.583 139.5130 0.35 Q . . . V.
(PEAK DAY 1, HOUR 26.583)
122.667 139.5151 0.29 Q . . . V.
(PEAK DAY 1, HOUR 26.667)
122.750 139.5168 0.26 Q . . . V.
(PEAK DAY 1, HOUR 26.750)
122.833 139.5185 0.24 Q . . . V.
(PEAK DAY 1, HOUR 26.833)
122.917 139.5201 0.23 Q . . . V.
(PEAK DAY 1, HOUR 26.917)
123.000 139.5216 0.21 Q . . . V.
(PEAK DAY 1, HOUR 27.000)
123.083 139.5229 0.20 Q . . . V.
(PEAK DAY 1, HOUR 27.083)
123.167 139.5242 0.18 Q . . . V.
(PEAK DAY 1, HOUR 27.167)
123.250 139.5253 0.17 Q . . . V.
(PEAK DAY 1, HOUR 27.250)
123.333 139.5264 0.15 Q . . . V.
(PEAK DAY 1, HOUR 27.333)
123.417 139.5273 0.13 Q . . . V.

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 (PEAK DAY 1, HOUR  27.417)
 123.500    139.5281      0.12  Q          .          .          .        V.
 (PEAK DAY 1, HOUR  27.500)
 123.583    139.5288      0.10  Q          .          .          .        V.
 (PEAK DAY 1, HOUR  27.583)
 123.667    139.5294      0.09  Q          .          .          .        V.
 (PEAK DAY 1, HOUR  27.667)
 123.750    139.5300      0.08  Q          .          .          .        V.
 (PEAK DAY 1, HOUR  27.750)
 123.833    139.5304      0.06  Q          .          .          .        V.
 (PEAK DAY 1, HOUR  27.833)
 123.917    139.5307      0.05  Q          .          .          .        V.
 (PEAK DAY 1, HOUR  27.917)
 124.000    139.5309      0.03  Q          .          .          .        V.
 (PEAK DAY 1, HOUR  28.000)
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********************************************************************************
  FLOW PROCESS FROM NODE   6330.00 TO NODE   6330.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  5341.3 Ac. ***
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6330.00 TO NODE   6330.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  5341.3 Ac. ***

           STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
         (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      550.0    1100.0    1650.0    2200.0
--------------------------------------------------------------------------------
  96.000    594.2886     66.34  .Q         V          .          .          .
 (PEAK DAY 2, HOUR  24.000)
  96.083    594.7471     66.58  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.083)
  96.167    595.2249     69.38  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.167)
  96.250    595.7480     75.96  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.250)
  96.333    596.3325     84.87  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.333)
  96.417    596.9864     94.94  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.417)
  96.500    597.7319    108.25  .Q         V          .          .          .
 (PEAK DAY 1, HOUR   0.500)
  96.583    598.6196    128.89  . Q        V          .          .          .
 (PEAK DAY 1, HOUR   0.583)
  96.667    599.6803    154.02  . Q        V          .          .          .
 (PEAK DAY 1, HOUR   0.667)
  96.750    600.8806    174.28  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   0.750)
  96.833    602.1709    187.35  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   0.833)
  96.917    603.5261    196.78  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   0.917)
  97.000    604.9341    204.43  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   1.000)
  97.083    606.3862    210.85  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   1.083)
  97.167    607.8767    216.41  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   1.167)
  97.250    609.4009    221.31  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   1.250)
  97.333    610.9547    225.62  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   1.333)
  97.417    612.5349    229.44  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   1.417)
  97.500    614.1390    232.91  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   1.500)
  97.583    615.7651    236.11  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   1.583)
  97.667    617.4109    238.98  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   1.667)
  97.750    619.0747    241.58  .  Q       V          .          .          .
 (PEAK DAY 1, HOUR   1.750)
  97.833    620.7546    243.92  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   1.833)
  97.917    622.4487    245.99  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   1.917)
  98.000    624.1559    247.89  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   2.000)
  98.083    625.8755    249.68  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   2.083)
  98.167    627.6060    251.26  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   2.167)
  98.250    629.3453    252.55  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   2.250)
  98.333    631.0926    253.70  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   2.333)
  98.417    632.8475    254.82  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   2.417)
  98.500    634.6101    255.92  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   2.500)
  98.583    636.3804    257.04  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   2.583)
  98.667    638.1584    258.16  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   2.667)
  98.750    639.9441    259.28  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   2.750)
  98.833    641.7375    260.40  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   2.833)
  98.917    643.5387    261.53  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   2.917)
  99.000    645.3477    262.67  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   3.000)
  99.083    647.1647    263.82  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   3.083)
  99.167    648.9896    264.98  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   3.167)
  99.250    650.8227    266.16  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   3.250)
  99.333    652.6639    267.34  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   3.333)
  99.417    654.5133    268.54  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   3.417)
  99.500    656.3711    269.75  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   3.500)
  99.583    658.2372    270.97  .  Q       .V         .          .          .
 (PEAK DAY 1, HOUR   3.583)
  99.667    660.1119    272.19  .  Q       .V         .          .          .
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 (PEAK DAY 1, HOUR   3.667)
  99.750    661.9950    273.43  .   Q     .V        .         .         .
 (PEAK DAY 1, HOUR   3.750)
  99.833    663.8867    274.67  .   Q     .V        .         .         .
 (PEAK DAY 1, HOUR   3.833)
  99.917    665.7870    275.93  .    Q    .V        .         .         .
 (PEAK DAY 1, HOUR   3.917)
 100.000    667.6959    277.16  .    Q    .V        .         .         .
 (PEAK DAY 1, HOUR   4.000)
 100.083    669.6129    278.35  .    Q    .V        .         .         .
 (PEAK DAY 1, HOUR   4.083)
 100.167    671.5378    279.51  .    Q    .V        .         .         .
 (PEAK DAY 1, HOUR   4.167)
 100.250    673.4708    280.67  .    Q    .V        .         .         .
 (PEAK DAY 1, HOUR   4.250)
 100.333    675.4119    281.84  .    Q    .V        .         .         .
 (PEAK DAY 1, HOUR   4.333)
 100.417    677.3611    283.02  .    Q    . V       .         .         .
 (PEAK DAY 1, HOUR   4.417)
 100.500    679.3185    284.22  .    Q    . V       .         .         .
 (PEAK DAY 1, HOUR   4.500)
 100.583    681.2843    285.43  .    Q    . V       .         .         .
 (PEAK DAY 1, HOUR   4.583)
 100.667    683.2585    286.65  .    Q    . V       .         .         .
 (PEAK DAY 1, HOUR   4.667)
 100.750    685.2411    287.89  .    Q    . V       .         .         .
 (PEAK DAY 1, HOUR   4.750)
 100.833    687.2324    289.14  .    Q    . V       .         .         .
 (PEAK DAY 1, HOUR   4.833)
 100.917    689.2324    290.40  .    Q    . V       .         .         .
 (PEAK DAY 1, HOUR   4.917)
 101.000    691.2413    291.68  .    Q    . V       .         .         .
 (PEAK DAY 1, HOUR   5.000)
 101.083    693.2590    292.98  .    Q    . V       .         .         .
 (PEAK DAY 1, HOUR   5.083)
 101.167    695.2858    294.28  .    Q    . V       .         .         .
 (PEAK DAY 1, HOUR   5.167)
 101.250    697.3217    295.61  .    Q    . V       .         .         .
 (PEAK DAY 1, HOUR   5.250)
 101.333    699.3668    296.95  .    Q    . V       .         .         .
 (PEAK DAY 1, HOUR   5.333)
 101.417    701.4212    298.30  .    Q    . V       .         .         .
 (PEAK DAY 1, HOUR   5.417)
 101.500    703.4851    299.68  .    Q    . V       .         .         .
 (PEAK DAY 1, HOUR   5.500)
 101.583    705.5585    301.06  .    Q    . V       .         .         .
 (PEAK DAY 1, HOUR   5.583)
 101.667    707.6417    302.47  .    Q    . V       .         .         .
 (PEAK DAY 1, HOUR   5.667)
 101.750    709.7346    303.89  .    Q    . V       .         .         .
 (PEAK DAY 1, HOUR   5.750)
 101.833    711.8375    305.33  .    Q    . V       .         .         .
 (PEAK DAY 1, HOUR   5.833)
 101.917    713.9504    306.79  .    Q    . V       .         .         .
 (PEAK DAY 1, HOUR   5.917)
 102.000    716.0734    308.27  .    Q    . V       .         .         .
 (PEAK DAY 1, HOUR   6.000)
 102.083    718.2068    309.76  .    Q    . V       .         .         .
 (PEAK DAY 1, HOUR   6.083)
 102.167    720.3505    311.27  .    Q    . V       .         .         .
 (PEAK DAY 1, HOUR   6.167)
 102.250    722.5049    312.81  .    Q    . V       .         .         .
 (PEAK DAY 1, HOUR   6.250)
 102.333    724.6699    314.36  .    Q    . V       .         .         .
 (PEAK DAY 1, HOUR   6.333)
 102.417    726.8458    315.93  .    Q    . V       .         .         .
 (PEAK DAY 1, HOUR   6.417)
 102.500    729.0326    317.53  .    Q    . V       .         .         .
 (PEAK DAY 1, HOUR   6.500)
 102.583    731.2305    319.14  .    Q    . V       .         .         .
 (PEAK DAY 1, HOUR   6.583)
 102.667    733.4398    320.78  .    Q    . V       .         .         .
 (PEAK DAY 1, HOUR   6.667)
 102.750    735.6604    322.44  .    Q    .  V      .         .         .
 (PEAK DAY 1, HOUR   6.750)
 102.833    737.8926    324.12  .    Q    .  V      .         .         .
 (PEAK DAY 1, HOUR   6.833)
 102.917    740.1367    325.83  .    Q    .  V      .         .         .
 (PEAK DAY 1, HOUR   6.917)
 103.000    742.3926    327.56  .    Q    .  V      .         .         .
 (PEAK DAY 1, HOUR   7.000)
 103.083    744.6605    329.31  .    Q    .  V      .         .         .
 (PEAK DAY 1, HOUR   7.083)
 103.167    746.9407    331.09  .     Q   .  V      .         .         .
 (PEAK DAY 1, HOUR   7.167)
 103.250    749.2333    332.89  .     Q   .  V      .         .         .
 (PEAK DAY 1, HOUR   7.250)
 103.333    751.5386    334.72  .     Q   .  V      .         .         .
 (PEAK DAY 1, HOUR   7.333)
 103.417    753.8566    336.57  .     Q   .  V      .         .         .
 (PEAK DAY 1, HOUR   7.417)
 103.500    756.1875    338.45  .     Q   .  V      .         .         .
 (PEAK DAY 1, HOUR   7.500)
 103.583    758.5316    340.36  .     Q   .  V      .         .         .
 (PEAK DAY 1, HOUR   7.583)
 103.667    760.8890    342.30  .     Q   .  V      .         .         .
 (PEAK DAY 1, HOUR   7.667)
 103.750    763.2600    344.27  .     Q   .  V      .         .         .
 (PEAK DAY 1, HOUR   7.750)
 103.833    765.6448    346.26  .     Q   .  V      .         .         .
 (PEAK DAY 1, HOUR   7.833)
 103.917    768.0435    348.29  .     Q   .  V      .         .         .
 (PEAK DAY 1, HOUR   7.917)
 104.000    770.4564    350.35  .     Q   .  V      .         .         .
 (PEAK DAY 1, HOUR   8.000)
 104.083    772.8837    352.44  .     Q   .  V      .         .         .
 (PEAK DAY 1, HOUR   8.083)
 104.167    775.3256    354.57  .     Q   .  V      .         .         .
 (PEAK DAY 1, HOUR   8.167)
 104.250    777.7823    356.72  .     Q   .  V      .         .         .
 (PEAK DAY 1, HOUR   8.250)
 104.333    780.2542    358.92  .     Q   .  V      .         .         .
 (PEAK DAY 1, HOUR   8.333)
 104.417    782.7414    361.14  .     Q   .  V      .         .         .
 (PEAK DAY 1, HOUR   8.417)
 104.500    785.2442    363.41  .     Q   .  V      .         .         .
 (PEAK DAY 1, HOUR   8.500)
 104.583    787.7628    365.71  .     Q   .  V      .         .         .
 (PEAK DAY 1, HOUR   8.583)
 104.667    790.2975    368.05  .     Q   .   V     .         .         .
 (PEAK DAY 1, HOUR   8.667)
 104.750    792.8487    370.43  .     Q   .   V     .         .         .
 (PEAK DAY 1, HOUR   8.750)
 104.833    795.4165    372.84  .     Q   .   V     .         .         .
 (PEAK DAY 1, HOUR   8.833)
 104.917    798.0012    375.31  .     Q   .   V     .         .         .
 (PEAK DAY 1, HOUR   8.917)
 105.000    800.6032    377.81  .     Q   .   V     .         .         .
 (PEAK DAY 1, HOUR   9.000)
 105.083    803.2227    380.36  .     Q   .   V     .         .         .
 (PEAK DAY 1, HOUR   9.083)
 105.167    805.8601    382.95  .     Q   .   V     .         .         .
 (PEAK DAY 1, HOUR   9.167)
 105.250    808.5157    385.59  .      Q  .   V     .         .         .
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 (PEAK DAY 1, HOUR   9.250)
105.333    811.1898    388.28  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR   9.333)
105.417    813.8827    391.02  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR   9.417)
105.500    816.5948    393.81  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR   9.500)
105.583    819.3266    396.65  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR   9.583)
105.667    822.0782    399.54  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR   9.667)
105.750    824.8503    402.50  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR   9.750)
105.833    827.6430    405.50  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR   9.833)
105.917    830.4568    408.57  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR   9.917)
106.000    833.2922    411.70  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR  10.000)
106.083    836.1497    414.90  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR  10.083)
106.167    839.0295    418.16  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR  10.167)
106.250    841.9323    421.48  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR  10.250)
106.333    844.8585    424.88  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR  10.333)
106.417    847.8086    428.35  .      Q  .    V    .         .         .
 (PEAK DAY 1, HOUR  10.417)
106.500    850.7831    431.90  .      Q  .    V    .         .         .
 (PEAK DAY 1, HOUR  10.500)
106.583    853.7825    435.52  .      Q  .    V    .         .         .
 (PEAK DAY 1, HOUR  10.583)
106.667    856.8075    439.23  .      Q  .    V    .         .         .
 (PEAK DAY 1, HOUR  10.667)
106.750    859.8585    443.01  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  10.750)
106.833    862.9362    446.88  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  10.833)
106.917    866.0408    450.78  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  10.917)
107.000    869.1693    454.26  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.000)
107.083    872.3157    456.86  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.083)
107.167    875.4768    459.00  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.167)
107.250    878.6542    461.36  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.250)
107.333    881.8509    464.16  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.333)
107.417    885.0698    467.39  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.417)
107.500    888.3134    470.97  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.500)
107.583    891.5837    474.84  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.583)
107.667    894.8824    478.98  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.667)
107.750    898.2114    483.35  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.750)
107.833    901.5718    487.94  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.833)
107.917    904.9651    492.71  .       Q .     V   .         .         .
 (PEAK DAY 1, HOUR  11.917)
108.000    908.3926    497.68  .        Q.     V   .         .         .
 (PEAK DAY 1, HOUR  12.000)
108.083    911.8593    503.37  .        Q.     V   .         .         .
 (PEAK DAY 1, HOUR  12.083)
108.167    915.3780    510.91  .        Q.     V   .         .         .
 (PEAK DAY 1, HOUR  12.167)
108.250    918.9630    520.54  .        Q.     V   .         .         .
 (PEAK DAY 1, HOUR  12.250)
108.333    922.6132    530.01  .        Q.     V   .         .         .
 (PEAK DAY 1, HOUR  12.333)
108.417    926.3162    537.68  .        Q.     V   .         .         .
 (PEAK DAY 1, HOUR  12.417)
108.500    930.0685    544.83  .        Q.     V   .         .         .
 (PEAK DAY 1, HOUR  12.500)
108.583    933.8787    553.25  .         Q     V   .         .         .
 (PEAK DAY 1, HOUR  12.583)
108.667    937.7606    563.64  .         Q     V   .         .         .
 (PEAK DAY 1, HOUR  12.667)
108.750    941.7244    575.55  .         Q     V   .         .         .
 (PEAK DAY 1, HOUR  12.750)
108.833    945.7698    587.40  .         Q     V   .         .         .
 (PEAK DAY 1, HOUR  12.833)
108.917    949.8870    597.82  .         Q     V   .         .         .
 (PEAK DAY 1, HOUR  12.917)
109.000    954.0678    607.05  .         .Q    V   .         .         .
 (PEAK DAY 1, HOUR  13.000)
109.083    958.3106    616.05  .         .Q    V   .         .         .
 (PEAK DAY 1, HOUR  13.083)
109.167    962.6167    625.24  .         .Q     V  .         .         .
 (PEAK DAY 1, HOUR  13.167)
109.250    966.9872    634.60  .         .Q     V  .         .         .
 (PEAK DAY 1, HOUR  13.250)
109.333    971.4188    643.46  .         .Q     V  .         .         .
 (PEAK DAY 1, HOUR  13.333)
109.417    975.9030    651.10  .         .Q     V  .         .         .
 (PEAK DAY 1, HOUR  13.417)
109.500    980.4338    657.88  .         .Q     V  .         .         .
 (PEAK DAY 1, HOUR  13.500)
109.583    985.0110    664.62  .         . Q    V  .         .         .
 (PEAK DAY 1, HOUR  13.583)
109.667    989.6372    671.72  .         . Q    V  .         .         .
 (PEAK DAY 1, HOUR  13.667)
109.750    994.3156    679.31  .         . Q    V  .         .         .
 (PEAK DAY 1, HOUR  13.750)
109.833    999.0499    687.41  .         . Q    V  .         .         .
 (PEAK DAY 1, HOUR  13.833)
109.917   1003.8438    696.08  .         . Q    V  .         .         .
 (PEAK DAY 1, HOUR  13.917)
110.000   1008.7015    705.35  .         . Q    V  .         .         .
 (PEAK DAY 1, HOUR  14.000)
110.083   1013.6280    715.32  .         .  Q   V  .         .         .
 (PEAK DAY 1, HOUR  14.083)
110.167   1018.6296    726.23  .         .  Q    V .         .         .
 (PEAK DAY 1, HOUR  14.167)
110.250   1023.7139    738.25  .         .  Q    V .         .         .
 (PEAK DAY 1, HOUR  14.250)
110.333   1028.8846    750.78  .         .  Q    V .         .         .
 (PEAK DAY 1, HOUR  14.333)
110.417   1034.1404    763.14  .         .  Q    V .         .         .
 (PEAK DAY 1, HOUR  14.417)
110.500   1039.4833    775.80  .         .   Q   V .         .         .
 (PEAK DAY 1, HOUR  14.500)
110.583   1044.9246    790.08  .         .   Q   V .         .         .
 (PEAK DAY 1, HOUR  14.583)
110.667   1050.4811    806.81  .         .   Q   V .         .         .
 (PEAK DAY 1, HOUR  14.667)
110.750   1056.1686    825.83  .         .    Q  V .         .         .
 (PEAK DAY 1, HOUR  14.750)
110.833   1061.9973    846.34  .         .    Q  V .         .         .
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 (PEAK DAY 1, HOUR  14.833)
110.917   1067.9745    867.89  .         .    Q  V .         .         .
 (PEAK DAY 1, HOUR  14.917)
111.000   1074.1102    890.91  .         .     Q  V.         .         .
 (PEAK DAY 1, HOUR  15.000)
111.083   1080.4172    915.77  .         .     Q  V.         .         .
 (PEAK DAY 1, HOUR  15.083)
111.167   1086.8964    940.77  .         .      Q V.         .         .
 (PEAK DAY 1, HOUR  15.167)
111.250   1093.5386    964.45  .         .      Q V.         .         .
 (PEAK DAY 1, HOUR  15.250)
111.333   1100.3440    988.15  .         .      Q V.         .         .
 (PEAK DAY 1, HOUR  15.333)
111.417   1107.3141   1012.06  .         .       QV.         .         .
 (PEAK DAY 1, HOUR  15.417)
111.500   1114.4325   1033.60  .         .       QV.         .         .
 (PEAK DAY 1, HOUR  15.500)
111.583   1121.6852   1053.09  .         .        Q.         .         .
 (PEAK DAY 1, HOUR  15.583)
111.667   1129.0996   1076.57  .         .        QV         .         .
 (PEAK DAY 1, HOUR  15.667)
111.750   1136.7433   1109.85  .         .         Q         .         .
 (PEAK DAY 1, HOUR  15.750)
111.833   1144.6981   1155.03  .         .         VQ        .         .
 (PEAK DAY 1, HOUR  15.833)
111.917   1153.0856   1217.85  .         .         V Q       .         .
 (PEAK DAY 1, HOUR  15.917)
112.000   1162.1287   1313.06  .         .         V  Q      .         .
 (PEAK DAY 1, HOUR  16.000)
112.083   1172.6178   1523.02  .         .         V      Q  .         .
 (PEAK DAY 1, HOUR  16.083)
112.167   1185.5259   1874.24  .         .         .V         .   Q     .
 (PEAK DAY 1, HOUR  16.167)
112.250   1200.3770   2156.38  .         .         .V         .        Q.
 (PEAK DAY 1, HOUR  16.250)
112.333   1214.8047   2094.91  .         .         .V         .       Q .
 (PEAK DAY 1, HOUR  16.333)
112.417   1227.3948   1828.08  .         .         .V         .  Q      .
 (PEAK DAY 1, HOUR  16.417)
112.500   1238.7233   1644.90  .         .         .V       Q.          .
 (PEAK DAY 1, HOUR  16.500)
112.583   1249.5184   1567.47  .         .         . V     Q .         .
 (PEAK DAY 1, HOUR  16.583)
112.667   1260.0093   1523.28  .         .         . V    Q  .         .
 (PEAK DAY 1, HOUR  16.667)
112.750   1270.2246   1483.27  .         .         . V   Q   .         .
 (PEAK DAY 1, HOUR  16.750)
112.833   1280.1871   1446.57  .         .         . V   Q   .         .
 (PEAK DAY 1, HOUR  16.833)
112.917   1289.9386   1415.91  .         .         . V  Q    .         .
 (PEAK DAY 1, HOUR  16.917)
113.000   1299.5103   1389.80  .         .         .  V Q    .         .
 (PEAK DAY 1, HOUR  17.000)
113.083   1308.9342   1368.36  .         .         .  VQ     .         .
 (PEAK DAY 1, HOUR  17.083)
113.167   1318.2346   1350.42  .         .         .  VQ     .         .
 (PEAK DAY 1, HOUR  17.167)
113.250   1327.4463   1337.54  .         .         .  VQ     .         .
 (PEAK DAY 1, HOUR  17.250)
113.333   1336.5897   1327.62  .         .         .  VQ     .         .
 (PEAK DAY 1, HOUR  17.333)
113.417   1345.6915   1321.59  .         .         .  VQ     .         .
 (PEAK DAY 1, HOUR  17.417)
113.500   1354.7555   1316.09  .         .         .  QV     .         .
 (PEAK DAY 1, HOUR  17.500)
113.583   1363.7852   1311.10  .         .         .  QV     .         .
 (PEAK DAY 1, HOUR  17.583)
113.667   1372.7749   1305.32  .         .         .  QV     .         .
 (PEAK DAY 1, HOUR  17.667)
113.750   1381.7292   1300.17  .         .         .  QV     .         .
 (PEAK DAY 1, HOUR  17.750)
113.833   1390.6399   1293.82  .         .         .  QV     .         .
 (PEAK DAY 1, HOUR  17.833)
113.917   1399.5104   1287.99  .         .         .  QV     .         .
 (PEAK DAY 1, HOUR  17.917)
114.000   1408.3452   1282.82  .         .         .  QV     .         .
 (PEAK DAY 1, HOUR  18.000)
114.083   1417.1257   1274.93  .         .         .  Q V    .         .
 (PEAK DAY 1, HOUR  18.083)
114.167   1425.8508   1266.88  .         .         .  Q V    .         .
 (PEAK DAY 1, HOUR  18.167)
114.250   1434.5159   1258.16  .         .         . Q  V    .         .
 (PEAK DAY 1, HOUR  18.250)
114.333   1443.1143   1248.49  .         .         . Q  V    .         .
 (PEAK DAY 1, HOUR  18.333)
114.417   1451.6394   1237.85  .         .         . Q  V    .         .
 (PEAK DAY 1, HOUR  18.417)
114.500   1460.1108   1230.06  .         .         . Q  V    .         .
 (PEAK DAY 1, HOUR  18.500)
114.583   1468.5427   1224.31  .         .         . Q   V   .         .
 (PEAK DAY 1, HOUR  18.583)
114.667   1476.9376   1218.94  .         .         . Q   V   .         .
 (PEAK DAY 1, HOUR  18.667)
114.750   1485.2839   1211.89  .         .         . Q   V   .         .
 (PEAK DAY 1, HOUR  18.750)
114.833   1493.5874   1205.67  .         .         .Q    V   .         .
 (PEAK DAY 1, HOUR  18.833)
114.917   1501.8616   1201.42  .         .         .Q    V   .         .
 (PEAK DAY 1, HOUR  18.917)
115.000   1510.1088   1197.50  .         .         .Q    V   .         .
 (PEAK DAY 1, HOUR  19.000)
115.083   1518.3301   1193.73  .         .         .Q    V   .         .
 (PEAK DAY 1, HOUR  19.083)
115.167   1526.5261   1190.06  .         .         .Q     V  .         .
 (PEAK DAY 1, HOUR  19.167)
115.250   1534.6974   1186.47  .         .         .Q     V  .         .
 (PEAK DAY 1, HOUR  19.250)
115.333   1542.8442   1182.93  .         .         .Q     V  .         .
 (PEAK DAY 1, HOUR  19.333)
115.417   1550.9667   1179.39  .         .         .Q     V  .         .
 (PEAK DAY 1, HOUR  19.417)
115.500   1559.0645   1175.79  .         .         .Q     V  .         .
 (PEAK DAY 1, HOUR  19.500)
115.583   1567.1368   1172.11  .         .         .Q     V  .         .
 (PEAK DAY 1, HOUR  19.583)
115.667   1575.1798   1167.85  .         .         .Q     V  .         .
 (PEAK DAY 1, HOUR  19.667)
115.750   1583.1931   1163.53  .         .         .Q      V .         .
 (PEAK DAY 1, HOUR  19.750)
115.833   1591.1810   1159.84  .         .         .Q      V .         .
 (PEAK DAY 1, HOUR  19.833)
115.917   1599.1455   1156.44  .         .         .Q      V .         .
 (PEAK DAY 1, HOUR  19.917)
116.000   1607.0870   1153.12  .         .         Q       V .         .
 (PEAK DAY 1, HOUR  20.000)
116.083   1615.0056   1149.78  .         .         Q       V .         .
 (PEAK DAY 1, HOUR  20.083)
116.167   1622.9006   1146.36  .         .         Q       V .         .
 (PEAK DAY 1, HOUR  20.167)
116.250   1630.7656   1141.99  .         .         Q       V .         .
 (PEAK DAY 1, HOUR  20.250)
116.333   1638.6069   1138.56  .         .         Q        V.         .
 (PEAK DAY 1, HOUR  20.333)
116.417   1646.4275   1135.54  .         .         Q        V.         .
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(PEAK DAY 1, HOUR 20.417)
116.500 1654.2278 1132.60 . . Q V. .
(PEAK DAY 1, HOUR 20.500)
116.583 1662.0079 1129.69 . . Q V. .
(PEAK DAY 1, HOUR 20.583)
116.667 1669.7683 1126.80 . . Q V. .
(PEAK DAY 1, HOUR 20.667)
116.750 1677.5092 1123.96 . . Q V. .
(PEAK DAY 1, HOUR 20.750)
116.833 1685.2306 1121.16 . . Q V. .
(PEAK DAY 1, HOUR 20.833)
116.917 1692.9329 1118.37 . . Q V .
(PEAK DAY 1, HOUR 20.917)
117.000 1700.6160 1115.59 . . Q V .
(PEAK DAY 1, HOUR 21.000)
117.083 1708.2802 1112.84 . . Q V .
(PEAK DAY 1, HOUR 21.083)
117.167 1715.9258 1110.14 . . Q V .
(PEAK DAY 1, HOUR 21.167)
117.250 1723.5535 1107.53 . . Q V .
(PEAK DAY 1, HOUR 21.250)
117.333 1731.1635 1104.97 . . Q V .
(PEAK DAY 1, HOUR 21.333)
117.417 1738.7560 1102.43 . . Q V .
(PEAK DAY 1, HOUR 21.417)
117.500 1746.3311 1099.90 . . Q. V .
(PEAK DAY 1, HOUR 21.500)
117.583 1753.8888 1097.38 . . Q. .V .
(PEAK DAY 1, HOUR 21.583)
117.667 1761.4293 1094.88 . . Q. .V .
(PEAK DAY 1, HOUR 21.667)
117.750 1768.9526 1092.39 . . Q. .V .
(PEAK DAY 1, HOUR 21.750)
117.833 1776.4589 1089.91 . . Q. .V .
(PEAK DAY 1, HOUR 21.833)
117.917 1783.9481 1087.43 . . Q. .V .
(PEAK DAY 1, HOUR 21.917)
118.000 1791.4204 1084.97 . . Q. .V .
(PEAK DAY 1, HOUR 22.000)
118.083 1798.8757 1082.52 . . Q. .V .
(PEAK DAY 1, HOUR 22.083)
118.167 1806.3137 1079.99 . . Q. . V .
(PEAK DAY 1, HOUR 22.167)
118.250 1813.7306 1076.93 . . Q. . V .
(PEAK DAY 1, HOUR 22.250)
118.333 1821.1206 1073.03 . . Q. . V .
(PEAK DAY 1, HOUR 22.333)
118.417 1828.4808 1068.71 . . Q. . V .
(PEAK DAY 1, HOUR 22.417)
118.500 1835.8109 1064.33 . . Q. . V .
(PEAK DAY 1, HOUR 22.500)
118.583 1843.1110 1059.96 . . Q. . V .
(PEAK DAY 1, HOUR 22.583)
118.667 1850.3810 1055.61 . . Q. . V .
(PEAK DAY 1, HOUR 22.667)
118.750 1857.6211 1051.27 . . Q. . V .
(PEAK DAY 1, HOUR 22.750)
118.833 1864.8314 1046.94 . . Q. . V .
(PEAK DAY 1, HOUR 22.833)
118.917 1872.0121 1042.64 . . Q . . V .
(PEAK DAY 1, HOUR 22.917)
119.000 1879.1632 1038.35 . . Q . . V .
(PEAK DAY 1, HOUR 23.000)
119.083 1886.2849 1034.07 . . Q . . V .
(PEAK DAY 1, HOUR 23.083)
119.167 1893.3773 1029.81 . . Q . . V .
(PEAK DAY 1, HOUR 23.167)
119.250 1900.4403 1025.54 . . Q . . V .
(PEAK DAY 1, HOUR 23.250)
119.333 1907.4735 1021.22 . . Q . . V .
(PEAK DAY 1, HOUR 23.333)
119.417 1914.4766 1016.85 . . Q . . V .
(PEAK DAY 1, HOUR 23.417)
119.500 1921.4495 1012.47 . . Q . . V .
(PEAK DAY 1, HOUR 23.500)
119.583 1928.3923 1008.10 . . Q . . V .
(PEAK DAY 1, HOUR 23.583)
119.667 1935.3052 1003.75 . . Q . . V .
(PEAK DAY 1, HOUR 23.667)
119.750 1942.1882 999.41 . . Q . . V .
(PEAK DAY 1, HOUR 23.750)
119.833 1949.0415 995.10 . . Q . . V .
(PEAK DAY 1, HOUR 23.833)
119.917 1955.8651 990.80 . . Q . . V .
(PEAK DAY 1, HOUR 23.917)
120.000 1962.6593 986.52 . . Q . . V .
(PEAK DAY 1, HOUR 24.000)
120.083 1969.4183 981.40 . . Q . . V .
(PEAK DAY 1, HOUR 24.083)
120.167 1976.1256 973.89 . . Q . . V .
(PEAK DAY 1, HOUR 24.167)
120.250 1982.7640 963.91 . . Q . . V .
(PEAK DAY 1, HOUR 24.250)
120.333 1989.3351 954.12 . . Q . . V .
(PEAK DAY 1, HOUR 24.333)
120.417 1995.8519 946.25 . . Q . . V .
(PEAK DAY 1, HOUR 24.417)
120.500 2002.3228 939.56 . . Q . . V .
(PEAK DAY 1, HOUR 24.500)
120.583 2008.7501 933.25 . . Q . . V .
(PEAK DAY 1, HOUR 24.583)
120.667 2015.1351 927.11 . . Q . . V .
(PEAK DAY 1, HOUR 24.667)
120.750 2021.4786 921.08 . . Q . . V .
(PEAK DAY 1, HOUR 24.750)
120.833 2027.7812 915.15 . . Q . . V .
(PEAK DAY 1, HOUR 24.833)
120.917 2034.0436 909.30 . . Q . . V .
(PEAK DAY 1, HOUR 24.917)
121.000 2040.2664 903.54 . . Q . . V .
(PEAK DAY 1, HOUR 25.000)
121.083 2046.4501 897.87 . . Q . . V .
(PEAK DAY 1, HOUR 25.083)
121.167 2052.5952 892.27 . . Q . . V .
(PEAK DAY 1, HOUR 25.167)
121.250 2058.7017 886.65 . . Q . . V .
(PEAK DAY 1, HOUR 25.250)
121.333 2064.7688 880.93 . . Q . . V .
(PEAK DAY 1, HOUR 25.333)
121.417 2070.7959 875.13 . . Q . . V .
(PEAK DAY 1, HOUR 25.417)
121.500 2076.7830 869.32 . . Q . . V .
(PEAK DAY 1, HOUR 25.500)
121.583 2082.7302 863.53 . . Q . . V .
(PEAK DAY 1, HOUR 25.583)
121.667 2088.6379 857.78 . . Q . . V .
(PEAK DAY 1, HOUR 25.667)
121.750 2094.5061 852.07 . . Q . . V .
(PEAK DAY 1, HOUR 25.750)
121.833 2100.3352 846.40 . . Q . . V .
(PEAK DAY 1, HOUR 25.833)
121.917 2106.1257 840.77 . . Q . . V .
(PEAK DAY 1, HOUR 25.917)
122.000 2111.8774 835.16 . . Q . . V .

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 (PEAK DAY 1, HOUR  26.000)
 122.083   2117.5901    829.49  .         .    Q    .         .      V  .
 (PEAK DAY 1, HOUR  26.083)
 122.167   2123.2612    823.44  .         .   Q     .         .      V  .
 (PEAK DAY 1, HOUR  26.167)
 122.250   2128.8872    816.89  .         .   Q     .         .      V  .
 (PEAK DAY 1, HOUR  26.250)
 122.333   2134.4668    810.14  .         .   Q     .         .      V  .
 (PEAK DAY 1, HOUR  26.333)
 122.417   2140.0002    803.45  .         .   Q     .         .      V  .
 (PEAK DAY 1, HOUR  26.417)
 122.500   2145.4880    796.81  .         .   Q     .         .       V .
 (PEAK DAY 1, HOUR  26.500)
 122.583   2150.9304    790.23  .         .   Q     .         .       V .
 (PEAK DAY 1, HOUR  26.583)
 122.667   2156.3279    783.70  .         .   Q     .         .       V .
 (PEAK DAY 1, HOUR  26.667)
 122.750   2161.6809    777.25  .         .   Q     .         .       V .
 (PEAK DAY 1, HOUR  26.750)
 122.833   2166.9888    770.70  .         .   Q     .         .       V .
 (PEAK DAY 1, HOUR  26.833)
 122.917   2172.2439    763.04  .         .  Q      .         .       V .
 (PEAK DAY 1, HOUR  26.917)
 123.000   2177.4316    753.25  .         .  Q      .         .       V .
 (PEAK DAY 1, HOUR  27.000)
 123.083   2182.5415    741.97  .         .  Q      .         .       V .
 (PEAK DAY 1, HOUR  27.083)
 123.167   2187.5713    730.33  .         .  Q      .         .       V .
 (PEAK DAY 1, HOUR  27.167)
 123.250   2192.5215    718.78  .         .  Q      .         .       V .
 (PEAK DAY 1, HOUR  27.250)
 123.333   2197.3928    707.33  .         . Q       .         .       V .
 (PEAK DAY 1, HOUR  27.333)
 123.417   2202.1831    695.55  .         . Q       .         .        V.
 (PEAK DAY 1, HOUR  27.417)
 123.500   2206.8882    683.17  .         . Q       .         .        V.
 (PEAK DAY 1, HOUR  27.500)
 123.583   2211.5063    670.56  .         . Q       .         .        V.
 (PEAK DAY 1, HOUR  27.583)
 123.667   2216.0388    658.11  .         .Q        .         .        V.
 (PEAK DAY 1, HOUR  27.667)
 123.750   2220.4868    645.87  .         .Q        .         .        V.
 (PEAK DAY 1, HOUR  27.750)
 123.833   2224.8496    633.49  .         .Q        .         .        V.
 (PEAK DAY 1, HOUR  27.833)
 123.917   2229.1167    619.58  .         .Q        .         .        V.
 (PEAK DAY 1, HOUR  27.917)
 124.000   2233.2727    603.46  .         Q         .         .        V.
 (PEAK DAY 1, HOUR  28.000)
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
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  FLOW PROCESS FROM NODE   6330.00 TO NODE   6355.00 IS CODE = 5.2
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  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
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         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  5341.3 Ac. ***

         THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
         TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
         INTERVALS(Reference: the National Engineering Handbook,
         Hydrology, Chapter 17, page 17-52, August,1972,
         U.S. Department of Commerce).


         ASSUMED REGULAR CHANNEL INFORMATION:
           BASEWIDTH(FT) =   30.00     CHANNEL Z =  1.00
           UPSTREAM ELEVATION(FT) =     375.00
           DOWNSTREAM ELEVATION(FT) =     314.00
           CHANNEL LENGTH(FT) =    6086.00     MANNING'S FACTOR = 0.040
           CONSTANT LOSS RATE(CFS) =    0.00


         CHANNEL ROUTING COEFFICIENT ESTIMATED:
           MAXIMUM INFLOW(CFS) =  2156.38
           AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  1260.66
           CHANNEL NORMAL VELOCITY FOR Q =  1260.66 CFS =   8.56 FPS
           ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.834

         MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
         UNIT INTERVALS IS CSTAR = 0.700


         CONVEX METHOD CHANNEL ROUTING RESULTS:
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PEAK DAY	TIME (HRS)	CLOCK TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
2	24.000	96.000	66.34	67.54	67.54
1	0.083	96.083	66.58	67.04	67.04
1	0.167	96.167	69.38	66.55	66.55
1	0.250	96.250	75.96	66.61	66.61
1	0.333	96.333	84.87	68.65	68.65
1	0.417	96.417	94.94	73.91	73.91
1	0.500	96.500	108.25	81.74	81.74
1	0.583	96.583	128.89	91.19	91.19
1	0.667	96.667	154.02	103.46	103.46
1	0.750	96.750	174.28	121.66	121.66
1	0.833	96.833	187.35	144.64	144.64
1	0.917	96.917	196.78	165.60	165.60
1	1.000	97.000	204.43	180.98	180.98
1	1.083	97.083	210.85	192.16	192.16
1	1.167	97.167	216.41	200.86	200.86
1	1.250	97.250	221.31	207.94	207.94
1	1.333	97.333	225.62	213.95	213.95
1	1.417	97.417	229.44	219.17	219.17
1	1.500	97.500	232.91	223.75	223.75
1	1.583	97.583	236.11	227.79	227.79
1	1.667	97.667	238.98	231.43	231.43
1	1.750	97.750	241.58	234.75	234.75
1	1.833	97.833	243.92	237.76	237.76
1	1.917	97.917	245.99	240.47	240.47
1	2.000	98.000	247.89	242.92	242.92
1	2.083	98.083	249.68	245.10	245.10
1	2.167	98.167	251.26	247.08	247.08
1	2.250	98.250	252.55	248.93	248.93
1	2.333	98.333	253.70	250.58	250.58
1	2.417	98.417	254.82	251.98	251.98
1	2.500	98.500	255.92	253.20	253.20
1	2.583	98.583	257.04	254.35	254.35
1	2.667	98.667	258.16	255.47	255.47
1	2.750	98.750	259.28	256.59	256.59
1	2.833	98.833	260.40	257.71	257.71
1	2.917	98.917	261.53	258.83	258.83
1	3.000	99.000	262.67	259.95	259.95
1	3.083	99.083	263.82	261.08	261.08
1	3.167	99.167	264.98	262.21	262.21
1	3.250	99.250	266.16	263.36	263.36

1	3.333	99.333	267.34	264.52	264.52
1	3.417	99.417	268.54	265.68	265.68
1	3.500	99.500	269.75	266.86	266.86
1	3.583	99.583	270.97	268.06	268.06
1	3.667	99.667	272.19	269.26	269.26
1	3.750	99.750	273.43	270.47	270.47
1	3.833	99.833	274.67	271.70	271.70
1	3.917	99.917	275.93	272.93	272.93
1	4.000	100.000	277.16	274.17	274.17
1	4.083	100.083	278.35	275.42	275.42
1	4.167	100.167	279.51	276.66	276.66
1	4.250	100.250	280.67	277.86	277.86
1	4.333	100.333	281.84	279.04	279.04
1	4.417	100.417	283.02	280.20	280.20
1	4.500	100.500	284.22	281.37	281.37
1	4.583	100.583	285.43	282.55	282.55
1	4.667	100.667	286.65	283.74	283.74
1	4.750	100.750	287.89	284.94	284.94
1	4.833	100.833	289.14	286.16	286.16
1	4.917	100.917	290.40	287.39	287.39
1	5.000	101.000	291.68	288.63	288.63
1	5.083	101.083	292.98	289.89	289.89
1	5.167	101.167	294.28	291.17	291.17
1	5.250	101.250	295.61	292.45	292.45
1	5.333	101.333	296.95	293.76	293.76
1	5.417	101.417	298.30	295.07	295.07
1	5.500	101.500	299.68	296.41	296.41
1	5.583	101.583	301.06	297.76	297.76
1	5.667	101.667	302.47	299.12	299.12
1	5.750	101.750	303.89	300.50	300.50
1	5.833	101.833	305.33	301.90	301.90
1	5.917	101.917	306.79	303.32	303.32
1	6.000	102.000	308.27	304.75	304.75
1	6.083	102.083	309.76	306.20	306.20
1	6.167	102.167	311.27	307.67	307.67
1	6.250	102.250	312.81	309.16	309.16
1	6.333	102.333	314.36	310.66	310.66
1	6.417	102.417	315.93	312.19	312.19
1	6.500	102.500	317.53	313.74	313.74
1	6.583	102.583	319.14	315.30	315.30
1	6.667	102.667	320.78	316.89	316.89
1	6.750	102.750	322.44	318.49	318.49
1	6.833	102.833	324.12	320.12	320.12
1	6.917	102.917	325.83	321.77	321.77
1	7.000	103.000	327.56	323.45	323.45
1	7.083	103.083	329.31	325.14	325.14
1	7.167	103.167	331.09	326.86	326.86
1	7.250	103.250	332.89	328.60	328.60
1	7.333	103.333	334.72	330.37	330.37
1	7.417	103.417	336.57	332.16	332.16
1	7.500	103.500	338.45	333.98	333.98
1	7.583	103.583	340.36	335.82	335.82
1	7.667	103.667	342.30	337.70	337.70
1	7.750	103.750	344.27	339.59	339.59
1	7.833	103.833	346.26	341.52	341.52
1	7.917	103.917	348.29	343.48	343.48
1	8.000	104.000	350.35	345.46	345.46
1	8.083	104.083	352.44	347.48	347.48
1	8.167	104.167	354.57	349.52	349.52
1	8.250	104.250	356.72	351.60	351.60
1	8.333	104.333	358.92	353.71	353.71
1	8.417	104.417	361.14	355.85	355.85
1	8.500	104.500	363.41	358.03	358.03
1	8.583	104.583	365.71	360.25	360.25
1	8.667	104.667	368.05	362.49	362.49
1	8.750	104.750	370.43	364.78	364.78
1	8.833	104.833	372.84	367.10	367.10
1	8.917	104.917	375.31	369.47	369.47
1	9.000	105.000	377.81	371.87	371.87
1	9.083	105.083	380.36	374.32	374.32
1	9.167	105.167	382.95	376.80	376.80
1	9.250	105.250	385.59	379.33	379.33
1	9.333	105.333	388.28	381.91	381.91
1	9.417	105.417	391.02	384.53	384.53
1	9.500	105.500	393.81	387.20	387.20
1	9.583	105.583	396.65	389.92	389.92
1	9.667	105.667	399.54	392.68	392.68
1	9.750	105.750	402.50	395.51	395.51
1	9.833	105.833	405.50	398.38	398.38
1	9.917	105.917	408.57	401.31	401.31
1	10.000	106.000	411.70	404.29	404.29
1	10.083	106.083	414.90	407.34	407.34
1	10.167	106.167	418.16	410.45	410.45
1	10.250	106.250	421.48	413.61	413.61
1	10.333	106.333	424.88	416.85	416.85
1	10.417	106.417	428.35	420.15	420.15
1	10.500	106.500	431.90	423.52	423.52
1	10.583	106.583	435.52	426.96	426.96
1	10.667	106.667	439.23	430.47	430.47
1	10.750	106.750	443.01	434.07	434.07
1	10.833	106.833	446.88	437.74	437.74
1	10.917	106.917	450.78	441.49	441.49
1	11.000	107.000	454.26	445.33	445.33
1	11.083	107.083	456.86	449.20	449.20
1	11.167	107.167	459.00	452.78	452.78
1	11.250	107.250	461.36	455.67	455.67
1	11.333	107.333	464.16	458.04	458.04
1	11.417	107.417	467.39	460.41	460.41
1	11.500	107.500	470.97	463.09	463.09
1	11.583	107.583	474.84	466.16	466.16
1	11.667	107.667	478.98	469.58	469.58
1	11.750	107.750	483.35	473.33	473.33
1	11.833	107.833	487.94	477.36	477.36
1	11.917	107.917	492.71	481.63	481.63
1	12.000	108.000	497.68	486.12	486.12
1	12.083	108.083	503.37	490.81	490.81
1	12.167	108.167	510.91	495.71	495.71
1	12.250	108.250	520.54	501.19	501.19
1	12.333	108.333	530.01	508.15	508.15
1	12.417	108.417	537.68	516.97	516.97
1	12.500	108.500	544.83	526.22	526.22
1	12.583	108.583	553.25	534.36	534.36
1	12.667	108.667	563.64	541.82	541.82
1	12.750	108.750	575.55	549.99	549.99
1	12.833	108.833	587.40	559.74	559.74
1	12.917	108.917	597.82	570.99	570.99
1	13.000	109.000	607.05	582.64	582.64
1	13.083	109.083	616.05	593.42	593.42
1	13.167	109.167	625.24	603.11	603.11
1	13.250	109.250	634.60	612.32	612.32
1	13.333	109.333	643.46	621.51	621.51
1	13.417	109.417	651.10	630.82	630.82
1	13.500	109.500	657.88	639.79	639.79
1	13.583	109.583	664.62	647.82	647.82
1	13.667	109.667	671.72	654.97	654.97
1	13.750	109.750	679.31	661.84	661.84
1	13.833	109.833	687.41	668.88	668.88
1	13.917	109.917	696.08	676.31	676.31
1	14.000	110.000	705.35	684.22	684.22
1	14.083	110.083	715.32	692.67	692.67
1	14.167	110.167	726.23	701.70	701.70
1	14.250	110.250	738.25	711.41	711.41
1	14.333	110.333	750.78	721.98	721.98
1	14.417	110.417	763.14	733.57	733.57

1	14.500	110.500	775.80	745.82	745.82
1	14.583	110.583	790.08	758.15	758.15
1	14.667	110.667	806.81	770.73	770.73
1	14.750	110.750	825.83	784.54	784.54
1	14.833	110.833	846.34	800.43	800.43
1	14.917	110.917	867.89	818.54	818.54
1	15.000	111.000	890.91	838.34	838.34
1	15.083	111.083	915.77	859.39	859.39
1	15.167	111.167	940.77	881.85	881.85
1	15.250	111.250	964.45	906.00	906.00
1	15.333	111.333	988.15	930.72	930.72
1	15.417	111.417	1012.06	954.71	954.71
1	15.500	111.500	1033.60	978.50	978.50
1	15.583	111.583	1053.09	1002.34	1002.34
1	15.667	111.667	1076.57	1024.54	1024.54
1	15.750	111.750	1109.85	1044.90	1044.90
1	15.833	111.833	1155.03	1067.60	1067.60
1	15.917	111.917	1217.85	1097.90	1097.90
1	16.000	112.000	1313.06	1138.89	1138.89
1	16.083	112.083	1523.02	1195.68	1195.68
1	16.167	112.167	1874.24	1281.17	1281.17
1	16.250	112.250	2156.38	1456.04	1456.04
1	16.333	112.333	2094.91	1753.33	1753.33
1	16.417	112.417	1828.08	2034.63	2034.63
1	16.500	112.500	1644.90	2072.68	2072.68
1	16.583	112.583	1567.47	1898.52	1898.52
1	16.667	112.667	1523.28	1719.70	1719.70
1	16.750	112.750	1483.27	1612.40	1612.40
1	16.833	112.833	1446.57	1549.36	1549.36
1	16.917	112.917	1415.91	1502.50	1502.50
1	17.000	113.000	1389.80	1462.85	1462.85
1	17.083	113.083	1368.36	1429.57	1429.57
1	17.167	113.167	1350.42	1401.38	1401.38
1	17.250	113.250	1337.54	1377.98	1377.98
1	17.333	113.333	1327.62	1358.48	1358.48
1	17.417	113.417	1321.59	1343.66	1343.66
1	17.500	113.500	1316.09	1332.34	1332.34
1	17.583	113.583	1311.10	1324.72	1324.72
1	17.667	113.667	1305.32	1318.60	1318.60
1	17.750	113.750	1300.17	1313.26	1313.26
1	17.833	113.833	1293.82	1307.61	1307.61
1	17.917	113.917	1287.99	1302.30	1302.30
1	18.000	114.000	1282.82	1296.27	1296.27
1	18.083	114.083	1274.93	1290.39	1290.39
1	18.167	114.167	1266.88	1284.97	1284.97
1	18.250	114.250	1258.16	1277.81	1277.81
1	18.333	114.333	1248.49	1270.02	1270.02
1	18.417	114.417	1237.85	1261.56	1261.56
1	18.500	114.500	1230.06	1252.25	1252.25
1	18.583	114.583	1224.31	1242.04	1242.04
1	18.667	114.667	1218.94	1233.56	1233.56
1	18.750	114.750	1211.89	1227.00	1227.00
1	18.833	114.833	1205.67	1221.24	1221.24
1	18.917	114.917	1201.42	1214.59	1214.59
1	19.000	115.000	1197.50	1208.28	1208.28
1	19.083	115.083	1193.73	1203.41	1203.41
1	19.167	115.167	1190.06	1199.21	1199.21
1	19.250	115.250	1186.47	1195.32	1195.32
1	19.333	115.333	1182.93	1191.58	1191.58
1	19.417	115.417	1179.39	1187.95	1187.95
1	19.500	115.500	1175.79	1184.37	1184.37
1	19.583	115.583	1172.11	1180.82	1180.82
1	19.667	115.667	1167.85	1177.24	1177.24
1	19.750	115.750	1163.53	1173.58	1173.58
1	19.833	115.833	1159.84	1169.50	1169.50
1	19.917	115.917	1156.44	1165.26	1165.26
1	20.000	116.000	1153.12	1161.41	1161.41
1	20.083	116.083	1149.78	1157.88	1157.88
1	20.167	116.167	1146.36	1154.49	1154.49
1	20.250	116.250	1141.99	1151.14	1151.14
1	20.333	116.333	1138.56	1147.72	1147.72
1	20.417	116.417	1135.54	1143.66	1143.66
1	20.500	116.500	1132.60	1140.04	1140.04
1	20.583	116.583	1129.69	1136.84	1136.84
1	20.667	116.667	1126.80	1133.82	1133.82
1	20.750	116.750	1123.96	1130.88	1130.88
1	20.833	116.833	1121.16	1127.98	1127.98
1	20.917	116.917	1118.37	1125.12	1125.12
1	21.000	117.000	1115.59	1122.30	1122.30
1	21.083	117.083	1112.84	1119.50	1119.50
1	21.167	117.167	1110.14	1116.72	1116.72
1	21.250	117.250	1107.53	1113.96	1113.96
1	21.333	117.333	1104.97	1111.25	1111.25
1	21.417	117.417	1102.43	1108.61	1108.61
1	21.500	117.500	1099.90	1106.02	1106.02
1	21.583	117.583	1097.38	1103.47	1103.47
1	21.667	117.667	1094.88	1100.93	1100.93
1	21.750	117.750	1092.39	1098.41	1098.41
1	21.833	117.833	1089.91	1095.89	1095.89
1	21.917	117.917	1087.43	1093.40	1093.40
1	22.000	118.000	1084.97	1090.91	1090.91
1	22.083	118.083	1082.52	1088.44	1088.44
1	22.167	118.167	1079.99	1085.97	1085.97
1	22.250	118.250	1076.93	1083.51	1083.51
1	22.333	118.333	1073.03	1081.00	1081.00
1	22.417	118.417	1068.71	1078.09	1078.09
1	22.500	118.500	1064.33	1074.48	1074.48
1	22.583	118.583	1059.96	1070.37	1070.37
1	22.667	118.667	1055.61	1066.08	1066.08
1	22.750	118.750	1051.27	1061.73	1061.73
1	22.833	118.833	1046.94	1057.37	1057.37
1	22.917	118.917	1042.64	1053.03	1053.03
1	23.000	119.000	1038.35	1048.70	1048.70
1	23.083	119.083	1034.07	1044.39	1044.39
1	23.167	119.167	1029.81	1040.09	1040.09
1	23.250	119.250	1025.54	1035.81	1035.81
1	23.333	119.333	1021.22	1031.54	1031.54
1	23.417	119.417	1016.85	1027.27	1027.27
1	23.500	119.500	1012.47	1022.97	1022.97
1	23.583	119.583	1008.10	1018.61	1018.61
1	23.667	119.667	1003.75	1014.24	1014.24
1	23.750	119.750	999.41	1009.87	1009.87
1	23.833	119.833	995.10	1005.51	1005.51
1	23.917	119.917	990.80	1001.17	1001.17
1	24.000	120.000	986.52	996.85	996.85
1	24.083	120.083	981.40	992.54	992.54
1	24.167	120.167	973.89	988.24	988.24
1	24.250	120.250	963.91	983.34	983.34
1	24.333	120.333	954.12	976.57	976.57
1	24.417	120.417	946.25	967.55	967.55
1	24.500	120.500	939.56	958.02	958.02
1	24.583	120.583	933.25	949.67	949.67
1	24.667	120.667	927.11	942.49	942.49
1	24.750	120.750	921.08	935.92	935.92
1	24.833	120.833	915.15	929.65	929.65
1	24.917	120.917	909.30	923.55	923.55
1	25.000	121.000	903.54	917.57	917.57
1	25.083	121.083	897.87	911.69	911.69
1	25.167	121.167	892.27	905.89	905.89
1	25.250	121.250	886.65	900.19	900.19
1	25.333	121.333	880.93	894.55	894.55
1	25.417	121.417	875.13	888.93	888.93
1	25.500	121.500	869.32	883.24	883.24
1	25.583	121.583	863.53	877.47	877.47

1	25.667	121.667	857.78	871.67	871.67
1	25.750	121.750	852.07	865.88	865.88
1	25.833	121.833	846.40	860.12	860.12
1	25.917	121.917	840.77	854.39	854.39
1	26.000	122.000	835.16	848.71	848.71
1	26.083	122.083	829.49	843.06	843.06
1	26.167	122.167	823.44	837.44	837.44
1	26.250	122.250	816.89	831.78	831.78
1	26.333	122.333	810.14	825.83	825.83
1	26.417	122.417	803.45	819.46	819.46
1	26.500	122.500	796.81	812.83	812.83
1	26.583	122.583	790.23	806.15	806.15
1	26.667	122.667	783.70	799.51	799.51
1	26.750	122.750	777.25	792.91	792.91
1	26.833	122.833	770.70	786.36	786.36
1	26.917	122.917	763.04	779.87	779.87
1	27.000	123.000	753.25	773.33	773.33
1	27.083	123.083	741.97	765.97	765.97
1	27.167	123.167	730.33	756.89	756.89
1	27.250	123.250	718.78	746.26	746.26
1	27.333	123.333	707.33	734.92	734.92
1	27.417	123.417	695.55	723.44	723.44
1	27.500	123.500	683.17	711.98	711.98
1	27.583	123.583	670.56	700.28	700.28
1	27.667	123.667	658.11	688.10	688.10
1	27.750	123.750	645.87	675.62	675.62
1	27.833	123.833	633.49	663.17	663.17
1	27.917	123.917	619.58	650.86	650.86
1	28.000	124.000	603.46	638.48	638.48

Note: Computed Hydrograph continues past two days after the peak day of the design storm.

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PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 2257.066 AF
OUTFLOW VOLUME = 2257.065 AF
LOSS VOLUME = 0.000 AF

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FLOW PROCESS FROM NODE 6340.00 TO NODE 6355.00 IS CODE = 1

*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 697.9 Ac. ***

>>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<

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(UNIT-HYDROGRAPH ADDED TO STREAM #2)

WATERSHED AREA = 697.900 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.340 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY(DEVELOPED):
"S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.900
FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.050
MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.050
VALLEY(UNDEVELOPED)/DESERT:
"S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.000
DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.000
BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:

LOSS RATES	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
5-MINUTE (INCHES)	0.58	0.27	0.12	0.06	0.04
30-MINUTE (INCHES)	1.22	0.56	0.24	0.13	0.09
1-HOUR (INCHES)	1.62	0.75	0.33	0.17	0.12
3-HOUR (INCHES)	2.71	1.25	0.54	0.28	0.21
6-HOUR (INCHES)	3.75	1.73	0.75	0.39	0.29
24-HOUR (INCHES)	6.28	2.89	1.26	0.66	0.48
LOSS RATE(IN/HR)	0.210	0.210	0.210	0.210	0.210
LOW LOSS FRACTION	0.450	0.690	0.900	0.980	0.990

5-MINUTE FACTOR = 0.969
30-MINUTE FACTOR = 0.969
1-HOUR FACTOR = 0.969
3-HOUR FACTOR = 0.995
6-HOUR FACTOR = 0.998
24-HOUR FACTOR = 0.999

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 24.510

RUNOFF HYDROGRAPH LISTING LIMITS:
MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 96.00
MODEL TIME(HOURS) FOR END OF RESULTS = 124.00

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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.545	130.419
2	7.337	488.804
3	20.261	1090.852
4	37.173	1427.448
5	57.561	1720.753
6	73.834	1373.504
7	84.155	871.070
8	90.157	506.624
9	93.846	311.340
10	95.934	176.209
11	96.823	75.053
12	97.453	53.201
13	98.047	50.140
14	98.563	43.554
15	98.877	26.445
16	99.042	13.975
17	99.137	8.025
18	99.206	5.797
19	99.261	4.649
20	99.315	4.546
21	99.365	4.228
22	99.414	4.161
23	99.461	3.902
24	99.505	3.743
25	99.548	3.674
26	99.587	3.272
27	99.625	3.204
28	99.663	3.169
29	99.695	2.719
30	99.726	2.582
31	99.756	2.583
32	99.787	2.570

33	99.813	2.195
34	99.830	1.492
35	99.848	1.489
36	99.866	1.488
37	99.883	1.487
38	99.899	1.328
39	99.905	0.518
40	99.910	0.406
41	99.915	0.406
42	99.919	0.404
43	99.924	0.406
44	99.929	0.406
45	99.934	0.405
46	99.939	0.408
47	99.944	0.405
48	99.948	0.408
49	99.953	0.404
50	99.958	0.405
51	99.963	0.405
52	99.968	0.405
53	99.972	0.405
54	99.977	0.404
55	99.982	0.405
56	99.987	0.405
57	99.992	0.405
58	99.996	0.405
59	100.000	0.311

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 349.4661

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 322.3159

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5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	400.0	800.0	1200.0	1600.0
96.000	87.4798	10.14	Q	V	.	.	.
(PEAK DAY 2, HOUR 24.000)							
96.083	87.5521	10.50	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.083)							
96.167	87.6352	12.06	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.167)							
96.250	87.7427	15.61	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.250)							
96.333	87.8825	20.31	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.333)							
96.417	88.0616	26.00	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.417)							
96.500	88.2723	30.59	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.500)							
96.583	88.5034	33.55	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.583)							
96.667	88.7466	35.32	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.667)							
96.750	88.9977	36.46	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.750)							
96.833	89.2536	37.16	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.833)							
96.917	89.5120	37.53	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.917)							
97.000	89.7725	37.82	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.000)							
97.083	90.0351	38.12	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.083)							
97.167	90.2995	38.39	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.167)							
97.250	90.5654	38.61	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.250)							
97.333	90.8325	38.79	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.333)							
97.417	91.1007	38.95	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.417)							
97.500	91.3700	39.10	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.500)							
97.583	91.6403	39.25	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.583)							
97.667	91.9117	39.41	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.667)							
97.750	92.1842	39.56	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.750)							
97.833	92.4577	39.71	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.833)							
97.917	92.7323	39.87	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.917)							
98.000	93.0079	40.03	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.000)							
98.083	93.2847	40.18	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.083)							
98.167	93.5625	40.34	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.167)							
98.250	93.8414	40.50	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.250)							
98.333	94.1214	40.66	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.333)							
98.417	94.4026	40.82	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.417)							
98.500	94.6848	40.98	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.500)							
98.583	94.9682	41.14	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.583)							
98.667	95.2526	41.31	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.667)							
98.750	95.5383	41.47	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.750)							
98.833	95.8250	41.63	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.833)							
98.917	96.1129	41.80	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.917)							
99.000	96.4019	41.97	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.000)							
99.083	96.6921	42.14	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.083)							
99.167	96.9835	42.31	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.167)							
99.250	97.2760	42.48	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.250)							
99.333	97.5697	42.65	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.333)							
99.417	97.8646	42.82	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.417)							
99.500	98.1607	42.99	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.500)							
99.583	98.4580	43.17	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.583)							
99.667	98.7566	43.35	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.667)							
99.750	99.0563	43.53	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.750)							
99.833	99.3573	43.71	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.833)							
99.917	99.6596	43.89	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.917)							
100.000	99.9632	44.08	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.000)							
100.083	100.2680	44.26	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.083)							
100.167	100.5742	44.45	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.167)							
100.250	100.8816	44.65	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.250)							
100.333	101.1905	44.84	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.333)							
100.417	101.5006	45.04	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.417)							
100.500	101.8121	45.23	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.500)							
100.583	102.1251	45.43	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.583)							
100.667	102.4394	45.64	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.667)							
100.750	102.7551	45.84	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.750)							
100.833	103.0722	46.05	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.833)							
100.917	103.3908	46.26	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.917)							
101.000	103.7108	46.47	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 5.000)							
101.083	104.0324	46.68	.Q	. V	.	.	.

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 (PEAK DAY 1, HOUR   5.083)
 101.167    104.3554     46.90  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.167)
 101.250    104.6799     47.12  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.250)
 101.333    105.0059     47.34  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   5.333)
 101.417    105.3335     47.56  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   5.417)
 101.500    105.6626     47.79  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   5.500)
 101.583    105.9933     48.02  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   5.583)
 101.667    106.3257     48.25  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   5.667)
 101.750    106.6596     48.49  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   5.750)
 101.833    106.9952     48.73  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   5.833)
 101.917    107.3325     48.97  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   5.917)
 102.000    107.6714     49.21  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.000)
 102.083    108.0120     49.46  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.083)
 102.167    108.3544     49.71  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.167)
 102.250    108.6985     49.97  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.250)
 102.333    109.0444     50.23  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.333)
 102.417    109.3922     50.49  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.417)
 102.500    109.7417     50.75  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.500)
 102.583    110.0931     51.02  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.583)
 102.667    110.4463     51.29  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.667)
 102.750    110.8015     51.57  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.750)
 102.833    111.1586     51.85  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.833)
 102.917    111.5177     52.14  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.917)
 103.000    111.8787     52.42  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.000)
 103.083    112.2418     52.72  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.083)
 103.167    112.6068     53.01  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.167)
 103.250    112.9740     53.31  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   7.250)
 103.333    113.3433     53.62  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   7.333)
 103.417    113.7147     53.93  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   7.417)
 103.500    114.0882     54.24  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   7.500)
 103.583    114.4640     54.56  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   7.583)
 103.667    114.8420     54.89  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   7.667)
 103.750    115.2223     55.22  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   7.750)
 103.833    115.6049     55.55  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   7.833)
 103.917    115.9898     55.89  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   7.917)
 104.000    116.3771     56.24  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.000)
 104.083    116.7669     56.59  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.083)
 104.167    117.1590     56.94  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.167)
 104.250    117.5537     57.31  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.250)
 104.333    117.9509     57.68  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.333)
 104.417    118.3508     58.05  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.417)
 104.500    118.7532     58.43  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.500)
 104.583    119.1583     58.82  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.583)
 104.667    119.5661     59.22  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.667)
 104.750    119.9767     59.62  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.750)
 104.833    120.3901     60.03  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.833)
 104.917    120.8064     60.45  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.917)
 105.000    121.2256     60.87  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.000)
 105.083    121.6478     61.30  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.083)
 105.167    122.0730     61.74  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.167)
 105.250    122.5013     62.19  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.250)
 105.333    122.9327     62.64  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.333)
 105.417    123.3674     63.11  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.417)
 105.500    123.8053     63.58  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.500)
 105.583    124.2466     64.07  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.583)
 105.667    124.6912     64.56  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.667)
 105.750    125.1393     65.07  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.750)
 105.833    125.5910     65.58  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.833)
 105.917    126.0462     66.11  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.917)
 106.000    126.5052     66.64  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.000)
 106.083    126.9679     67.19  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.083)
 106.167    127.4345     67.74  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.167)
 106.250    127.9050     68.32  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.250)
 106.333    128.3795     68.90  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.333)
 106.417    128.8582     69.50  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.417)
 106.500    129.3410     70.11  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  10.500)
 106.583    129.8282     70.74  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  10.583)
 106.667    130.3197     71.37  .Q        .     V   .         .         .
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(PEAK DAY 1, HOUR  10.667)
106.750    130.8158     72.03  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.750)
106.833    131.3165     72.70  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.833)
106.917    131.8219     73.39  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.917)
107.000    132.3321     74.09  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.000)
107.083    132.8474     74.81  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.083)
107.167    133.3677     75.55  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.167)
107.250    133.8932     76.31  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.250)
107.333    134.4241     77.09  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.333)
107.417    134.9606     77.90  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.417)
107.500    135.5027     78.71  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.500)
107.583    136.0507     79.56  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.583)
107.667    136.6046     80.43  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  11.667)
107.750    137.1647     81.33  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.750)
107.833    137.7311     82.24  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.833)
107.917    138.3041     83.20  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.917)
108.000    138.8838     84.17  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.000)
108.083    139.4731     85.56  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.083)
108.167    140.0790     87.98  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.167)
108.250    140.7138     92.17  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.250)
108.333    141.3842     97.34  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.333)
108.417    142.0964    103.42  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.417)
108.500    142.8440    108.54  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.500)
108.583    143.6175    112.31  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.583)
108.667    144.4101    115.08  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.667)
108.750    145.2184    117.37  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  12.750)
108.833    146.0400    119.30  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  12.833)
108.917    146.8734    121.02  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  12.917)
109.000    147.7185    122.71  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.000)
109.083    148.5758    124.48  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.083)
109.167    149.4454    126.26  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.167)
109.250    150.3275    128.09  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.250)
109.333    151.2224    129.93  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.333)
109.417    152.1305    131.86  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.417)
109.500    153.0522    133.83  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.500)
109.583    153.9883    135.93  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.583)
109.667    154.9393    138.08  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.667)
109.750    155.9060    140.37  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.750)
109.833    156.8890    142.73  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.833)
109.917    157.8894    145.25  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.917)
110.000    158.9077    147.86  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  14.000)
110.083    159.9461    150.77  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  14.083)
110.167    161.0074    154.10  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  14.167)
110.250    162.0967    158.17  .  Q      .        V          .         .
(PEAK DAY 1, HOUR  14.250)
110.333    163.2173    162.70  .   Q     .        V          .         .
(PEAK DAY 1, HOUR  14.333)
110.417    164.3738    167.94  .   Q     .        V          .         .
(PEAK DAY 1, HOUR  14.417)
110.500    165.5685    173.47  .   Q     .        V          .         .
(PEAK DAY 1, HOUR  14.500)
110.583    166.8051    179.55  .   Q     .        V          .         .
(PEAK DAY 1, HOUR  14.583)
110.667    168.0883    186.32  .   Q     .        V          .         .
(PEAK DAY 1, HOUR  14.667)
110.750    169.4257    194.19  .   Q     .        .V         .         .
(PEAK DAY 1, HOUR  14.750)
110.833    170.8223    202.78  .    Q    .        .V         .         .
(PEAK DAY 1, HOUR  14.833)
110.917    172.2852    212.42  .    Q    .        .V         .         .
(PEAK DAY 1, HOUR  14.917)
111.000    173.8201    222.86  .    Q    .        .V         .         .
(PEAK DAY 1, HOUR  15.000)
111.083    175.4357    234.58  .    Q    .        .V         .         .
(PEAK DAY 1, HOUR  15.083)
111.167    177.1388    247.30  .     Q   .        .V         .         .
(PEAK DAY 1, HOUR  15.167)
111.250    178.9411    261.69  .     Q   .        . V        .         .
(PEAK DAY 1, HOUR  15.250)
111.333    180.8522    277.50  .     Q   .        . V        .         .
(PEAK DAY 1, HOUR  15.333)
111.417    182.8791    294.30  .      Q  .        . V        .         .
(PEAK DAY 1, HOUR  15.417)
111.500    185.0097    309.37  .      Q  .        . V        .         .
(PEAK DAY 1, HOUR  15.500)
111.583    187.2243    321.55  .       Q .        .  V       .         .
(PEAK DAY 1, HOUR  15.583)
111.667    189.5230    333.78  .       Q .        .  V       .         .
(PEAK DAY 1, HOUR  15.667)
111.750    191.9303    349.53  .       Q .        .  V       .         .
(PEAK DAY 1, HOUR  15.750)
111.833    194.5298    377.44  .        Q.        .   V      .         .
(PEAK DAY 1, HOUR  15.833)
111.917    197.4737    427.47  .         Q        .   V      .         .
(PEAK DAY 1, HOUR  15.917)
112.000    200.9750    508.38  .         . Q      .   V      .         .
(PEAK DAY 1, HOUR  16.000)
112.083    205.6728    682.13  .         .     Q  .    V     .         .
(PEAK DAY 1, HOUR  16.083)
112.167    212.3362    967.53  .         .        .   Q V    .         .
(PEAK DAY 1, HOUR  16.167)
112.250    221.4721   1326.53  .         .        .      V . Q       .
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 (PEAK DAY 1, HOUR  16.250)
112.333    231.8962   1513.58  .         .         .       V .      Q  .
 (PEAK DAY 1, HOUR  16.333)
112.417    242.8206   1586.22  .         .         .         V        Q.
 (PEAK DAY 1, HOUR  16.417)
112.500    251.9846   1330.62  .         .         .         .V Q      .
 (PEAK DAY 1, HOUR  16.500)
112.583    258.8450    996.13  .         .         .   Q     . V       .
 (PEAK DAY 1, HOUR  16.583)
112.667    263.9171    736.46  .         .       Q .         . V       .
 (PEAK DAY 1, HOUR  16.667)
112.750    267.8633    572.98  .         .   Q     .         .  V      .
 (PEAK DAY 1, HOUR  16.750)
112.833    270.9846    453.22  .         .Q        .         .  V      .
 (PEAK DAY 1, HOUR  16.833)
112.917    273.4837    362.87  .        Q.         .         .  V      .
 (PEAK DAY 1, HOUR  16.917)
113.000    275.6631    316.44  .      Q  .         .         .   V     .
 (PEAK DAY 1, HOUR  17.000)
113.083    277.6262    285.04  .      Q  .         .         .   V     .
 (PEAK DAY 1, HOUR  17.083)
113.167    279.3894    256.02  .     Q   .         .         .   V     .
 (PEAK DAY 1, HOUR  17.167)
113.250    280.9456    225.96  .    Q    .         .         .   V     .
 (PEAK DAY 1, HOUR  17.250)
113.333    282.3374    202.09  .    Q    .         .         .    V    .
 (PEAK DAY 1, HOUR  17.333)
113.417    283.6112    184.96  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  17.417)
113.500    284.8014    172.81  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  17.500)
113.583    285.9275    163.52  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  17.583)
113.667    287.0038    156.28  .  Q      .         .         .    V    .
 (PEAK DAY 1, HOUR  17.667)
113.750    288.0374    150.07  .  Q      .         .         .    V    .
 (PEAK DAY 1, HOUR  17.750)
113.833    289.0344    144.76  .  Q      .         .         .    V    .
 (PEAK DAY 1, HOUR  17.833)
113.917    289.9984    139.98  .  Q      .         .         .    V    .
 (PEAK DAY 1, HOUR  17.917)
114.000    290.9330    135.70  .  Q      .         .         .     V   .
 (PEAK DAY 1, HOUR  18.000)
114.083    291.8382    131.44  .  Q      .         .         .     V   .
 (PEAK DAY 1, HOUR  18.083)
114.167    292.7084    126.36  .  Q      .         .         .     V   .
 (PEAK DAY 1, HOUR  18.167)
114.250    293.5348    119.99  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.250)
114.333    294.3125    112.92  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.333)
114.417    295.0361    105.07  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.417)
114.500    295.7149     98.56  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.500)
114.583    296.3602     93.70  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.583)
114.667    296.9800     89.99  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.667)
114.750    297.5778     86.80  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.750)
114.833    298.1563     84.01  . Q       .         .         .      V  .
 (PEAK DAY 1, HOUR  18.833)
114.917    298.7205     81.92  . Q       .         .         .      V  .
 (PEAK DAY 1, HOUR  18.917)
115.000    299.2716     80.01  . Q       .         .         .      V  .
 (PEAK DAY 1, HOUR  19.000)
115.083    299.8099     78.17  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.083)
115.167    300.3355     76.31  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.167)
115.250    300.8476     74.35  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.250)
115.333    301.3492     72.83  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.333)
115.417    301.8414     71.47  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.417)
115.500    302.3248     70.19  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.500)
115.583    302.7998     68.97  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.583)
115.667    303.2668     67.81  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.667)
115.750    303.7261     66.70  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.750)
115.833    304.1781     65.64  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.833)
115.917    304.6231     64.62  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.917)
116.000    305.0614     63.64  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  20.000)
116.083    305.4932     62.70  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  20.083)
116.167    305.9187     61.79  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  20.167)
116.250    306.3383     60.92  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.250)
116.333    306.7520     60.08  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.333)
116.417    307.1602     59.26  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.417)
116.500    307.5629     58.48  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.500)
116.583    307.9604     57.71  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.583)
116.667    308.3527     56.97  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.667)
116.750    308.7400     56.24  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.750)
116.833    309.1223     55.51  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.833)
116.917    309.4995     54.76  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.917)
117.000    309.8710     53.95  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.000)
117.083    310.2382     53.31  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.083)
117.167    310.6010     52.69  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.167)
117.250    310.9598     52.10  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.250)
117.333    311.3147     51.52  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.333)
117.417    311.6657     50.97  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.417)
117.500    312.0130     50.43  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.500)
117.583    312.3567     49.90  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.583)
117.667    312.6969     49.39  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.667)
117.750    313.0336     48.90  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.750)
117.833    313.3671     48.41  .Q        .         .         .       V .
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(PEAK DAY 1, HOUR 21.833)
117.917 313.6973 47.94 .Q . . . V .
(PEAK DAY 1, HOUR 21.917)
118.000 314.0243 47.49 .Q . . . V .
(PEAK DAY 1, HOUR 22.000)
118.083 314.3483 47.04 .Q . . . V.
(PEAK DAY 1, HOUR 22.083)
118.167 314.6692 46.60 .Q . . . V.
(PEAK DAY 1, HOUR 22.167)
118.250 314.9872 46.18 .Q . . . V.
(PEAK DAY 1, HOUR 22.250)
118.333 315.3024 45.76 .Q . . . V.
(PEAK DAY 1, HOUR 22.333)
118.417 315.6148 45.36 .Q . . . V.
(PEAK DAY 1, HOUR 22.417)
118.500 315.9244 44.96 .Q . . . V.
(PEAK DAY 1, HOUR 22.500)
118.583 316.2314 44.57 .Q . . . V.
(PEAK DAY 1, HOUR 22.583)
118.667 316.5357 44.19 .Q . . . V.
(PEAK DAY 1, HOUR 22.667)
118.750 316.8376 43.82 .Q . . . V.
(PEAK DAY 1, HOUR 22.750)
118.833 317.1369 43.46 .Q . . . V.
(PEAK DAY 1, HOUR 22.833)
118.917 317.4337 43.10 .Q . . . V.
(PEAK DAY 1, HOUR 22.917)
119.000 317.7282 42.76 .Q . . . V.
(PEAK DAY 1, HOUR 23.000)
119.083 318.0204 42.42 .Q . . . V.
(PEAK DAY 1, HOUR 23.083)
119.167 318.3102 42.09 .Q . . . V.
(PEAK DAY 1, HOUR 23.167)
119.250 318.5978 41.76 .Q . . . V.
(PEAK DAY 1, HOUR 23.250)
119.333 318.8832 41.44 .Q . . . V.
(PEAK DAY 1, HOUR 23.333)
119.417 319.1664 41.13 .Q . . . V.
(PEAK DAY 1, HOUR 23.417)
119.500 319.4476 40.82 .Q . . . V.
(PEAK DAY 1, HOUR 23.500)
119.583 319.7266 40.52 .Q . . . V.
(PEAK DAY 1, HOUR 23.583)
119.667 320.0037 40.22 .Q . . . V.
(PEAK DAY 1, HOUR 23.667)
119.750 320.2787 39.94 Q . . . V.
(PEAK DAY 1, HOUR 23.750)
119.833 320.5518 39.65 Q . . . V.
(PEAK DAY 1, HOUR 23.833)
119.917 320.8229 39.37 Q . . . V.
(PEAK DAY 1, HOUR 23.917)
120.000 321.0922 39.10 Q . . . V.
(PEAK DAY 1, HOUR 24.000)
120.083 321.3556 38.25 Q . . . V.
(PEAK DAY 1, HOUR 24.083)
120.167 321.6022 35.81 Q . . . V.
(PEAK DAY 1, HOUR 24.167)
120.250 321.8137 30.70 Q . . . V.
(PEAK DAY 1, HOUR 24.250)
120.333 321.9799 24.13 Q . . . V.
(PEAK DAY 1, HOUR 24.333)
120.417 322.0921 16.30 Q . . . V.
(PEAK DAY 1, HOUR 24.417)
120.500 322.1615 10.07 Q . . . V.
(PEAK DAY 1, HOUR 24.500)
120.583 322.2036 6.12 Q . . . V.
(PEAK DAY 1, HOUR 24.583)
120.667 322.2299 3.82 Q . . . V.
(PEAK DAY 1, HOUR 24.667)
120.750 322.2465 2.40 Q . . . V.
(PEAK DAY 1, HOUR 24.750)
120.833 322.2575 1.60 Q . . . V.
(PEAK DAY 1, HOUR 24.833)
120.917 322.2662 1.26 Q . . . V.
(PEAK DAY 1, HOUR 24.917)
121.000 322.2732 1.01 Q . . . V.
(PEAK DAY 1, HOUR 25.000)
121.083 322.2785 0.78 Q . . . V.
(PEAK DAY 1, HOUR 25.083)
121.167 322.2825 0.58 Q . . . V.
(PEAK DAY 1, HOUR 25.167)
121.250 322.2857 0.46 Q . . . V.
(PEAK DAY 1, HOUR 25.250)
121.333 322.2884 0.39 Q . . . V.
(PEAK DAY 1, HOUR 25.333)
121.417 322.2908 0.35 Q . . . V.
(PEAK DAY 1, HOUR 25.417)
121.500 322.2931 0.33 Q . . . V.
(PEAK DAY 1, HOUR 25.500)
121.583 322.2951 0.30 Q . . . V.
(PEAK DAY 1, HOUR 25.583)
121.667 322.2971 0.28 Q . . . V.
(PEAK DAY 1, HOUR 25.667)
121.750 322.2988 0.26 Q . . . V.
(PEAK DAY 1, HOUR 25.750)
121.833 322.3005 0.24 Q . . . V.
(PEAK DAY 1, HOUR 25.833)
121.917 322.3020 0.22 Q . . . V.
(PEAK DAY 1, HOUR 25.917)
122.000 322.3033 0.20 Q . . . V.
(PEAK DAY 1, HOUR 26.000)
122.083 322.3046 0.18 Q . . . V.
(PEAK DAY 1, HOUR 26.083)
122.167 322.3058 0.17 Q . . . V.
(PEAK DAY 1, HOUR 26.167)
122.250 322.3068 0.15 Q . . . V.
(PEAK DAY 1, HOUR 26.250)
122.333 322.3077 0.14 Q . . . V.
(PEAK DAY 1, HOUR 26.333)
122.417 322.3086 0.12 Q . . . V.
(PEAK DAY 1, HOUR 26.417)
122.500 322.3094 0.11 Q . . . V.
(PEAK DAY 1, HOUR 26.500)
122.583 322.3100 0.10 Q . . . V.
(PEAK DAY 1, HOUR 26.583)
122.667 322.3106 0.09 Q . . . V.
(PEAK DAY 1, HOUR 26.667)
122.750 322.3111 0.08 Q . . . V.
(PEAK DAY 1, HOUR 26.750)
122.833 322.3116 0.07 Q . . . V.
(PEAK DAY 1, HOUR 26.833)
122.917 322.3120 0.06 Q . . . V.
(PEAK DAY 1, HOUR 26.917)
123.000 322.3124 0.05 Q . . . V.
(PEAK DAY 1, HOUR 27.000)
123.083 322.3127 0.05 Q . . . V.
(PEAK DAY 1, HOUR 27.083)
123.167 322.3130 0.04 Q . . . V.
(PEAK DAY 1, HOUR 27.167)
123.250 322.3133 0.04 Q . . . V.
(PEAK DAY 1, HOUR 27.250)
123.333 322.3135 0.04 Q . . . V.
(PEAK DAY 1, HOUR 27.333)
123.417 322.3138 0.03 Q . . . V.

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 (PEAK DAY 1, HOUR  27.417)
 123.500    322.3140      0.03  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.500)
 123.583    322.3142      0.03  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.583)
 123.667    322.3144      0.03  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.667)
 123.750    322.3145      0.03  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.750)
 123.833    322.3147      0.02  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.833)
 123.917    322.3148      0.02  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.917)
 124.000    322.3150      0.02  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  28.000)
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6355.00 TO NODE   6355.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  6039.2 Ac. ***
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6355.00 TO NODE   6355.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  6039.2 Ac. ***

           STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
         (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)    Q(CFS) 0.      925.0    1850.0    2775.0    3700.0
--------------------------------------------------------------------------------
  96.000    680.6626     77.68  Q         V         .         .         .
 (PEAK DAY 2, HOUR  24.000)
  96.083    681.1967     77.54  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.083)
  96.167    681.7380     78.61  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.167)
  96.250    682.3043     82.23  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.250)
  96.333    682.9170     88.96  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.333)
  96.417    683.6051     99.91  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.417)
  96.500    684.3787    112.33  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.500)
  96.583    685.2378    124.74  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.583)
  96.667    686.1935    138.78  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.667)
  96.750    687.2825    158.12  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.750)
  96.833    688.5346    181.80  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.833)
  96.917    689.9336    203.13  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   0.917)
  97.000    691.4405    218.80  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.000)
  97.083    693.0264    230.28  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.083)
  97.167    694.6741    239.24  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.167)
  97.250    696.3721    246.55  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.250)
  97.333    698.1127    252.74  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.333)
  97.417    699.8904    258.12  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.417)
  97.500    701.7006    262.85  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.500)
  97.583    703.5397    267.04  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.583)
  97.667    705.4050    270.83  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.667)
  97.750    707.2941    274.31  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.750)
  97.833    709.2051    277.47  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.833)
  97.917    711.1358    280.34  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   1.917)
  98.000    713.0844    282.94  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.000)
  98.083    715.0491    285.28  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.083)
  98.167    717.0286    287.42  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.167)
  98.250    719.0219    289.43  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.250)
  98.333    721.0277    291.24  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.333)
  98.417    723.0443    292.80  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.417)
  98.500    725.0703    294.18  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.500)
  98.583    727.1054    295.49  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.583)
  98.667    729.1493    296.78  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.667)
  98.750    731.2020    298.06  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.750)
  98.833    733.2636    299.34  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.833)
  98.917    735.3341    300.63  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.917)
  99.000    737.4135    301.92  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   3.000)
  99.083    739.5017    303.21  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   3.083)
  99.167    741.5989    304.52  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   3.167)
  99.250    743.7053    305.83  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   3.250)
  99.333    745.8207    307.16  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   3.333)
  99.417    747.9454    308.50  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   3.417)
  99.500    750.0793    309.86  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   3.500)
  99.583    752.2228    311.23  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   3.583)
  99.667    754.3757    312.61  .  Q      .V        .         .         .
```

(PEAK DAY 1, HOUR 3.667)
99.750 756.5383 314.00 . Q .V . . .
(PEAK DAY 1, HOUR 3.750)
99.833 758.7104 315.40 . Q .V . . .
(PEAK DAY 1, HOUR 3.833)
99.917 760.8924 316.82 . Q .V . . .
(PEAK DAY 1, HOUR 3.917)
100.000 763.0842 318.25 . Q .V . . .
(PEAK DAY 1, HOUR 4.000)
100.083 765.2859 319.69 . Q .V . . .
(PEAK DAY 1, HOUR 4.083)
100.167 767.4974 321.11 . Q .V . . .
(PEAK DAY 1, HOUR 4.167)
100.250 769.7185 322.51 . Q .V . . .
(PEAK DAY 1, HOUR 4.250)
100.333 771.9490 323.87 . Q .V . . .
(PEAK DAY 1, HOUR 4.333)
100.417 774.1890 325.24 . Q . V . . .
(PEAK DAY 1, HOUR 4.417)
100.500 776.4383 326.60 . Q . V . . .
(PEAK DAY 1, HOUR 4.500)
100.583 778.6971 327.98 . Q . V . . .
(PEAK DAY 1, HOUR 4.583)
100.667 780.9656 329.37 . Q . V . . .
(PEAK DAY 1, HOUR 4.667)
100.750 783.2437 330.78 . Q . V . . .
(PEAK DAY 1, HOUR 4.750)
100.833 785.5316 332.21 . Q . V . . .
(PEAK DAY 1, HOUR 4.833)
100.917 787.8295 333.65 . Q . V . . .
(PEAK DAY 1, HOUR 4.917)
101.000 790.1373 335.10 . Q . V . . .
(PEAK DAY 1, HOUR 5.000)
101.083 792.4553 336.58 . Q . V . . .
(PEAK DAY 1, HOUR 5.083)
101.167 794.7836 338.06 . Q . V . . .
(PEAK DAY 1, HOUR 5.167)
101.250 797.1223 339.57 . Q . V . . .
(PEAK DAY 1, HOUR 5.250)
101.333 799.4714 341.10 . Q . V . . .
(PEAK DAY 1, HOUR 5.333)
101.417 801.8311 342.64 . Q . V . . .
(PEAK DAY 1, HOUR 5.417)
101.500 804.2016 344.20 . Q . V . . .
(PEAK DAY 1, HOUR 5.500)
101.583 806.5830 345.78 . Q . V . . .
(PEAK DAY 1, HOUR 5.583)
101.667 808.9754 347.38 . Q . V . . .
(PEAK DAY 1, HOUR 5.667)
101.750 811.3790 348.99 . Q . V . . .
(PEAK DAY 1, HOUR 5.750)
101.833 813.7938 350.63 . Q . V . . .
(PEAK DAY 1, HOUR 5.833)
101.917 816.2200 352.29 . Q . V . . .
(PEAK DAY 1, HOUR 5.917)
102.000 818.6578 353.97 . Q . V . . .
(PEAK DAY 1, HOUR 6.000)
102.083 821.1072 355.67 . Q . V . . .
(PEAK DAY 1, HOUR 6.083)
102.167 823.5685 357.38 . Q . V . . .
(PEAK DAY 1, HOUR 6.167)
102.250 826.0419 359.13 . Q . V . . .
(PEAK DAY 1, HOUR 6.250)
102.333 828.5273 360.89 . Q . V . . .
(PEAK DAY 1, HOUR 6.333)
102.417 831.0251 362.68 . Q . V . . .
(PEAK DAY 1, HOUR 6.417)
102.500 833.5354 364.49 . Q . V . . .
(PEAK DAY 1, HOUR 6.500)
102.583 836.0583 366.32 . Q . V . . .
(PEAK DAY 1, HOUR 6.583)
102.667 838.5939 368.18 . Q . V . . .
(PEAK DAY 1, HOUR 6.667)
102.750 841.1426 370.06 . Q . V . . .
(PEAK DAY 1, HOUR 6.750)
102.833 843.7043 371.97 . Q . V . . .
(PEAK DAY 1, HOUR 6.833)
102.917 846.2795 373.91 . Q . V . . .
(PEAK DAY 1, HOUR 6.917)
103.000 848.8681 375.87 . Q . V . . .
(PEAK DAY 1, HOUR 7.000)
103.083 851.4704 377.86 . Q . V . . .
(PEAK DAY 1, HOUR 7.083)
103.167 854.0866 379.87 . Q . V . . .
(PEAK DAY 1, HOUR 7.167)
103.250 856.7169 381.92 . Q . V . . .
(PEAK DAY 1, HOUR 7.250)
103.333 859.3615 383.99 . Q . V . . .
(PEAK DAY 1, HOUR 7.333)
103.417 862.0205 386.09 . Q . V . . .
(PEAK DAY 1, HOUR 7.417)
103.500 864.6942 388.22 . Q . V . . .
(PEAK DAY 1, HOUR 7.500)
103.583 867.3828 390.39 . Q . V . . .
(PEAK DAY 1, HOUR 7.583)
103.667 870.0865 392.58 . Q . V . . .
(PEAK DAY 1, HOUR 7.667)
103.750 872.8057 394.81 . Q . V . . .
(PEAK DAY 1, HOUR 7.750)
103.833 875.5403 397.07 . Q . V . . .
(PEAK DAY 1, HOUR 7.833)
103.917 878.2908 399.37 . Q . V . . .
(PEAK DAY 1, HOUR 7.917)
104.000 881.0573 401.70 . Q . V . . .
(PEAK DAY 1, HOUR 8.000)
104.083 883.8401 404.06 . Q . V . . .
(PEAK DAY 1, HOUR 8.083)
104.167 886.6395 406.47 . Q . V . . .
(PEAK DAY 1, HOUR 8.167)
104.250 889.4556 408.91 . Q . V . . .
(PEAK DAY 1, HOUR 8.250)
104.333 892.2889 411.39 . Q . V . . .
(PEAK DAY 1, HOUR 8.333)
104.417 895.1395 413.91 . Q . V . . .
(PEAK DAY 1, HOUR 8.417)
104.500 898.0077 416.47 . Q . V . . .
(PEAK DAY 1, HOUR 8.500)
104.583 900.8939 419.07 . Q . V . . .
(PEAK DAY 1, HOUR 8.583)
104.667 903.7982 421.71 . Q . V . . .
(PEAK DAY 1, HOUR 8.667)
104.750 906.7211 424.40 . Q . V . . .
(PEAK DAY 1, HOUR 8.750)
104.833 909.6627 427.13 . Q . V . . .
(PEAK DAY 1, HOUR 8.833)
104.917 912.6235 429.91 . Q . V . . .
(PEAK DAY 1, HOUR 8.917)
105.000 915.6038 432.74 . Q . V . . .
(PEAK DAY 1, HOUR 9.000)
105.083 918.6039 435.62 . Q . V . . .
(PEAK DAY 1, HOUR 9.083)
105.167 921.6242 438.54 . Q . V . . .
(PEAK DAY 1, HOUR 9.167)
105.250 924.6650 441.52 . Q . V . . .

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 (PEAK DAY 1, HOUR   9.250)
105.333    927.7266    444.55  .   Q     .   V     .         .         .
 (PEAK DAY 1, HOUR   9.333)
105.417    930.8096    447.64  .   Q     .   V     .         .         .
 (PEAK DAY 1, HOUR   9.417)
105.500    933.9141    450.78  .   Q     .   V     .         .         .
 (PEAK DAY 1, HOUR   9.500)
105.583    937.0408    453.99  .   Q     .   V     .         .         .
 (PEAK DAY 1, HOUR   9.583)
105.667    940.1898    457.25  .   Q     .   V     .         .         .
 (PEAK DAY 1, HOUR   9.667)
105.750    943.3618    460.57  .   Q     .   V     .         .         .
 (PEAK DAY 1, HOUR   9.750)
105.833    946.5571    463.96  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR   9.833)
105.917    949.7762    467.42  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR   9.917)
106.000    953.0196    470.93  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR  10.000)
106.083    956.2877    474.53  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR  10.083)
106.167    959.5811    478.19  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR  10.167)
106.250    962.9001    481.93  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR  10.250)
106.333    966.2455    485.75  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR  10.333)
106.417    969.6177    489.65  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  10.417)
106.500    973.0173    493.62  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  10.500)
106.583    976.4450    497.70  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  10.583)
106.667    979.9012    501.85  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  10.667)
106.750    983.3868    506.10  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  10.750)
106.833    986.9022    510.43  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  10.833)
106.917    990.4482    514.88  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  10.917)
107.000    994.0255    519.42  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  11.000)
107.083    997.6344    524.02  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  11.083)
107.167   1001.2730    528.33  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  11.167)
107.250   1004.9368    531.99  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  11.250)
107.333   1008.6223    535.13  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  11.333)
107.417   1012.3296    538.30  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  11.417)
107.500   1016.0610    541.80  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  11.500)
107.583   1019.8194    545.72  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  11.583)
107.667   1023.6074    550.01  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  11.667)
107.750   1027.4274    554.66  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  11.750)
107.833   1031.2814    559.60  .     Q   .    V    .         .         .
 (PEAK DAY 1, HOUR  11.833)
107.917   1035.1714    564.83  .     Q   .     V   .         .         .
 (PEAK DAY 1, HOUR  11.917)
108.000   1039.0990    570.29  .     Q   .     V   .         .         .
 (PEAK DAY 1, HOUR  12.000)
108.083   1043.0685    576.37  .     Q   .     V   .         .         .
 (PEAK DAY 1, HOUR  12.083)
108.167   1047.0884    583.69  .     Q   .     V   .         .         .
 (PEAK DAY 1, HOUR  12.167)
108.250   1051.1749    593.36  .     Q   .     V   .         .         .
 (PEAK DAY 1, HOUR  12.250)
108.333   1055.3450    605.49  .     Q   .     V   .         .         .
 (PEAK DAY 1, HOUR  12.333)
108.417   1059.6177    620.39  .     Q   .     V   .         .         .
 (PEAK DAY 1, HOUR  12.417)
108.500   1063.9894    634.77  .     Q   .     V   .         .         .
 (PEAK DAY 1, HOUR  12.500)
108.583   1068.4431    646.67  .     Q   .     V   .         .         .
 (PEAK DAY 1, HOUR  12.583)
108.667   1072.9673    656.90  .      Q  .     V   .         .         .
 (PEAK DAY 1, HOUR  12.667)
108.750   1077.5634    667.35  .      Q  .     V   .         .         .
 (PEAK DAY 1, HOUR  12.750)
108.833   1082.2399    679.03  .      Q  .     V   .         .         .
 (PEAK DAY 1, HOUR  12.833)
108.917   1087.0057    692.01  .      Q  .     V   .         .         .
 (PEAK DAY 1, HOUR  12.917)
109.000   1091.8635    705.35  .      Q  .     V   .         .         .
 (PEAK DAY 1, HOUR  13.000)
109.083   1096.8077    717.89  .      Q  .      V  .         .         .
 (PEAK DAY 1, HOUR  13.083)
109.167   1101.8309    729.37  .      Q  .      V  .         .         .
 (PEAK DAY 1, HOUR  13.167)
109.250   1106.9302    740.41  .       Q .      V  .         .         .
 (PEAK DAY 1, HOUR  13.250)
109.333   1112.1055    751.45  .       Q .      V  .         .         .
 (PEAK DAY 1, HOUR  13.333)
109.417   1117.3580    762.68  .       Q .      V  .         .         .
 (PEAK DAY 1, HOUR  13.417)
109.500   1122.6860    773.62  .       Q .      V  .         .         .
 (PEAK DAY 1, HOUR  13.500)
109.583   1128.0837    783.74  .       Q .      V  .         .         .
 (PEAK DAY 1, HOUR  13.583)
109.667   1133.5455    793.05  .       Q .      V  .         .         .
 (PEAK DAY 1, HOUR  13.667)
109.750   1139.0703    802.21  .       Q .      V  .         .         .
 (PEAK DAY 1, HOUR  13.750)
109.833   1144.6599    811.61  .       Q .      V  .         .         .
 (PEAK DAY 1, HOUR  13.833)
109.917   1150.3181    821.56  .       Q .      V  .         .         .
 (PEAK DAY 1, HOUR  13.917)
110.000   1156.0487    832.08  .       Q .      V  .         .         .
 (PEAK DAY 1, HOUR  14.000)
110.083   1161.8575    843.45  .        Q.       V .         .         .
 (PEAK DAY 1, HOUR  14.083)
110.167   1167.7515    855.80  .        Q.       V .         .         .
 (PEAK DAY 1, HOUR  14.167)
110.250   1173.7404    869.58  .        Q.       V .         .         .
 (PEAK DAY 1, HOUR  14.250)
110.333   1179.8331    884.68  .        Q.       V .         .         .
 (PEAK DAY 1, HOUR  14.333)
110.417   1186.0419    901.50  .        Q.       V .         .         .
 (PEAK DAY 1, HOUR  14.417)
110.500   1192.3730    919.28  .        Q.       V .         .         .
 (PEAK DAY 1, HOUR  14.500)
110.583   1198.8311    937.70  .         Q       V .         .         .
 (PEAK DAY 1, HOUR  14.583)
110.667   1205.4224    957.05  .         Q       V .         .         .
 (PEAK DAY 1, HOUR  14.667)
110.750   1212.1630    978.73  .         Q       V .         .         .
 (PEAK DAY 1, HOUR  14.750)
110.833   1219.0721   1003.21  .         Q       V .         .         .
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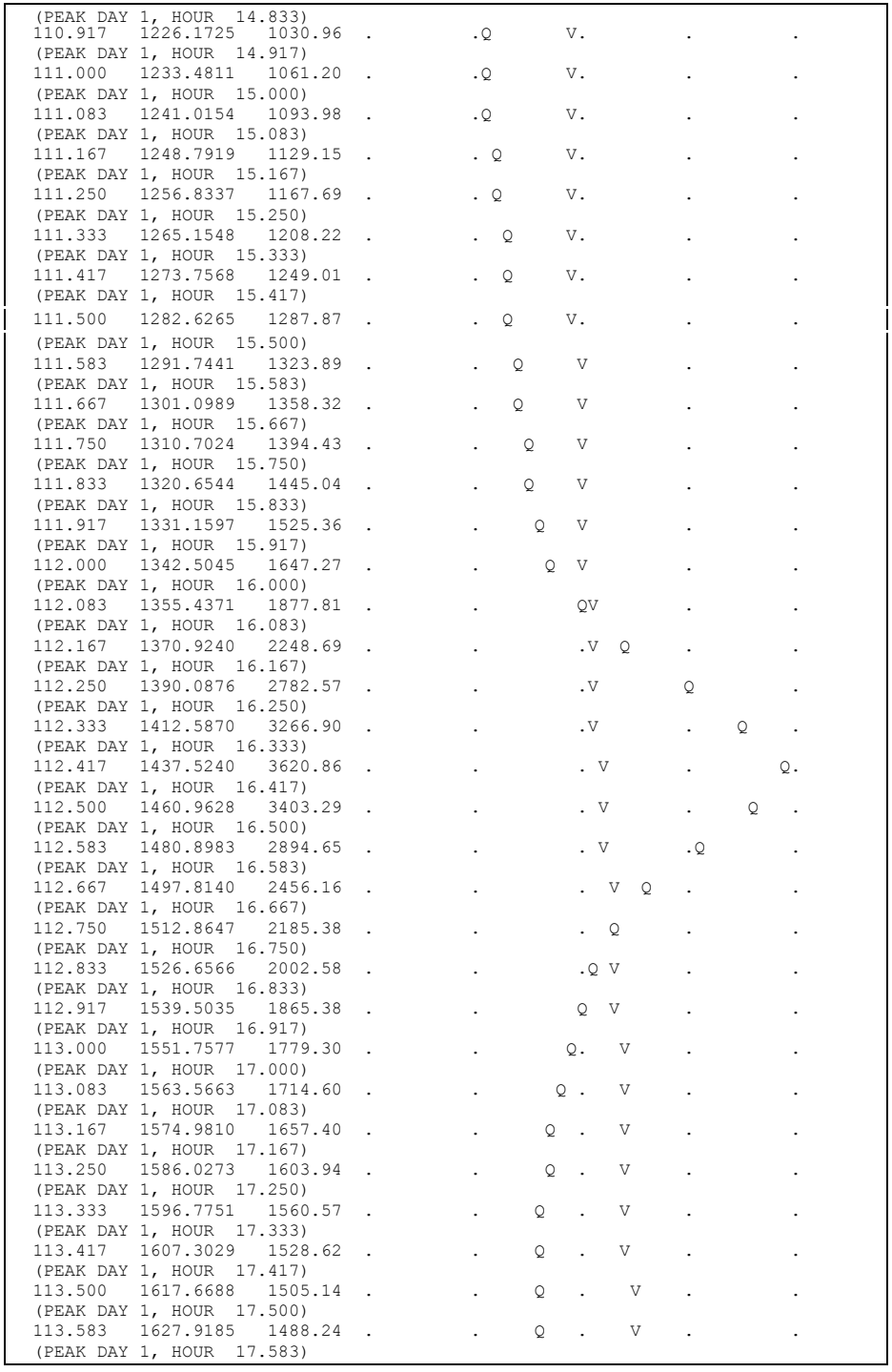
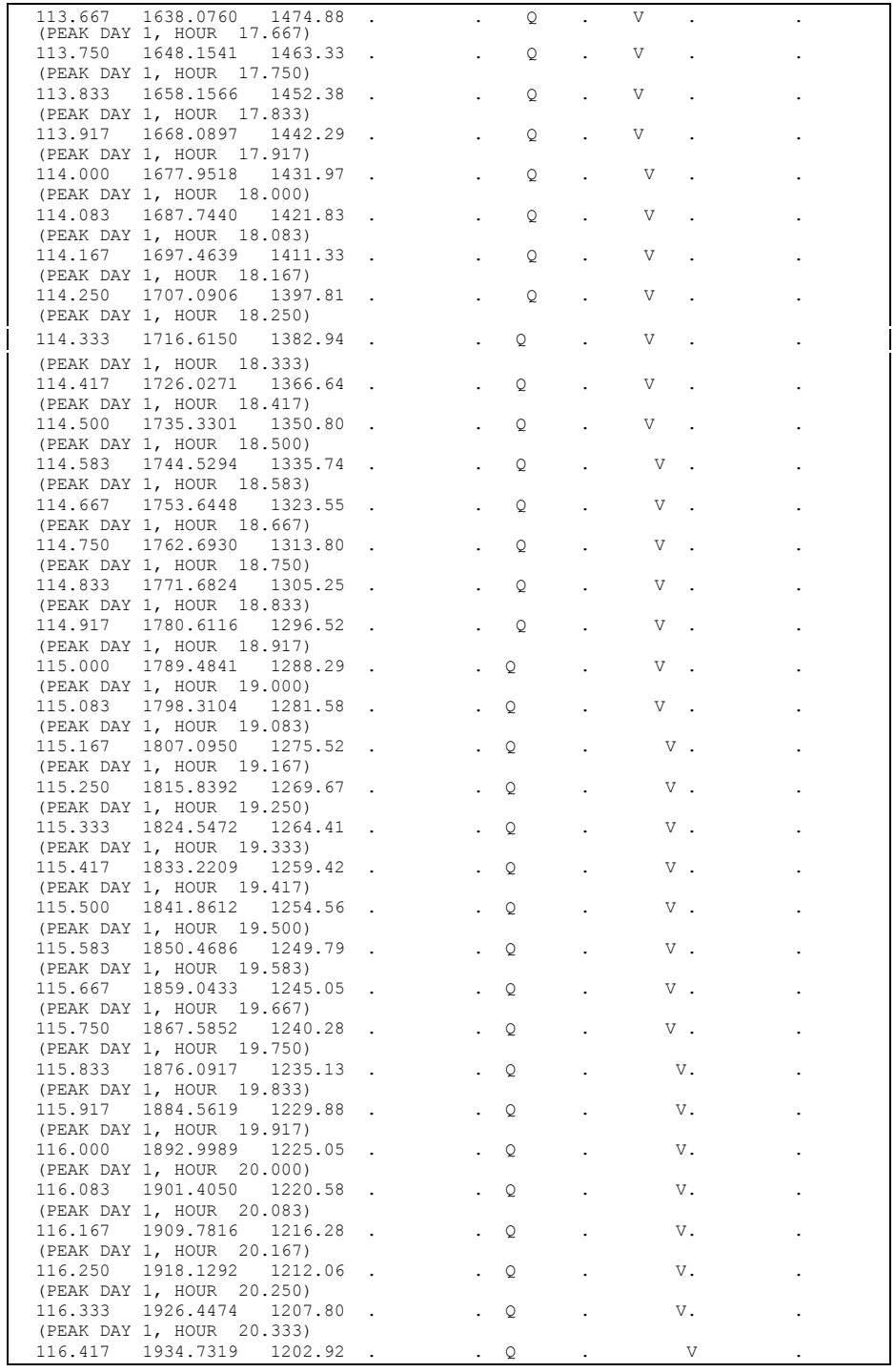

(PEAK DAY 1, HOUR 14.833)
110.917 1226.1725 1030.96
(PEAK DAY 1, HOUR 14.917)
111.000 1233.4811 1061.20
(PEAK DAY 1, HOUR 15.000)
111.083 1241.0154 1093.98
(PEAK DAY 1, HOUR 15.083)
111.167 1248.7919 1129.15
(PEAK DAY 1, HOUR 15.167)
111.250 1256.8337 1167.69
(PEAK DAY 1, HOUR 15.250)
111.333 1265.1548 1208.22
(PEAK DAY 1, HOUR 15.333)
111.417 1273.7568 1249.01
(PEAK DAY 1, HOUR 15.417)
111.500 1282.6265 1287.87
(PEAK DAY 1, HOUR 15.500)
111.583 1291.7441 1323.89
(PEAK DAY 1, HOUR 15.583)
111.667 1301.0989 1358.32
(PEAK DAY 1, HOUR 15.667)
111.750 1310.7024 1394.43
(PEAK DAY 1, HOUR 15.750)
111.833 1320.6544 1445.04
(PEAK DAY 1, HOUR 15.833)
111.917 1331.1597 1525.36
(PEAK DAY 1, HOUR 15.917)
112.000 1342.5045 1647.27
(PEAK DAY 1, HOUR 16.000)
112.083 1355.4371 1877.81
(PEAK DAY 1, HOUR 16.083)
112.167 1370.9240 2248.69
(PEAK DAY 1, HOUR 16.167)
112.250 1390.0876 2782.57
(PEAK DAY 1, HOUR 16.250)
112.333 1412.5870 3266.90
(PEAK DAY 1, HOUR 16.333)
112.417 1437.5240 3620.86
(PEAK DAY 1, HOUR 16.417)
112.500 1460.9628 3403.29
(PEAK DAY 1, HOUR 16.500)
112.583 1480.8983 2894.65
(PEAK DAY 1, HOUR 16.583)
112.667 1497.8140 2456.16
(PEAK DAY 1, HOUR 16.667)
112.750 1512.8647 2185.38
(PEAK DAY 1, HOUR 16.750)
112.833 1526.6566 2002.58
(PEAK DAY 1, HOUR 16.833)
112.917 1539.5035 1865.38
(PEAK DAY 1, HOUR 16.917)
113.000 1551.7577 1779.30
(PEAK DAY 1, HOUR 17.000)
113.083 1563.5663 1714.60
(PEAK DAY 1, HOUR 17.083)
113.167 1574.9810 1657.40
(PEAK DAY 1, HOUR 17.167)
113.250 1586.0273 1603.94
(PEAK DAY 1, HOUR 17.250)
113.333 1596.7751 1560.57
(PEAK DAY 1, HOUR 17.333)
113.417 1607.3029 1528.62
(PEAK DAY 1, HOUR 17.417)
113.500 1617.6688 1505.14
(PEAK DAY 1, HOUR 17.500)
113.583 1627.9185 1488.24
(PEAK DAY 1, HOUR 17.583)


113.667 1638.0760 1474.88
(PEAK DAY 1, HOUR 17.667)
113.750 1648.1541 1463.33
(PEAK DAY 1, HOUR 17.750)
113.833 1658.1566 1452.38
(PEAK DAY 1, HOUR 17.833)
113.917 1668.0897 1442.29
(PEAK DAY 1, HOUR 17.917)
114.000 1677.9518 1431.97
(PEAK DAY 1, HOUR 18.000)
114.083 1687.7440 1421.83
(PEAK DAY 1, HOUR 18.083)
114.167 1697.4639 1411.33
(PEAK DAY 1, HOUR 18.167)
114.250 1707.0906 1397.81
(PEAK DAY 1, HOUR 18.250)
114.333 1716.6150 1382.94
(PEAK DAY 1, HOUR 18.333)
114.417 1726.0271 1366.64
(PEAK DAY 1, HOUR 18.417)
114.500 1735.3301 1350.80
(PEAK DAY 1, HOUR 18.500)
114.583 1744.5294 1335.74
(PEAK DAY 1, HOUR 18.583)
114.667 1753.6448 1323.55
(PEAK DAY 1, HOUR 18.667)
114.750 1762.6930 1313.80
(PEAK DAY 1, HOUR 18.750)
114.833 1771.6824 1305.25
(PEAK DAY 1, HOUR 18.833)
114.917 1780.6116 1296.52
(PEAK DAY 1, HOUR 18.917)
115.000 1789.4841 1288.29
(PEAK DAY 1, HOUR 19.000)
115.083 1798.3104 1281.58
(PEAK DAY 1, HOUR 19.083)
115.167 1807.0950 1275.52
(PEAK DAY 1, HOUR 19.167)
115.250 1815.8392 1269.67
(PEAK DAY 1, HOUR 19.250)
115.333 1824.5472 1264.41
(PEAK DAY 1, HOUR 19.333)
115.417 1833.2209 1259.42
(PEAK DAY 1, HOUR 19.417)
115.500 1841.8612 1254.56
(PEAK DAY 1, HOUR 19.500)
115.583 1850.4686 1249.79
(PEAK DAY 1, HOUR 19.583)
115.667 1859.0433 1245.05
(PEAK DAY 1, HOUR 19.667)
115.750 1867.5852 1240.28
(PEAK DAY 1, HOUR 19.750)
115.833 1876.0917 1235.13
(PEAK DAY 1, HOUR 19.833)
115.917 1884.5619 1229.88
(PEAK DAY 1, HOUR 19.917)
116.000 1892.9989 1225.05
(PEAK DAY 1, HOUR 20.000)
116.083 1901.4050 1220.58
(PEAK DAY 1, HOUR 20.083)
116.167 1909.7816 1216.28
(PEAK DAY 1, HOUR 20.167)
116.250 1918.1292 1212.06
(PEAK DAY 1, HOUR 20.250)
116.333 1926.4474 1207.80
(PEAK DAY 1, HOUR 20.333)
116.417 1934.7319 1202.92

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 (PEAK DAY 1, HOUR  20.417)
116.500   1942.9862   1198.52  .         . Q       .         V         .
 (PEAK DAY 1, HOUR  20.500)
116.583   1951.2131   1194.55  .         . Q       .         V         .
 (PEAK DAY 1, HOUR  20.583)
116.667   1959.4142   1190.79  .         . Q       .         V         .
 (PEAK DAY 1, HOUR  20.667)
116.750   1967.5900   1187.12  .         . Q       .         V         .
 (PEAK DAY 1, HOUR  20.750)
116.833   1975.7407   1183.49  .         . Q       .         V         .
 (PEAK DAY 1, HOUR  20.833)
116.917   1983.8666   1179.88  .         . Q       .         V         .
 (PEAK DAY 1, HOUR  20.917)
117.000   1991.9675   1176.25  .         . Q       .         V         .
 (PEAK DAY 1, HOUR  21.000)
117.083   2000.0447   1172.81  .         . Q       .         .V        .
 (PEAK DAY 1, HOUR  21.083)
117.167   2008.0985   1169.41  .         . Q       .         .V        .
 (PEAK DAY 1, HOUR  21.167)
117.250   2016.1293   1166.06  .         . Q       .         .V        .
 (PEAK DAY 1, HOUR  21.250)
117.333   2024.1373   1162.77  .         . Q       .         .V        .
 (PEAK DAY 1, HOUR  21.333)
117.417   2032.1234   1159.57  .         . Q       .         .V        .
 (PEAK DAY 1, HOUR  21.417)
117.500   2040.0879   1156.45  .         . Q       .         .V        .
 (PEAK DAY 1, HOUR  21.500)
117.583   2048.0312   1153.37  .         . Q       .         .V        .
 (PEAK DAY 1, HOUR  21.583)
117.667   2055.9536   1150.32  .         . Q       .         .V        .
 (PEAK DAY 1, HOUR  21.667)
117.750   2063.8552   1147.30  .         . Q       .         . V       .
 (PEAK DAY 1, HOUR  21.750)
117.833   2071.7361   1144.31  .         . Q       .         . V       .
 (PEAK DAY 1, HOUR  21.833)
117.917   2079.5967   1141.34  .         . Q       .         . V       .
 (PEAK DAY 1, HOUR  21.917)
118.000   2087.4370   1138.40  .         . Q       .         . V       .
 (PEAK DAY 1, HOUR  22.000)
118.083   2095.2571   1135.48  .         . Q       .         . V       .
 (PEAK DAY 1, HOUR  22.083)
118.167   2103.0571   1132.58  .         . Q       .         . V       .
 (PEAK DAY 1, HOUR  22.167)
118.250   2110.8374   1129.69  .         . Q       .         . V       .
 (PEAK DAY 1, HOUR  22.250)
118.333   2118.5974   1126.76  .         . Q       .         . V       .
 (PEAK DAY 1, HOUR  22.333)
118.417   2126.3347   1123.45  .         . Q       .         . V       .
 (PEAK DAY 1, HOUR  22.417)
118.500   2134.0444   1119.44  .         . Q       .         .  V      .
 (PEAK DAY 1, HOUR  22.500)
118.583   2141.7231   1114.95  .         . Q       .         .  V      .
 (PEAK DAY 1, HOUR  22.583)
118.667   2149.3696   1110.27  .         . Q       .         .  V      .
 (PEAK DAY 1, HOUR  22.667)
118.750   2156.9836   1105.55  .         .Q        .         .  V      .
 (PEAK DAY 1, HOUR  22.750)
118.833   2164.5652   1100.83  .         .Q        .         .  V      .
 (PEAK DAY 1, HOUR  22.833)
118.917   2172.1143   1096.13  .         .Q        .         .  V      .
 (PEAK DAY 1, HOUR  22.917)
119.000   2179.6311   1091.46  .         .Q        .         .  V      .
 (PEAK DAY 1, HOUR  23.000)
119.083   2187.1160   1086.80  .         .Q        .         .  V      .
 (PEAK DAY 1, HOUR  23.083)
119.167   2194.5688   1082.17  .         .Q        .         .   V     .
 (PEAK DAY 1, HOUR  23.167)
119.250   2201.9902   1077.57  .         .Q        .         .   V     .
 (PEAK DAY 1, HOUR  23.250)
119.333   2209.3799   1072.98  .         .Q        .         .   V     .
 (PEAK DAY 1, HOUR  23.333)
119.417   2216.7380   1068.40  .         .Q        .         .   V     .
 (PEAK DAY 1, HOUR  23.417)
119.500   2224.0645   1063.79  .         .Q        .         .   V     .
 (PEAK DAY 1, HOUR  23.500)
119.583   2231.3589   1059.13  .         .Q        .         .   V     .
 (PEAK DAY 1, HOUR  23.583)
119.667   2238.6211   1054.47  .         .Q        .         .   V     .
 (PEAK DAY 1, HOUR  23.667)
119.750   2245.8511   1049.81  .         .Q        .         .   V     .
 (PEAK DAY 1, HOUR  23.750)
119.833   2253.0491   1045.17  .         .Q        .         .   V     .
 (PEAK DAY 1, HOUR  23.833)
119.917   2260.2153   1040.55  .         .Q        .         .    V    .
 (PEAK DAY 1, HOUR  23.917)
120.000   2267.3499   1035.95  .         .Q        .         .    V    .
 (PEAK DAY 1, HOUR  24.000)
120.083   2274.4490   1030.79  .         .Q        .         .    V    .
 (PEAK DAY 1, HOUR  24.083)
120.167   2281.5017   1024.05  .         .Q        .         .    V    .
 (PEAK DAY 1, HOUR  24.167)
120.250   2288.4854   1014.04  .         Q         .         .    V    .
 (PEAK DAY 1, HOUR  24.250)
120.333   2295.3772   1000.70  .         Q         .         .    V    .
 (PEAK DAY 1, HOUR  24.333)
120.417   2302.1531    983.85  .         Q         .         .    V    .
 (PEAK DAY 1, HOUR  24.417)
120.500   2308.8203    968.09  .         Q         .         .    V    .
 (PEAK DAY 1, HOUR  24.500)
120.583   2315.4028    955.79  .         Q         .         .    V    .
 (PEAK DAY 1, HOUR  24.583)
120.667   2321.9202    946.31  .         Q         .         .     V   .
 (PEAK DAY 1, HOUR  24.667)
120.750   2328.3826    938.33  .         Q         .         .     V   .
 (PEAK DAY 1, HOUR  24.750)
120.833   2334.7961    931.26  .         Q         .         .     V   .
 (PEAK DAY 1, HOUR  24.833)
120.917   2341.1653    924.81  .        Q.         .         .     V   .
 (PEAK DAY 1, HOUR  24.917)
121.000   2347.4917    918.59  .        Q.         .         .     V   .
 (PEAK DAY 1, HOUR  25.000)
121.083   2353.7759    912.47  .        Q.         .         .     V   .
 (PEAK DAY 1, HOUR  25.083)
121.167   2360.0188    906.47  .        Q.         .         .     V   .
 (PEAK DAY 1, HOUR  25.167)
121.250   2366.2217    900.64  .        Q.         .         .     V   .
 (PEAK DAY 1, HOUR  25.250)
121.333   2372.3853    894.95  .        Q.         .         .     V   .
 (PEAK DAY 1, HOUR  25.333)
121.417   2378.5098    889.28  .        Q.         .         .     V   .
 (PEAK DAY 1, HOUR  25.417)
121.500   2384.5950    883.56  .        Q.         .         .     V   .
 (PEAK DAY 1, HOUR  25.500)
121.583   2390.6401    877.77  .        Q.         .         .      V  .
 (PEAK DAY 1, HOUR  25.583)
121.667   2396.6453    871.95  .        Q.         .         .      V  .
 (PEAK DAY 1, HOUR  25.667)
121.750   2402.6104    866.14  .        Q.         .         .      V  .
 (PEAK DAY 1, HOUR  25.750)
121.833   2408.5356    860.36  .        Q.         .         .      V  .
 (PEAK DAY 1, HOUR  25.833)
121.917   2414.4214    854.61  .        Q.         .         .      V  .
 (PEAK DAY 1, HOUR  25.917)
122.000   2420.2678    848.91  .        Q.         .         .      V  .
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 (PEAK DAY 1, HOUR  26.000)
 122.083   2426.0752    843.24  .        Q.         .         .      V  .
 (PEAK DAY 1, HOUR  26.083)
 122.167   2431.8438    837.61  .        Q.         .         .      V  .
 (PEAK DAY 1, HOUR  26.167)
 122.250   2437.5732    831.93  .       Q .         .         .      V  .
 (PEAK DAY 1, HOUR  26.250)
 122.333   2443.2617    825.97  .       Q .         .         .      V  .
 (PEAK DAY 1, HOUR  26.333)
 122.417   2448.9062    819.59  .       Q .         .         .      V  .
 (PEAK DAY 1, HOUR  26.417)
 122.500   2454.5051    812.94  .       Q .         .         .       V .
 (PEAK DAY 1, HOUR  26.500)
 122.583   2460.0579    806.25  .       Q .         .         .       V .
 (PEAK DAY 1, HOUR  26.583)
 122.667   2465.5647    799.59  .       Q .         .         .       V .
 (PEAK DAY 1, HOUR  26.667)
 122.750   2471.0261    792.98  .       Q .         .         .       V .
 (PEAK DAY 1, HOUR  26.750)
 122.833   2476.4424    786.43  .       Q .         .         .       V .
 (PEAK DAY 1, HOUR  26.833)
 122.917   2481.8137    779.94  .       Q .         .         .       V .
 (PEAK DAY 1, HOUR  26.917)
 123.000   2487.1401    773.39  .       Q .         .         .       V .
 (PEAK DAY 1, HOUR  27.000)
 123.083   2492.4158    766.02  .       Q .         .         .       V .
 (PEAK DAY 1, HOUR  27.083)
 123.167   2497.6287    756.93  .       Q .         .         .       V .
 (PEAK DAY 1, HOUR  27.167)
 123.250   2502.7686    746.30  .       Q .         .         .       V .
 (PEAK DAY 1, HOUR  27.250)
 123.333   2507.8303    734.96  .      Q  .         .         .       V .
 (PEAK DAY 1, HOUR  27.333)
 123.417   2512.8130    723.47  .      Q  .         .         .       V .
 (PEAK DAY 1, HOUR  27.417)
 123.500   2517.7166    712.01  .      Q  .         .         .        V.
 (PEAK DAY 1, HOUR  27.500)
 123.583   2522.5396    700.31  .      Q  .         .         .        V.
 (PEAK DAY 1, HOUR  27.583)
 123.667   2527.2788    688.13  .      Q  .         .         .        V.
 (PEAK DAY 1, HOUR  27.667)
 123.750   2531.9321    675.65  .      Q  .         .         .        V.
 (PEAK DAY 1, HOUR  27.750)
 123.833   2536.4995    663.19  .      Q  .         .         .        V.
 (PEAK DAY 1, HOUR  27.833)
 123.917   2540.9822    650.88  .      Q  .         .         .        V.
 (PEAK DAY 1, HOUR  27.917)
 124.000   2545.3796    638.50  .     Q   .         .         .        V.
 (PEAK DAY 1, HOUR  28.000)
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
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  FLOW PROCESS FROM NODE   6355.00 TO NODE   6371.00 IS CODE = 5.2
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  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  6039.2 Ac. ***

         THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
         TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
         INTERVALS(Reference: the National Engineering Handbook,
         Hydrology, Chapter 17, page 17-52, August,1972,
         U.S. Department of Commerce).


         ASSUMED REGULAR CHANNEL INFORMATION:
           BASEWIDTH(FT) =   30.00     CHANNEL Z =  1.00
           UPSTREAM ELEVATION(FT) =     314.00
           DOWNSTREAM ELEVATION(FT) =     220.00
           CHANNEL LENGTH(FT) =    5919.00     MANNING'S FACTOR = 0.040
           CONSTANT LOSS RATE(CFS) =    0.00


         CHANNEL ROUTING COEFFICIENT ESTIMATED:
           MAXIMUM INFLOW(CFS) =  3620.86
           AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  2600.39
           CHANNEL NORMAL VELOCITY FOR Q =  2600.39 CFS =  12.66 FPS
           ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.882

         MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
         UNIT INTERVALS IS CSTAR = 0.826


         CONVEX METHOD CHANNEL ROUTING RESULTS:
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PEAK DAY	TIME (HRS)	CLOCK TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
2	24.000	96.000	77.68	78.62	78.62
1	0.083	96.083	77.54	78.03	78.03
1	0.167	96.167	78.61	77.67	77.67
1	0.250	96.250	82.23	78.12	78.12
1	0.333	96.333	88.96	80.39	80.39
1	0.417	96.417	99.91	85.39	85.39
1	0.500	96.500	112.33	94.00	94.00
1	0.583	96.583	124.74	105.30	105.30
1	0.667	96.667	138.78	117.52	117.52
1	0.750	96.750	158.12	130.74	130.74
1	0.833	96.833	181.80	147.38	147.38
1	0.917	96.917	203.13	168.49	168.49
1	1.000	97.000	218.80	190.51	190.51
1	1.083	97.083	230.28	209.04	209.04
1	1.167	97.167	239.24	223.04	223.04
1	1.250	97.250	246.55	233.65	233.65
1	1.333	97.333	252.74	242.05	242.05
1	1.417	97.417	258.12	248.96	248.96
1	1.500	97.500	262.85	254.86	254.86
1	1.583	97.583	267.04	260.00	260.00
1	1.667	97.667	270.83	264.52	264.52
1	1.750	97.750	274.31	268.56	268.56
1	1.833	97.833	277.47	272.23	272.23
1	1.917	97.917	280.34	275.58	275.58
1	2.000	98.000	282.94	278.63	278.63
1	2.083	98.083	285.28	281.39	281.39
1	2.167	98.167	287.42	283.88	283.88
1	2.250	98.250	289.43	286.14	286.14
1	2.333	98.333	291.24	288.23	288.23
1	2.417	98.417	292.80	290.16	290.16
1	2.500	98.500	294.18	291.86	291.86
1	2.583	98.583	295.49	293.35	293.35
1	2.667	98.667	296.78	294.72	294.72
1	2.750	98.750	298.06	296.02	296.02
1	2.833	98.833	299.34	297.31	297.31
1	2.917	98.917	300.63	298.59	298.59
1	3.000	99.000	301.92	299.88	299.88
1	3.083	99.083	303.21	301.17	301.17
1	3.167	99.167	304.52	302.46	302.46
1	3.250	99.250	305.83	303.76	303.76

1	3.333	99.333	307.16	305.07	305.07
1	3.417	99.417	308.50	306.39	306.39
1	3.500	99.500	309.86	307.72	307.72
1	3.583	99.583	311.23	309.07	309.07
1	3.667	99.667	312.61	310.43	310.43
1	3.750	99.750	314.00	311.80	311.80
1	3.833	99.833	315.40	313.19	313.19
1	3.917	99.917	316.82	314.58	314.58
1	4.000	100.000	318.25	315.99	315.99
1	4.083	100.083	319.69	317.41	317.41
1	4.167	100.167	321.11	318.85	318.85
1	4.250	100.250	322.51	320.28	320.28
1	4.333	100.333	323.87	321.69	321.69
1	4.417	100.417	325.24	323.07	323.07
1	4.500	100.500	326.60	324.44	324.44
1	4.583	100.583	327.98	325.80	325.80
1	4.667	100.667	329.37	327.18	327.18
1	4.750	100.750	330.78	328.56	328.56
1	4.833	100.833	332.21	329.96	329.96
1	4.917	100.917	333.65	331.38	331.38
1	5.000	101.000	335.10	332.81	332.81
1	5.083	101.083	336.58	334.25	334.25
1	5.167	101.167	338.06	335.72	335.72
1	5.250	101.250	339.57	337.20	337.20
1	5.333	101.333	341.10	338.69	338.69
1	5.417	101.417	342.64	340.21	340.21
1	5.500	101.500	344.20	341.74	341.74
1	5.583	101.583	345.78	343.29	343.29
1	5.667	101.667	347.38	344.86	344.86
1	5.750	101.750	348.99	346.44	346.44
1	5.833	101.833	350.63	348.05	348.05
1	5.917	101.917	352.29	349.68	349.68
1	6.000	102.000	353.97	351.32	351.32
1	6.083	102.083	355.67	352.99	352.99
1	6.167	102.167	357.38	354.67	354.67
1	6.250	102.250	359.13	356.38	356.38
1	6.333	102.333	360.89	358.11	358.11
1	6.417	102.417	362.68	359.86	359.86
1	6.500	102.500	364.49	361.64	361.64
1	6.583	102.583	366.32	363.43	363.43
1	6.667	102.667	368.18	365.25	365.25
1	6.750	102.750	370.06	367.10	367.10
1	6.833	102.833	371.97	368.97	368.97
1	6.917	102.917	373.91	370.86	370.86
1	7.000	103.000	375.87	372.78	372.78
1	7.083	103.083	377.86	374.72	374.72
1	7.167	103.167	379.87	376.70	376.70
1	7.250	103.250	381.92	378.70	378.70
1	7.333	103.333	383.99	380.72	380.72
1	7.417	103.417	386.09	382.78	382.78
1	7.500	103.500	388.22	384.87	384.87
1	7.583	103.583	390.39	386.98	386.98
1	7.667	103.667	392.58	389.13	389.13
1	7.750	103.750	394.81	391.30	391.30
1	7.833	103.833	397.07	393.51	393.51
1	7.917	103.917	399.37	395.75	395.75
1	8.000	104.000	401.70	398.03	398.03
1	8.083	104.083	404.06	400.34	400.34
1	8.167	104.167	406.47	402.68	402.68
1	8.250	104.250	408.91	405.07	405.07
1	8.333	104.333	411.39	407.49	407.49
1	8.417	104.417	413.91	409.94	409.94
1	8.500	104.500	416.47	412.44	412.44
1	8.583	104.583	419.07	414.97	414.97
1	8.667	104.667	421.71	417.55	417.55
1	8.750	104.750	424.40	420.17	420.17
1	8.833	104.833	427.13	422.83	422.83
1	8.917	104.917	429.91	425.54	425.54
1	9.000	105.000	432.74	428.29	428.29
1	9.083	105.083	435.62	431.09	431.09
1	9.167	105.167	438.54	433.94	433.94
1	9.250	105.250	441.52	436.84	436.84
1	9.333	105.333	444.55	439.79	439.79
1	9.417	105.417	447.64	442.78	442.78
1	9.500	105.500	450.78	445.84	445.84
1	9.583	105.583	453.99	448.95	448.95
1	9.667	105.667	457.25	452.12	452.12
1	9.750	105.750	460.57	455.35	455.35
1	9.833	105.833	463.96	458.64	458.64
1	9.917	105.917	467.42	461.99	461.99
1	10.000	106.000	470.93	465.40	465.40
1	10.083	106.083	474.53	468.88	468.88
1	10.167	106.167	478.19	472.44	472.44
1	10.250	106.250	481.93	476.06	476.06
1	10.333	106.333	485.75	479.75	479.75
1	10.417	106.417	489.65	483.53	483.53
1	10.500	106.500	493.62	487.38	487.38
1	10.583	106.583	497.70	491.31	491.31
1	10.667	106.667	501.85	495.33	495.33
1	10.750	106.750	506.10	499.43	499.43
1	10.833	106.833	510.43	503.62	503.62
1	10.917	106.917	514.88	507.91	507.91
1	11.000	107.000	519.42	512.29	512.29
1	11.083	107.083	524.02	516.78	516.78
1	11.167	107.167	528.33	521.33	521.33
1	11.250	107.250	531.99	525.78	525.78
1	11.333	107.333	535.13	529.78	529.78
1	11.417	107.417	538.30	533.23	533.23
1	11.500	107.500	541.80	536.44	536.44
1	11.583	107.583	545.72	539.79	539.79
1	11.667	107.667	550.01	543.48	543.48
1	11.750	107.750	554.66	547.55	547.55
1	11.833	107.833	559.60	551.99	551.99
1	11.917	107.917	564.83	556.75	556.75
1	12.000	108.000	570.29	561.81	561.81
1	12.083	108.083	576.37	567.13	567.13
1	12.167	108.167	583.69	572.89	572.89
1	12.250	108.250	593.36	579.55	579.55
1	12.333	108.333	605.49	587.97	587.97
1	12.417	108.417	620.39	598.69	598.69
1	12.500	108.500	634.77	612.01	612.01
1	12.583	108.583	646.67	626.37	626.37
1	12.667	108.667	656.90	639.46	639.46
1	12.750	108.750	667.35	650.71	650.71
1	12.833	108.833	679.03	661.23	661.23
1	12.917	108.917	692.01	672.33	672.33
1	13.000	109.000	705.35	684.58	684.58
1	13.083	109.083	717.89	697.62	697.62
1	13.167	109.167	729.37	710.49	710.49
1	13.250	109.250	740.41	722.54	722.54
1	13.333	109.333	751.45	733.89	733.89
1	13.417	109.417	762.68	744.98	744.98
1	13.500	109.500	773.62	756.13	756.13
1	13.583	109.583	783.74	767.20	767.20
1	13.667	109.667	793.05	777.74	777.74
1	13.750	109.750	802.21	787.51	787.51
1	13.833	109.833	811.61	796.82	796.82
1	13.917	109.917	821.56	806.13	806.13
1	14.000	110.000	832.08	815.80	815.80
1	14.083	110.083	843.45	826.00	826.00
1	14.167	110.167	855.80	836.90	836.90
1	14.250	110.250	869.58	848.70	848.70
1	14.333	110.333	884.68	861.69	861.69
1	14.417	110.417	901.50	876.01	876.01

1	14.500	110.500	919.28	891.87	891.87
1	14.583	110.583	937.70	909.02	909.02
1	14.667	110.667	957.05	927.02	927.02
1	14.750	110.750	978.73	945.85	945.85
1	14.833	110.833	1003.21	966.31	966.31
1	14.917	110.917	1030.96	989.23	989.23
1	15.000	111.000	1061.20	1015.13	1015.13
1	15.083	111.083	1093.98	1043.84	1043.84
1	15.167	111.167	1129.15	1075.12	1075.12
1	15.250	111.250	1167.69	1108.88	1108.88
1	15.333	111.333	1208.22	1145.55	1145.55
1	15.417	111.417	1249.01	1184.79	1184.79
1	15.500	111.500	1287.87	1225.23	1225.23
1	15.583	111.583	1323.89	1264.97	1264.97
1	15.667	111.667	1358.32	1302.51	1302.51
1	15.750	111.750	1394.43	1337.97	1337.97
1	15.833	111.833	1445.04	1373.45	1373.45
1	15.917	111.917	1525.36	1416.95	1416.95
1	16.000	112.000	1647.27	1481.69	1481.69
1	16.083	112.083	1877.81	1580.80	1580.80
1	16.167	112.167	2248.69	1754.91	1754.91
1	16.250	112.250	2782.57	2048.20	2048.20
1	16.333	112.333	3266.90	2489.85	2489.85
1	16.417	112.417	3620.86	2982.04	2982.04
1	16.500	112.500	3403.29	3400.31	3400.31
1	16.583	112.583	2894.65	3469.90	3469.90
1	16.667	112.667	2456.16	3151.84	3151.84
1	16.750	112.750	2185.38	2712.70	2712.70
1	16.833	112.833	2002.58	2360.83	2360.83
1	16.917	112.917	1865.38	2121.42	2121.42
1	17.000	113.000	1779.30	1952.34	1952.34
1	17.083	113.083	1714.60	1836.01	1836.01
1	17.167	113.167	1657.40	1755.72	1755.72
1	17.250	113.250	1603.94	1692.19	1692.19
1	17.333	113.333	1560.57	1635.81	1635.81
1	17.417	113.417	1528.62	1587.07	1587.07
1	17.500	113.500	1505.14	1548.67	1548.67
1	17.583	113.583	1488.24	1519.97	1519.97
1	17.667	113.667	1474.88	1498.99	1498.99
1	17.750	113.750	1463.33	1483.20	1483.20
1	17.833	113.833	1452.38	1470.35	1470.35
1	17.917	113.917	1442.29	1458.89	1458.89
1	18.000	114.000	1431.97	1448.29	1448.29
1	18.083	114.083	1421.83	1438.00	1438.00
1	18.167	114.167	1411.33	1427.78	1427.78
1	18.250	114.250	1397.81	1417.44	1417.44
1	18.333	114.333	1382.94	1405.40	1405.40
1	18.417	114.417	1366.64	1391.44	1391.44
1	18.500	114.500	1350.80	1375.99	1375.99
1	18.583	114.583	1335.74	1360.08	1360.08
1	18.667	114.667	1323.55	1344.63	1344.63
1	18.750	114.750	1313.80	1330.99	1330.99
1	18.833	114.833	1305.25	1319.80	1319.80
1	18.917	114.917	1296.52	1310.43	1310.43
1	19.000	115.000	1288.29	1301.64	1301.64
1	19.083	115.083	1281.58	1293.15	1293.15
1	19.167	115.167	1275.52	1285.67	1285.67
1	19.250	115.250	1269.67	1279.16	1279.16
1	19.333	115.333	1264.41	1273.13	1273.13
1	19.417	115.417	1259.42	1267.55	1267.55
1	19.500	115.500	1254.56	1262.37	1262.37
1	19.583	115.583	1249.79	1257.42	1257.42
1	19.667	115.667	1245.05	1252.60	1252.60
1	19.750	115.750	1240.28	1247.83	1247.83
1	19.833	115.833	1235.13	1243.07	1243.07
1	19.917	115.917	1229.88	1238.10	1238.10
1	20.000	116.000	1225.05	1232.93	1232.93
1	20.083	116.083	1220.58	1227.91	1227.91
1	20.167	116.167	1216.28	1223.23	1223.23
1	20.250	116.250	1212.06	1218.82	1218.82
1	20.333	116.333	1207.80	1214.54	1214.54
1	20.417	116.417	1202.92	1210.29	1210.29
1	20.500	116.500	1198.52	1205.71	1205.71
1	20.583	116.583	1194.55	1201.13	1201.13
1	20.667	116.667	1190.79	1196.92	1196.92
1	20.750	116.750	1187.12	1193.02	1193.02
1	20.833	116.833	1183.49	1189.28	1189.28
1	20.917	116.917	1179.88	1185.62	1185.62
1	21.000	117.000	1176.25	1182.00	1182.00
1	21.083	117.083	1172.81	1178.37	1178.37
1	21.167	117.167	1169.41	1174.84	1174.84
1	21.250	117.250	1166.06	1171.41	1171.41
1	21.333	117.333	1162.77	1168.03	1168.03
1	21.417	117.417	1159.57	1164.70	1164.70
1	21.500	117.500	1156.45	1161.45	1161.45
1	21.583	117.583	1153.37	1158.28	1158.28
1	21.667	117.667	1150.32	1155.18	1155.18
1	21.750	117.750	1147.30	1152.11	1152.11
1	21.833	117.833	1144.31	1149.07	1149.07
1	21.917	117.917	1141.34	1146.06	1146.06
1	22.000	118.000	1138.40	1143.08	1143.08
1	22.083	118.083	1135.48	1140.12	1140.12
1	22.167	118.167	1132.58	1137.19	1137.19
1	22.250	118.250	1129.69	1134.28	1134.28
1	22.333	118.333	1126.76	1131.38	1131.38
1	22.417	118.417	1123.45	1128.47	1128.47
1	22.500	118.500	1119.44	1125.35	1125.35
1	22.583	118.583	1114.95	1121.71	1121.71
1	22.667	118.667	1110.27	1117.51	1117.51
1	22.750	118.750	1105.55	1112.97	1112.97
1	22.833	118.833	1100.83	1108.30	1108.30
1	22.917	118.917	1096.13	1103.59	1103.59
1	23.000	119.000	1091.46	1098.88	1098.88
1	23.083	119.083	1086.80	1094.19	1094.19
1	23.167	119.167	1082.17	1089.53	1089.53
1	23.250	119.250	1077.57	1084.88	1084.88
1	23.333	119.333	1072.98	1080.26	1080.26
1	23.417	119.417	1068.40	1075.67	1075.67
1	23.500	119.500	1063.79	1071.08	1071.08
1	23.583	119.583	1059.13	1066.48	1066.48
1	23.667	119.667	1054.47	1061.85	1061.85
1	23.750	119.750	1049.81	1057.19	1057.19
1	23.833	119.833	1045.17	1052.53	1052.53
1	23.917	119.917	1040.55	1047.88	1047.88
1	24.000	120.000	1035.95	1043.25	1043.25
1	24.083	120.083	1030.79	1038.64	1038.64
1	24.167	120.167	1024.05	1033.75	1033.75
1	24.250	120.250	1014.04	1027.82	1027.82
1	24.333	120.333	1000.70	1019.53	1019.53
1	24.417	120.417	983.85	1008.10	1008.10
1	24.500	120.500	968.09	993.27	993.27
1	24.583	120.583	955.79	977.34	977.34
1	24.667	120.667	946.31	963.34	963.34
1	24.750	120.750	938.33	952.20	952.20
1	24.833	120.833	931.26	943.21	943.21
1	24.917	120.917	924.81	935.52	935.52
1	25.000	121.000	918.59	928.67	928.67
1	25.083	121.083	912.47	922.26	922.26
1	25.167	121.167	906.47	916.06	916.06
1	25.250	121.250	900.64	909.99	909.99
1	25.333	121.333	894.95	904.07	904.07
1	25.417	121.417	889.28	898.29	898.29
1	25.500	121.500	883.56	892.60	892.60
1	25.583	121.583	877.77	886.90	886.90

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  1   25.667 121.667       871.95      881.15      881.15
  1   25.750 121.750       866.14      875.35      875.35
  1   25.833 121.833       860.36      869.54      869.54
  1   25.917 121.917       854.61      863.74      863.74
  1   26.000 122.000       848.91      857.98      857.98
  1   26.083 122.083       843.24      852.25      852.25
  1   26.167 122.167       837.61      846.56      846.56
  1   26.250 122.250       831.93      840.91      840.91
  1   26.333 122.333       825.97      835.25      835.25
  1   26.417 122.417       819.59      829.43      829.43
  1   26.500 122.500       812.94      823.27      823.27
  1   26.583 122.583       806.25      816.79      816.79
  1   26.667 122.667       799.59      810.15      810.15
  1   26.750 122.750       792.98      803.49      803.49
  1   26.833 122.833       786.43      796.85      796.85
  1   26.917 122.917       779.94      790.27      790.27
  1   27.000 123.000       773.39      783.74      783.74
  1   27.083 123.083       766.02      777.21      777.21
  1   27.167 123.167       756.93      770.24      770.24
  1   27.250 123.250       746.30      762.05      762.05
  1   27.333 123.333       734.96      752.32      752.32
  1   27.417 123.417       723.47      741.48      741.48
  1   27.500 123.500       712.01      730.16      730.16
  1   27.583 123.583       700.31      718.71      718.71
  1   27.667 123.667       688.13      707.13      707.13
  1   27.750 123.750       675.65      695.20      695.20
  1   27.833 123.833       663.19      682.91      682.91
  1   27.917 123.917       650.88      670.47      670.47
  1   28.000 124.000       638.50      658.09      658.09
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
================================================================================
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   2579.381 AF
    OUTFLOW VOLUME =   2579.380 AF
    LOSS    VOLUME =      0.000 AF
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6360.00 TO NODE   6371.00 IS CODE =   1
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        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of   922.3 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
================================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #2)

         WATERSHED AREA =     922.300 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.250 HOURS
          CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
          THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
          MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.900
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:
         +-------------------+--------+--------+--------+--------+--------+
         | RAINFALL DEPTHS & |        |        |        |        |        |
```

LOSS RATES	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
5-MINUTE (INCHES)	0.58	0.27	0.12	0.06	0.04
30-MINUTE (INCHES)	1.22	0.56	0.24	0.13	0.09
1-HOUR (INCHES)	1.62	0.75	0.33	0.17	0.12
3-HOUR (INCHES)	2.71	1.25	0.54	0.28	0.21
6-HOUR (INCHES)	3.75	1.73	0.75	0.39	0.29
24-HOUR (INCHES)	6.28	2.89	1.26	0.66	0.48
LOSS RATE(IN/HR)	0.120	0.120	0.120	0.120	0.120
LOW LOSS FRACTION	0.510	0.760	0.950	0.990	0.990

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          5-MINUTE FACTOR = 0.959
         30-MINUTE FACTOR = 0.959
          1-HOUR FACTOR = 0.959
          3-HOUR FACTOR = 0.994
          6-HOUR FACTOR = 0.997
         24-HOUR FACTOR = 0.998

        UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
        UNIT INTERVAL PERCENTAGE OF LAG-TIME =  33.333


        RUNOFF HYDROGRAPH LISTING LIMITS:
        MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  96.00
        MODEL TIME(HOURS) FOR END OF RESULTS = 124.00
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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	2.292	255.704
2	13.821	1285.900
3	35.522	2420.567
4	62.164	2971.648
5	80.648	2061.668
6	89.997	1042.866
7	94.646	518.513
8	96.625	220.790
9	97.489	96.296
10	98.211	80.598
11	98.708	55.360
12	99.005	33.223
13	99.174	18.845
14	99.253	8.821
15	99.326	8.100
16	99.394	7.535
17	99.458	7.164
18	99.518	6.727
19	99.574	6.257
20	99.626	5.759
21	99.675	5.514
22	99.718	4.708
23	99.759	4.643
24	99.799	4.443
25	99.827	3.130
26	99.851	2.675
27	99.875	2.675
28	99.897	2.469
29	99.906	1.014
30	99.913	0.730
31	99.919	0.731
32	99.926	0.729

33	99.932	0.731
34	99.939	0.729
35	99.946	0.730
36	99.952	0.729
37	99.959	0.729
38	99.965	0.729
39	99.972	0.730
40	99.978	0.729
41	99.985	0.729
42	99.991	0.729
43	99.998	0.729
44	100.000	0.237

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 433.5397

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 453.8287

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5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	650.0	1300.0	1950.0	2600.0
96.000	126.4908	10.29	Q	.V	.	.	.
(PEAK DAY 2, HOUR 24.000)							
96.083	126.5666	11.01	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.083)							
96.167	126.6693	14.91	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.167)							
96.250	126.8231	22.33	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.250)							
96.333	127.0401	31.50	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.333)							
96.417	127.3012	37.92	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.417)							
96.500	127.5853	41.24	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.500)							
96.583	127.8812	42.97	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.583)							
96.667	128.1828	43.79	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.667)							
96.750	128.4874	44.23	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.750)							
96.833	128.7947	44.62	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.833)							
96.917	129.1042	44.94	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.917)							
97.000	129.4155	45.20	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.000)							
97.083	129.7283	45.41	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.083)							
97.167	130.0422	45.59	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.167)							
97.250	130.3575	45.77	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.250)							
97.333	130.6740	45.95	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.333)							
97.417	130.9917	46.14	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.417)							
97.500	131.3107	46.32	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.500)							
97.583	131.6310	46.50	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.583)							
97.667	131.9525	46.68	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.667)							
97.750	132.2753	46.87	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.750)							
97.833	132.5993	47.05	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.833)							
97.917	132.9246	47.23	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.917)							
98.000	133.2512	47.42	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.000)							
98.083	133.5791	47.60	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.083)							
98.167	133.9082	47.79	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.167)							
98.250	134.2386	47.97	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.250)							
98.333	134.5703	48.16	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.333)							
98.417	134.9032	48.34	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.417)							
98.500	135.2374	48.53	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.500)							
98.583	135.5729	48.71	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.583)							
98.667	135.9097	48.90	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.667)							
98.750	136.2478	49.09	Q	. V	.	.	.
(PEAK DAY 1, HOUR 2.750)							
98.833	136.5872	49.28	Q	. V	.	.	.
(PEAK DAY 1, HOUR 2.833)							
98.917	136.9279	49.48	Q	. V	.	.	.
(PEAK DAY 1, HOUR 2.917)							
99.000	137.2700	49.67	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.000)							
99.083	137.6135	49.87	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.083)							
99.167	137.9583	50.07	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.167)							
99.250	138.3045	50.27	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.250)							
99.333	138.6522	50.48	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.333)							
99.417	139.0012	50.68	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.417)							
99.500	139.3517	50.89	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.500)							
99.583	139.7036	51.10	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.583)							
99.667	140.0570	51.31	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.667)							
99.750	140.4118	51.52	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.750)							
99.833	140.7682	51.74	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.833)							
99.917	141.1260	51.95	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.917)							
100.000	141.4853	52.18	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.000)							
100.083	141.8462	52.40	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.083)							
100.167	142.2086	52.62	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.167)							
100.250	142.5726	52.85	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.250)							
100.333	142.9381	53.08	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.333)							
100.417	143.3053	53.31	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.417)							
100.500	143.6741	53.55	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.500)							
100.583	144.0445	53.78	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.583)							
100.667	144.4165	54.02	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.667)							
100.750	144.7903	54.27	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.750)							
100.833	145.1657	54.51	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.833)							
100.917	145.5429	54.76	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.917)							
101.000	145.9218	55.02	Q	. V	.	.	.
(PEAK DAY 1, HOUR 5.000)							
101.083	146.3024	55.27	Q	. V	.	.	.

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 (PEAK DAY 1, HOUR   5.083)
 101.167    146.6848     55.53  Q          . V        .          .          .
 (PEAK DAY 1, HOUR   5.167)
 101.250    147.0691     55.79  Q          . V        .          .          .
 (PEAK DAY 1, HOUR   5.250)
 101.333    147.4551     56.05  Q          . V        .          .          .
 (PEAK DAY 1, HOUR   5.333)
 101.417    147.8430     56.32  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   5.417)
 101.500    148.2327     56.59  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   5.500)
 101.583    148.6244     56.87  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   5.583)
 101.667    149.0179     57.14  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   5.667)
 101.750    149.4134     57.42  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   5.750)
 101.833    149.8109     57.71  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   5.833)
 101.917    150.2103     58.00  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   5.917)
 102.000    150.6118     58.29  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.000)
 102.083    151.0152     58.59  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.083)
 102.167    151.4208     58.89  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.167)
 102.250    151.8285     59.19  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.250)
 102.333    152.2383     59.50  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.333)
 102.417    152.6502     59.81  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.417)
 102.500    153.0643     60.13  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.500)
 102.583    153.4807     60.45  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.583)
 102.667    153.8993     60.78  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.667)
 102.750    154.3201     61.11  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.750)
 102.833    154.7433     61.45  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.833)
 102.917    155.1688     61.78  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.917)
 103.000    155.5967     62.13  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   7.000)
 103.083    156.0270     62.48  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   7.083)
 103.167    156.4598     62.84  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   7.167)
 103.250    156.8950     63.19  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   7.250)
 103.333    157.3327     63.56  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   7.333)
 103.417    157.7730     63.93  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   7.417)
 103.500    158.2159     64.31  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   7.500)
 103.583    158.6615     64.69  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   7.583)
 103.667    159.1097     65.08  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   7.667)
 103.750    159.5606     65.47  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   7.750)
 103.833    160.0143     65.88  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   7.833)
 103.917    160.4708     66.28  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   7.917)
 104.000    160.9302     66.70  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.000)
 104.083    161.3924     67.12  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.083)
 104.167    161.8577     67.55  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.167)
 104.250    162.3259     67.98  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.250)
 104.333    162.7971     68.43  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.333)
 104.417    163.2715     68.88  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.417)
 104.500    163.7490     69.34  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.500)
 104.583    164.2297     69.80  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.583)
 104.667    164.7137     70.28  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.667)
 104.750    165.2010     70.76  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.750)
 104.833    165.6917     71.25  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.833)
 104.917    166.1859     71.75  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.917)
 105.000    166.6836     72.26  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   9.000)
 105.083    167.1848     72.78  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   9.083)
 105.167    167.6897     73.31  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   9.167)
 105.250    168.1983     73.85  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   9.250)
 105.333    168.7106     74.40  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   9.333)
 105.417    169.2269     74.96  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   9.417)
 105.500    169.7471     75.53  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   9.500)
 105.583    170.2712     76.11  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR   9.583)
 105.667    170.7995     76.71  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR   9.667)
 105.750    171.3320     77.31  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR   9.750)
 105.833    171.8687     77.93  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR   9.833)
 105.917    172.4097     78.56  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR   9.917)
 106.000    172.9553     79.21  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR  10.000)
 106.083    173.5053     79.87  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR  10.083)
 106.167    174.0600     80.55  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR  10.167)
 106.250    174.6195     81.23  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR  10.250)
 106.333    175.1838     81.94  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR  10.333)
 106.417    175.7531     82.66  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR  10.417)
 106.500    176.3275     83.40  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR  10.500)
 106.583    176.9070     84.15  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR  10.583)
 106.667    177.4919     84.93  .Q         .    V     .          .          .
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 (PEAK DAY 1, HOUR  10.667)
106.750    178.0822     85.71  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.750)
106.833    178.6782     86.53  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.833)
106.917    179.2798     87.36  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.917)
107.000    179.8873     88.21  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.000)
107.083    180.5009     89.08  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.083)
107.167    181.1206     89.99  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.167)
107.250    181.7466     90.90  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.250)
107.333    182.3792     91.85  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.333)
107.417    183.0185     92.82  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.417)
107.500    183.6647     93.83  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.500)
107.583    184.3179     94.85  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.583)
107.667    184.9784     95.91  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.667)
107.750    185.6464     96.99  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.750)
107.833    186.3222     98.12  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.833)
107.917    187.0058     99.27  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.917)
108.000    187.6978    100.47  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  12.000)
108.083    188.4071    103.00  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  12.083)
108.167    189.1709    110.90  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  12.167)
108.250    190.0303    124.79  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  12.250)
108.333    191.0077    141.92  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.333)
108.417    192.0742    154.86  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.417)
108.500    193.1971    163.04  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.500)
108.583    194.3594    168.77  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.583)
108.667    195.5523    173.20  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.667)
108.750    196.7720    177.11  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.750)
108.833    198.0194    181.12  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.833)
108.917    199.2942    185.10  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.917)
109.000    200.5969    189.16  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.000)
109.083    201.9279    193.26  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.083)
109.167    203.2883    197.53  .  Q      .      V  .         .         .
 (PEAK DAY 1, HOUR  13.167)
109.250    204.6788    201.90  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.250)
109.333    206.1012    206.52  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.333)
109.417    207.5563    211.28  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.417)
109.500    209.0460    216.31  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.500)
109.583    210.5715    221.50  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.583)
109.667    212.1349    227.01  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.667)
109.750    213.7376    232.71  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.750)
109.833    215.3821    238.78  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.833)
109.917    217.0699    245.07  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  13.917)
110.000    218.8041    251.80  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  14.000)
110.083    220.5902    259.34  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  14.083)
110.167    222.4465    269.54  .   Q     .        V.         .         .
 (PEAK DAY 1, HOUR  14.167)
110.250    224.3919    282.46  .   Q     .        V.         .         .
 (PEAK DAY 1, HOUR  14.250)
110.333    226.4383    297.14  .   Q     .        V.         .         .
 (PEAK DAY 1, HOUR  14.333)
110.417    228.5758    310.36  .   Q     .         V         .         .
 (PEAK DAY 1, HOUR  14.417)
110.500    230.7948    322.20  .   Q     .         V         .         .
 (PEAK DAY 1, HOUR  14.500)
110.583    233.0915    333.49  .    Q    .         V         .         .
 (PEAK DAY 1, HOUR  14.583)
110.667    235.4680    345.08  .    Q    .         V         .         .
 (PEAK DAY 1, HOUR  14.667)
110.750    237.9275    357.12  .    Q    .         V         .         .
 (PEAK DAY 1, HOUR  14.750)
110.833    240.4778    370.30  .    Q    .         .V        .         .
 (PEAK DAY 1, HOUR  14.833)
110.917    243.1250    384.38  .    Q    .         .V        .         .
 (PEAK DAY 1, HOUR  14.917)
111.000    245.8795    399.94  .     Q   .         .V        .         .
 (PEAK DAY 1, HOUR  15.000)
111.083    248.7500    416.80  .     Q   .         .V        .         .
 (PEAK DAY 1, HOUR  15.083)
111.167    251.7508    435.72  .     Q   .         . V       .         .
 (PEAK DAY 1, HOUR  15.167)
111.250    254.8950    456.54  .      Q  .         . V       .         .
 (PEAK DAY 1, HOUR  15.250)
111.333    258.2032    480.36  .      Q  .         . V       .         .
 (PEAK DAY 1, HOUR  15.333)
111.417    261.6745    504.03  .      Q  .         .  V      .         .
 (PEAK DAY 1, HOUR  15.417)
111.500    265.2556    519.98  .      Q  .         .  V      .         .
 (PEAK DAY 1, HOUR  15.500)
111.583    268.8864    527.19  .       Q .         .  V      .         .
 (PEAK DAY 1, HOUR  15.583)
111.667    272.5746    535.52  .       Q .         .   V     .         .
 (PEAK DAY 1, HOUR  15.667)
111.750    276.4615    564.39  .       Q .         .   V     .         .
 (PEAK DAY 1, HOUR  15.750)
111.833    280.7536    623.20  .        Q.         .   V     .         .
 (PEAK DAY 1, HOUR  15.833)
111.917    285.6821    715.63  .         .Q        .    V    .         .
 (PEAK DAY 1, HOUR  15.917)
112.000    291.6738    869.99  .         . Q       .    V    .         .
 (PEAK DAY 1, HOUR  16.000)
112.083    299.9257   1198.18  .         .       Q .     V   .         .
 (PEAK DAY 1, HOUR  16.083)
112.167    312.6125   1842.12  .         .         .      VQ .         .
 (PEAK DAY 1, HOUR  16.167)
112.250    329.2037   2409.04  .         .         .        V.      Q  .
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 (PEAK DAY 1, HOUR  16.250)
112.333    346.6870   2538.58  .         .         .         V         Q.
 (PEAK DAY 1, HOUR  16.333)
112.417    360.1437   1953.91  .         .         .         QV        .
 (PEAK DAY 1, HOUR  16.417)
112.500    369.2429   1321.20  .         .         Q         . V       .
 (PEAK DAY 1, HOUR  16.500)
112.583    375.7551    945.57  .         .   Q     .         .  V      .
 (PEAK DAY 1, HOUR  16.583)
112.667    380.7361    723.23  .         .Q        .         .  V      .
 (PEAK DAY 1, HOUR  16.667)
112.750    384.8868    602.69  .        Q.         .         .  V      .
 (PEAK DAY 1, HOUR  16.750)
112.833    388.6063    540.07  .       Q .         .         .   V     .
 (PEAK DAY 1, HOUR  16.833)
112.917    391.9329    483.02  .      Q  .         .         .   V     .
 (PEAK DAY 1, HOUR  16.917)
113.000    394.9217    433.96  .     Q   .         .         .   V     .
 (PEAK DAY 1, HOUR  17.000)
113.083    397.6353    394.02  .     Q   .         .         .    V    .
 (PEAK DAY 1, HOUR  17.083)
113.167    400.1144    359.97  .    Q    .         .         .    V    .
 (PEAK DAY 1, HOUR  17.167)
113.250    402.3992    331.75  .    Q    .         .         .    V    .
 (PEAK DAY 1, HOUR  17.250)
113.333    404.5044    305.67  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  17.333)
113.417    406.4601    283.98  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  17.417)
113.500    408.2940    266.28  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  17.500)
113.583    410.0247    251.30  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  17.583)
113.667    411.6657    238.27  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  17.667)
113.750    413.2271    226.73  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  17.750)
113.833    414.7146    215.98  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  17.833)
113.917    416.1360    206.38  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  17.917)
114.000    417.4958    197.44  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.000)
114.083    418.7867    187.45  .Q        .         .         .     V   .
 (PEAK DAY 1, HOUR  18.083)
114.167    419.9803    173.31  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  18.167)
114.250    421.0444    154.50  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  18.250)
114.333    421.9666    133.89  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  18.333)
114.417    422.7832    118.57 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  18.417)
114.500    423.5391    109.76 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  18.500)
114.583    424.2572    104.27 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  18.583)
114.667    424.9502    100.61 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  18.667)
114.750    425.6237     97.79 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  18.750)
114.833    426.2794     95.21 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  18.833)
114.917    426.9191     92.90 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  18.917)
115.000    427.5446     90.82 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  19.000)
115.083    428.1571     88.93 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  19.083)
115.167    428.7575     87.18 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  19.167)
115.250    429.3465     85.52 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  19.250)
115.333    429.9244     83.92 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  19.333)
115.417    430.4919     82.39 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  19.417)
115.500    431.0491     80.91 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  19.500)
115.583    431.5964     79.46 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  19.583)
115.667    432.1327     77.87 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  19.667)
115.750    432.6594     76.47 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  19.750)
115.833    433.1776     75.24 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  19.833)
115.917    433.6878     74.08 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  19.917)
116.000    434.1903     72.96 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  20.000)
116.083    434.6854     71.89 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  20.083)
116.167    435.1735     70.87 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  20.167)
116.250    435.6548     69.88 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  20.250)
116.333    436.1295     68.93 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  20.333)
116.417    436.5980     68.02 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  20.417)
116.500    437.0605     67.15 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  20.500)
116.583    437.5171     66.30 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  20.583)
116.667    437.9680     65.48 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  20.667)
116.750    438.4135     64.69 Q          .         .         .       V .
 (PEAK DAY 1, HOUR  20.750)
116.833    438.8538     63.92 Q          .         .         .       V .
 (PEAK DAY 1, HOUR  20.833)
116.917    439.2888     63.18 Q          .         .         .       V .
 (PEAK DAY 1, HOUR  20.917)
117.000    439.7190     62.45 Q          .         .         .       V .
 (PEAK DAY 1, HOUR  21.000)
117.083    440.1443     61.75 Q          .         .         .       V .
 (PEAK DAY 1, HOUR  21.083)
117.167    440.5648     61.07 Q          .         .         .       V .
 (PEAK DAY 1, HOUR  21.167)
117.250    440.9809     60.41 Q          .         .         .       V .
 (PEAK DAY 1, HOUR  21.250)
117.333    441.3925     59.77 Q          .         .         .       V .
 (PEAK DAY 1, HOUR  21.333)
117.417    441.7998     59.14 Q          .         .         .       V .
 (PEAK DAY 1, HOUR  21.417)
117.500    442.2029     58.53 Q          .         .         .       V .
 (PEAK DAY 1, HOUR  21.500)
117.583    442.6020     57.94 Q          .         .         .        V.
 (PEAK DAY 1, HOUR  21.583)
117.667    442.9971     57.37 Q          .         .         .        V.
 (PEAK DAY 1, HOUR  21.667)
117.750    443.3883     56.81 Q          .         .         .        V.
 (PEAK DAY 1, HOUR  21.750)
117.833    443.7758     56.26 Q          .         .         .        V.
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(PEAK DAY 1, HOUR 21.833)
117.917 444.1596 55.73 Q . . . V.
(PEAK DAY 1, HOUR 21.917)
118.000 444.5399 55.21 Q . . . V.
(PEAK DAY 1, HOUR 22.000)
118.083 444.9166 54.71 Q . . . V.
(PEAK DAY 1, HOUR 22.083)
118.167 445.2900 54.21 Q . . . V.
(PEAK DAY 1, HOUR 22.167)
118.250 445.6600 53.73 Q . . . V.
(PEAK DAY 1, HOUR 22.250)
118.333 446.0268 53.26 Q . . . V.
(PEAK DAY 1, HOUR 22.333)
118.417 446.3904 52.79 Q . . . V.
(PEAK DAY 1, HOUR 22.417)
118.500 446.7509 52.34 Q . . . V.
(PEAK DAY 1, HOUR 22.500)
118.583 447.1083 51.90 Q . . . V.
(PEAK DAY 1, HOUR 22.583)
118.667 447.4628 51.47 Q . . . V.
(PEAK DAY 1, HOUR 22.667)
118.750 447.8144 51.05 Q . . . V.
(PEAK DAY 1, HOUR 22.750)
118.833 448.1631 50.64 Q . . . V.
(PEAK DAY 1, HOUR 22.833)
118.917 448.5091 50.23 Q . . . V.
(PEAK DAY 1, HOUR 22.917)
119.000 448.8523 49.83 Q . . . V.
(PEAK DAY 1, HOUR 23.000)
119.083 449.1928 49.45 Q . . . V.
(PEAK DAY 1, HOUR 23.083)
119.167 449.5307 49.06 Q . . . V.
(PEAK DAY 1, HOUR 23.167)
119.250 449.8661 48.69 Q . . . V.
(PEAK DAY 1, HOUR 23.250)
119.333 450.1989 48.33 Q . . . V.
(PEAK DAY 1, HOUR 23.333)
119.417 450.5292 47.97 Q . . . V.
(PEAK DAY 1, HOUR 23.417)
119.500 450.8572 47.62 Q . . . V.
(PEAK DAY 1, HOUR 23.500)
119.583 451.1827 47.27 Q . . . V.
(PEAK DAY 1, HOUR 23.583)
119.667 451.5060 46.93 Q . . . V.
(PEAK DAY 1, HOUR 23.667)
119.750 451.8269 46.60 Q . . . V.
(PEAK DAY 1, HOUR 23.750)
119.833 452.1455 46.27 Q . . . V.
(PEAK DAY 1, HOUR 23.833)
119.917 452.4620 45.95 Q . . . V.
(PEAK DAY 1, HOUR 23.917)
120.000 452.7763 45.64 Q . . . V.
(PEAK DAY 1, HOUR 24.000)
120.083 453.0815 44.31 Q . . . V.
(PEAK DAY 1, HOUR 24.083)
120.167 453.3494 38.91 Q . . . V.
(PEAK DAY 1, HOUR 24.167)
120.250 453.5494 29.03 Q . . . V.
(PEAK DAY 1, HOUR 24.250)
120.333 453.6667 17.04 Q . . . V.
(PEAK DAY 1, HOUR 24.333)
120.417 453.7269 8.73 Q . . . V.
(PEAK DAY 1, HOUR 24.417)
120.500 453.7581 4.53 Q . . . V.
(PEAK DAY 1, HOUR 24.500)
120.583 453.7749 2.44 Q . . . V.
(PEAK DAY 1, HOUR 24.583)
120.667 453.7856 1.55 Q . . . V.
(PEAK DAY 1, HOUR 24.667)
120.750 453.7936 1.16 Q . . . V.
(PEAK DAY 1, HOUR 24.750)
120.833 453.7993 0.83 Q . . . V.
(PEAK DAY 1, HOUR 24.833)
120.917 453.8034 0.60 Q . . . V.
(PEAK DAY 1, HOUR 24.917)
121.000 453.8066 0.47 Q . . . V.
(PEAK DAY 1, HOUR 25.000)
121.083 453.8093 0.39 Q . . . V.
(PEAK DAY 1, HOUR 25.083)
121.167 453.8117 0.35 Q . . . V.
(PEAK DAY 1, HOUR 25.167)
121.250 453.8139 0.32 Q . . . V.
(PEAK DAY 1, HOUR 25.250)
121.333 453.8159 0.28 Q . . . V.
(PEAK DAY 1, HOUR 25.333)
121.417 453.8176 0.25 Q . . . V.
(PEAK DAY 1, HOUR 25.417)
121.500 453.8192 0.23 Q . . . V.
(PEAK DAY 1, HOUR 25.500)
121.583 453.8205 0.20 Q . . . V.
(PEAK DAY 1, HOUR 25.583)
121.667 453.8217 0.17 Q . . . V.
(PEAK DAY 1, HOUR 25.667)
121.750 453.8228 0.15 Q . . . V.
(PEAK DAY 1, HOUR 25.750)
121.833 453.8237 0.13 Q . . . V.
(PEAK DAY 1, HOUR 25.833)
121.917 453.8244 0.11 Q . . . V.
(PEAK DAY 1, HOUR 25.917)
122.000 453.8251 0.09 Q . . . V.
(PEAK DAY 1, HOUR 26.000)
122.083 453.8256 0.08 Q . . . V.
(PEAK DAY 1, HOUR 26.083)
122.167 453.8261 0.07 Q . . . V.
(PEAK DAY 1, HOUR 26.167)
122.250 453.8265 0.06 Q . . . V.
(PEAK DAY 1, HOUR 26.250)
122.333 453.8268 0.05 Q . . . V.
(PEAK DAY 1, HOUR 26.333)
122.417 453.8271 0.04 Q . . . V.
(PEAK DAY 1, HOUR 26.417)
122.500 453.8274 0.04 Q . . . V.
(PEAK DAY 1, HOUR 26.500)
122.583 453.8277 0.04 Q . . . V.
(PEAK DAY 1, HOUR 26.583)
122.667 453.8279 0.03 Q . . . V.
(PEAK DAY 1, HOUR 26.667)
122.750 453.8281 0.03 Q . . . V.
(PEAK DAY 1, HOUR 26.750)
122.833 453.8283 0.03 Q . . . V.
(PEAK DAY 1, HOUR 26.833)
122.917 453.8285 0.02 Q . . . V.
(PEAK DAY 1, HOUR 26.917)
123.000 453.8286 0.02 Q . . . V.
(PEAK DAY 1, HOUR 27.000)
123.083 453.8288 0.02 Q . . . V
(PEAK DAY 1, HOUR 27.083)
123.167 453.8289 0.02 Q . . . V
(PEAK DAY 1, HOUR 27.167)
123.250 453.8290 0.01 Q . . . V
(PEAK DAY 1, HOUR 27.250)
123.333 453.8290 0.01 Q . . . V
(PEAK DAY 1, HOUR 27.333)
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****************************************************************************
  FLOW PROCESS FROM NODE   6371.00 TO NODE   6371.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  6961.5 Ac. ***
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE   6371.00 TO NODE   6371.00 IS CODE =  11
----------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
============================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  6961.5 Ac. ***

            STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
          (Note: Time indicated is at END of Each Unit Intervals)
----------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.     1275.0    2550.0    3825.0    5100.0
----------------------------------------------------------------------------
  96.000    806.3026     88.91  Q         V         .         .         .
 (PEAK DAY 2, HOUR  24.000)
  96.083    806.9158     89.03  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.083)
  96.167    807.5533     92.58  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.167)
  96.250    808.2451    100.45  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.250)
  96.333    809.0157    111.90  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.333)
  96.417    809.8650    123.31  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.417)
  96.500    810.7964    135.25  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.500)
  96.583    811.8176    148.27  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.583)
  96.667    812.9286    161.31  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.667)
  96.750    814.1336    174.97  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.750)
  96.833    815.4559    192.01  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.833)
  96.917    816.9259    213.44  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.917)
  97.000    818.5493    235.71  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   1.000)
  97.083    820.3016    254.44  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   1.083)
  97.167    822.1517    268.63  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.167)
  97.250    824.0761    279.43  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.250)
  97.333    826.0596    288.00  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.333)
  97.417    828.0919    295.10  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.417)
  97.500    830.1662    301.18  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.500)
  97.583    832.2770    306.50  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.583)
  97.667    834.4203    311.20  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   1.667)
  97.750    836.5927    315.43  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   1.750)
  97.833    838.7916    319.29  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   1.833)
  97.917    841.0149    322.82  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   1.917)
  98.000    843.2604    326.05  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.000)
  98.083    845.5261    328.99  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.083)
  98.167    847.8104    331.67  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.167)
  98.250    850.1115    334.11  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.250)
  98.333    852.4282    336.39  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.333)
  98.417    854.7595    338.50  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.417)
  98.500    857.1037    340.39  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.500)
  98.583    859.4595    342.06  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.583)
  98.667    861.8260    343.62  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.667)
  98.750    864.2029    345.11  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.750)
  98.833    866.5898    346.59  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.833)
  98.917    868.9870    348.07  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.917)
  99.000    871.3944    349.55  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.000)
  99.083    873.8120    351.03  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.083)
  99.167    876.2399    352.53  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.167)
  99.250    878.6780    354.03  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.250)
  99.333    881.1266    355.54  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.333)
  99.417    883.5858    357.07  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.417)
  99.500    886.0556    358.61  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.500)
  99.583    888.5361    360.17  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.583)
  99.667    891.0274    361.74  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.667)
  99.750    893.5296    363.32  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.750)
  99.833    896.0428    364.93  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.833)
  99.917    898.5672    366.54  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.917)
 100.000    901.1028    368.17  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   4.000)
 100.083    903.6497    369.81  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   4.083)
 100.167    906.2081    371.47  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   4.167)
 100.250    908.7778    373.13  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   4.250)
 100.333    911.3589    374.77  . Q       . V       .         .         .
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(PEAK DAY 1, HOUR 4.333)								
100.417	913.9510	376.38	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 4.417)								
100.500	916.5543	377.98	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 4.500)								
100.583	919.1685	379.59	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 4.583)								
100.667	921.7938	381.20	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 4.667)								
100.750	924.4304	382.83	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 4.750)								
100.833	927.0782	384.48	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 4.833)								
100.917	929.7376	386.14	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 4.917)								
101.000	932.4086	387.82	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.000)								
101.083	935.0912	389.52	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.083)								
101.167	937.7858	391.25	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.167)								
101.250	940.4922	392.98	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.250)								
101.333	943.2109	394.75	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.333)								
101.417	945.9418	396.53	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.417)								
101.500	948.6851	398.33	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.500)								
101.583	951.4410	400.15	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.583)								
101.667	954.2096	402.00	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.667)								
101.750	956.9910	403.87	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.750)								
101.833	959.7855	405.76	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.833)								
101.917	962.5932	407.67	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 5.917)								
102.000	965.4142	409.61	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.000)								
102.083	968.2488	411.57	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.083)								
102.167	971.0970	413.56	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.167)								
102.250	973.9591	415.57	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.250)								
102.333	976.8352	417.61	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.333)								
102.417	979.7255	419.68	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.417)								
102.500	982.6302	421.77	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.500)								
102.583	985.5496	423.88	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.583)								
102.667	988.4837	426.03	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.667)								
102.750	991.4328	428.21	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.750)								
102.833	994.3971	430.41	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.833)								
102.917	997.3767	432.64	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 6.917)								
103.000	1000.3719	434.91	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.000)								
103.083	1003.3830	437.20	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.083)								
103.167	1006.4101	439.53	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.167)								
103.250	1009.4534	441.89	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.250)								
103.333	1012.5132	444.29	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.333)								
103.417	1015.5898	446.71	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.417)								
103.500	1018.6833	449.18	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.500)								
103.583	1021.7939	451.67	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.583)								
103.667	1024.9221	454.21	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.667)								
103.750	1028.0680	456.78	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.750)								
103.833	1031.2318	459.39	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.833)								
103.917	1034.4139	462.04	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 7.917)								
104.000	1037.6145	464.73	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.000)								
104.083	1040.8339	467.46	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.083)								
104.167	1044.0724	470.23	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.167)								
104.250	1047.3303	473.05	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.250)								
104.333	1050.6079	475.91	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.333)								
104.417	1053.9055	478.82	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.417)								
104.500	1057.2235	481.78	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.500)								
104.583	1060.5621	484.77	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.583)								
104.667	1063.9219	487.83	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.667)								
104.750	1067.3030	490.93	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.750)								
104.833	1070.7058	494.09	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.833)								
104.917	1074.1306	497.29	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 8.917)								
105.000	1077.5780	500.56	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.000)								
105.083	1081.0482	503.87	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.083)								
105.167	1084.5416	507.25	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.167)								
105.250	1088.0587	510.68	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.250)								
105.333	1091.6000	514.18	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.333)								
105.417	1095.1656	517.74	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.417)								
105.500	1098.7563	521.37	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.500)								
105.583	1102.3724	525.06	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.583)								
105.667	1106.0145	528.83	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.667)								
105.750	1109.6830	532.66	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.750)								
105.833	1113.3784	536.57	. Q	. V	.	.	.	
(PEAK DAY 1, HOUR 9.833)								
105.917	1117.1012	540.55	. Q	. V	.	.	.	

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(PEAK DAY 1, HOUR   9.917)
106.000   1120.8519    544.61  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.000)
106.083   1124.6312    548.75  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.083)
106.167   1128.4397    552.98  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.167)
106.250   1132.2778    557.29  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.250)
106.333   1136.1462    561.70  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.333)
106.417   1140.0455    566.18  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  10.417)
106.500   1143.9766    570.78  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  10.500)
106.583   1147.9398    575.46  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  10.583)
106.667   1151.9360    580.25  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  10.667)
106.750   1155.9659    585.14  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  10.750)
106.833   1160.0304    590.16  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  10.833)
106.917   1164.1300    595.27  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  10.917)
107.000   1168.2657    600.51  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.000)
107.083   1172.4384    605.86  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.083)
107.167   1176.6486    611.32  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.167)
107.250   1180.8956    616.68  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.250)
107.333   1185.1769    621.63  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.333)
107.417   1189.4885    626.05  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.417)
107.500   1193.8292    630.26  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.500)
107.583   1198.2000    634.63  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.583)
107.667   1202.6034    639.39  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  11.667)
107.750   1207.0424    644.54  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  11.750)
107.833   1211.5197    650.11  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  11.833)
107.917   1216.0377    656.02  .    Q    .     V   .         .         .
(PEAK DAY 1, HOUR  11.917)
108.000   1220.5989    662.28  .    Q    .     V   .         .         .
(PEAK DAY 1, HOUR  12.000)
108.083   1225.2141    670.13  .    Q    .     V   .         .         .
(PEAK DAY 1, HOUR  12.083)
108.167   1229.9233    683.78  .    Q    .     V   .         .         .
(PEAK DAY 1, HOUR  12.167)
108.250   1234.7742    704.34  .    Q    .     V   .         .         .
(PEAK DAY 1, HOUR  12.250)
108.333   1239.8009    729.89  .    Q    .     V   .         .         .
(PEAK DAY 1, HOUR  12.333)
108.417   1244.9907    753.55  .    Q    .     V   .         .         .
(PEAK DAY 1, HOUR  12.417)
108.500   1250.3286    775.06  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  12.500)
108.583   1255.8047    795.13  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  12.583)
108.667   1261.4015    812.66  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  12.667)
108.750   1267.1027    827.81  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  12.750)
108.833   1272.9039    842.35  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  12.833)
108.917   1278.8091    857.42  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  12.917)
109.000   1284.8265    873.74  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  13.000)
109.083   1290.9620    890.88  .     Q   .      V  .         .         .
(PEAK DAY 1, HOUR  13.083)
109.167   1297.2156    908.02  .      Q  .      V  .         .         .
(PEAK DAY 1, HOUR  13.167)
109.250   1303.5823    924.44  .      Q  .      V  .         .         .
(PEAK DAY 1, HOUR  13.250)
109.333   1310.0590    940.41  .      Q  .      V  .         .         .
(PEAK DAY 1, HOUR  13.333)
109.417   1316.6448    956.26  .      Q  .      V  .         .         .
(PEAK DAY 1, HOUR  13.417)
109.500   1323.3420    972.44  .      Q  .      V  .         .         .
(PEAK DAY 1, HOUR  13.500)
109.583   1330.1512    988.70  .      Q  .      V  .         .         .
(PEAK DAY 1, HOUR  13.583)
109.667   1337.0710   1004.75  .      Q  .      V  .         .         .
(PEAK DAY 1, HOUR  13.667)
109.750   1344.0973   1020.22  .       Q .      V  .         .         .
(PEAK DAY 1, HOUR  13.750)
109.833   1351.2295   1035.59  .       Q .      V  .         .         .
(PEAK DAY 1, HOUR  13.833)
109.917   1358.4692   1051.20  .       Q .      V  .         .         .
(PEAK DAY 1, HOUR  13.917)
110.000   1365.8219   1067.60  .       Q .       V .         .         .
(PEAK DAY 1, HOUR  14.000)
110.083   1373.2968   1085.34  .       Q .       V .         .         .
(PEAK DAY 1, HOUR  14.083)
110.167   1380.9169   1106.44  .       Q .       V .         .         .
(PEAK DAY 1, HOUR  14.167)
110.250   1388.7072   1131.16  .       Q .       V .         .         .
(PEAK DAY 1, HOUR  14.250)
110.333   1396.6881   1158.83  .        Q.       V .         .         .
(PEAK DAY 1, HOUR  14.333)
110.417   1404.8588   1186.37  .        Q.       V .         .         .
(PEAK DAY 1, HOUR  14.417)
110.500   1413.2201   1214.06  .        Q.       V .         .         .
(PEAK DAY 1, HOUR  14.500)
110.583   1421.7773   1242.50  .        Q.       V .         .         .
(PEAK DAY 1, HOUR  14.583)
110.667   1430.5383   1272.10  .        Q.       V .         .         .
(PEAK DAY 1, HOUR  14.667)
110.750   1439.5120   1302.97  .         Q       V .         .         .
(PEAK DAY 1, HOUR  14.750)
110.833   1448.7173   1336.61  .         Q        V.         .         .
(PEAK DAY 1, HOUR  14.833)
110.917   1458.1774   1373.60  .         Q        V.         .         .
(PEAK DAY 1, HOUR  14.917)
111.000   1467.9231   1415.07  .         .Q       V.         .         .
(PEAK DAY 1, HOUR  15.000)
111.083   1477.9825   1460.64  .         .Q       V.         .         .
(PEAK DAY 1, HOUR  15.083)
111.167   1488.3878   1510.85  .         .Q       V.         .         .
(PEAK DAY 1, HOUR  15.167)
111.250   1499.1689   1565.42  .         . Q      V.         .         .
(PEAK DAY 1, HOUR  15.250)
111.333   1510.3667   1625.91  .         . Q      V.         .         .
(PEAK DAY 1, HOUR  15.333)
111.417   1521.9977   1688.82  .         .  Q      V         .         .
(PEAK DAY 1, HOUR  15.417)
111.500   1534.0171   1745.21  .         .  Q      V         .         .
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 (PEAK DAY 1, HOUR  15.500)
111.583   1546.3597   1792.16  .         .   Q     V         .         .
 (PEAK DAY 1, HOUR  15.583)
111.667   1559.0183   1838.02  .         .   Q     V         .         .
 (PEAK DAY 1, HOUR  15.667)
111.750   1572.1199   1902.36  .         .   Q     V         .         .
 (PEAK DAY 1, HOUR  15.750)
111.833   1585.8710   1996.65  .         .    Q    V         .         .
 (PEAK DAY 1, HOUR  15.833)
111.917   1600.5581   2132.58  .         .     Q   .V        .         .
 (PEAK DAY 1, HOUR  15.917)
112.000   1616.7543   2351.68  .         .       Q .V        .         .
 (PEAK DAY 1, HOUR  16.000)
112.083   1635.8932   2778.98  .         .         .Q        .         .
 (PEAK DAY 1, HOUR  16.083)
112.167   1660.6661   3597.03  .         .         .V      Q .         .
 (PEAK DAY 1, HOUR  16.167)
112.250   1691.3634   4457.24  .         .         . V       .   Q     .
 (PEAK DAY 1, HOUR  16.250)
112.333   1725.9945   5028.44  .         .         . V       .        Q.
 (PEAK DAY 1, HOUR  16.333)
112.417   1759.9886   4935.95  .         .         .  V      .       Q .
 (PEAK DAY 1, HOUR  16.417)
112.500   1792.5060   4721.51  .         .         .  V      .      Q  .
 (PEAK DAY 1, HOUR  16.500)
112.583   1822.9155   4415.47  .         .         .   V     .   Q     .
 (PEAK DAY 1, HOUR  16.583)
112.667   1849.6034   3875.08  .         .         .   V     Q         .
 (PEAK DAY 1, HOUR  16.667)
112.750   1872.4366   3315.39  .         .         .   V Q   .         .
 (PEAK DAY 1, HOUR  16.750)
112.833   1892.4153   2900.90  .         .         . Q V     .         .
 (PEAK DAY 1, HOUR  16.833)
112.917   1910.3522   2604.44  .         .         Q    V    .         .
 (PEAK DAY 1, HOUR  16.917)
113.000   1926.7867   2386.30  .         .       Q .    V    .         .
 (PEAK DAY 1, HOUR  17.000)
113.083   1942.1451   2230.04  .         .      Q  .    V    .         .
 (PEAK DAY 1, HOUR  17.083)
113.167   1956.7161   2115.69  .         .     Q   .    V    .         .
 (PEAK DAY 1, HOUR  17.167)
113.250   1970.6550   2023.94  .         .    Q    .    V    .         .
 (PEAK DAY 1, HOUR  17.250)
113.333   1984.0261   1941.48  .         .    Q    .     V   .         .
 (PEAK DAY 1, HOUR  17.333)
113.417   1996.9121   1871.04  .         .   Q     .     V   .         .
 (PEAK DAY 1, HOUR  17.417)
113.500   2009.4117   1814.95  .         .   Q     .     V   .         .
 (PEAK DAY 1, HOUR  17.500)
113.583   2021.6106   1771.27  .         .  Q      .     V   .         .
 (PEAK DAY 1, HOUR  17.583)
113.667   2033.5752   1737.25  .         .  Q      .     V   .         .
 (PEAK DAY 1, HOUR  17.667)
113.750   2045.3516   1709.93  .         .  Q      .     V   .         .
 (PEAK DAY 1, HOUR  17.750)
113.833   2056.9653   1686.33  .         .  Q      .      V  .         .
 (PEAK DAY 1, HOUR  17.833)
113.917   2068.4341   1665.27  .         .  Q      .      V  .         .
 (PEAK DAY 1, HOUR  17.917)
114.000   2079.7683   1645.74  .         . Q       .      V  .         .
 (PEAK DAY 1, HOUR  18.000)
114.083   2090.9629   1625.45  .         . Q       .      V  .         .
 (PEAK DAY 1, HOUR  18.083)
114.167   2101.9897   1601.09  .         . Q       .      V  .         .
 (PEAK DAY 1, HOUR  18.167)
114.250   2112.8157   1571.94  .         . Q       .      V  .         .
 (PEAK DAY 1, HOUR  18.250)
114.333   2123.4170   1539.29  .         . Q       .      V  .         .
 (PEAK DAY 1, HOUR  18.333)
114.417   2133.8167   1510.01  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  18.417)
114.500   2144.0491   1485.75  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  18.500)
114.583   2154.1340   1464.34  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  18.583)
114.667   2164.0874   1445.24  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  18.667)
114.750   2173.9275   1428.78  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  18.750)
114.833   2183.6729   1415.01  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  18.833)
114.917   2193.3376   1403.32  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  18.917)
115.000   2202.9275   1392.46  .         Q         .       V.         .
 (PEAK DAY 1, HOUR  19.000)
115.083   2212.4460   1382.08  .         Q         .       V.         .
 (PEAK DAY 1, HOUR  19.083)
115.167   2221.9009   1372.85  .         Q         .       V.         .
 (PEAK DAY 1, HOUR  19.167)
115.250   2231.2996   1364.67  .         Q         .       V.         .
 (PEAK DAY 1, HOUR  19.250)
115.333   2240.6458   1357.05  .         Q         .       V.         .
 (PEAK DAY 1, HOUR  19.333)
115.417   2249.9429   1349.95  .         Q         .       V.         .
 (PEAK DAY 1, HOUR  19.417)
115.500   2259.1941   1343.29  .         Q         .       V.         .
 (PEAK DAY 1, HOUR  19.500)
115.583   2268.4014   1336.88  .         Q         .       V.         .
 (PEAK DAY 1, HOUR  19.583)
115.667   2277.5645   1330.47  .         Q         .        V         .
 (PEAK DAY 1, HOUR  19.667)
115.750   2286.6851   1324.30  .         Q         .        V         .
 (PEAK DAY 1, HOUR  19.750)
115.833   2295.7644   1318.31  .         Q         .        V         .
 (PEAK DAY 1, HOUR  19.833)
115.917   2304.8015   1312.18  .         Q         .        V         .
 (PEAK DAY 1, HOUR  19.917)
116.000   2313.7952   1305.90  .         Q         .        V         .
 (PEAK DAY 1, HOUR  20.000)
116.083   2322.7471   1299.81  .         Q         .        V         .
 (PEAK DAY 1, HOUR  20.083)
116.167   2331.6597   1294.10  .         Q         .        V         .
 (PEAK DAY 1, HOUR  20.167)
116.250   2340.5349   1288.70  .         Q         .        V         .
 (PEAK DAY 1, HOUR  20.250)
116.333   2349.3743   1283.47  .         Q         .        V         .
 (PEAK DAY 1, HOUR  20.333)
116.417   2358.1780   1278.31  .         Q         .        .V        .
 (PEAK DAY 1, HOUR  20.417)
116.500   2366.9443   1272.86  .        Q.         .        .V        .
 (PEAK DAY 1, HOUR  20.500)
116.583   2375.6731   1267.43  .        Q.         .        .V        .
 (PEAK DAY 1, HOUR  20.583)
116.667   2384.3674   1262.40  .        Q.         .        .V        .
 (PEAK DAY 1, HOUR  20.667)
116.750   2393.0293   1257.71  .        Q.         .        .V        .
 (PEAK DAY 1, HOUR  20.750)
116.833   2401.6602   1253.20  .        Q.         .        .V        .
 (PEAK DAY 1, HOUR  20.833)
116.917   2410.2607   1248.80  .        Q.         .        .V        .
 (PEAK DAY 1, HOUR  20.917)
117.000   2418.8313   1244.45  .        Q.         .        .V        .
 (PEAK DAY 1, HOUR  21.000)
117.083   2427.3721   1240.13  .        Q.         .         . V      .
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 (PEAK DAY 1, HOUR  21.083)
117.167   2435.8838   1235.91  .       Q.        .        . V       .
 (PEAK DAY 1, HOUR  21.167)
117.250   2444.3674   1231.82  .       Q.        .        . V       .
 (PEAK DAY 1, HOUR  21.250)
117.333   2452.8232   1227.79  .       Q.        .        . V       .
 (PEAK DAY 1, HOUR  21.333)
117.417   2461.2520   1223.84  .       Q.        .        . V       .
 (PEAK DAY 1, HOUR  21.417)
117.500   2469.6541   1219.99  .       Q.        .        . V       .
 (PEAK DAY 1, HOUR  21.500)
117.583   2478.0303   1216.23  .       Q.        .        . V       .
 (PEAK DAY 1, HOUR  21.583)
117.667   2486.3811   1212.54  .       Q.        .        . V       .
 (PEAK DAY 1, HOUR  21.667)
117.750   2494.7070   1208.91  .       Q.        .        . V       .
 (PEAK DAY 1, HOUR  21.750)
117.833   2503.0083   1205.33  .       Q.        .        .  V      .
 (PEAK DAY 1, HOUR  21.833)
117.917   2511.2852   1201.79  .       Q.        .        .  V      .
 (PEAK DAY 1, HOUR  21.917)
118.000   2519.5378   1198.29  .       Q.        .        .  V      .
 (PEAK DAY 1, HOUR  22.000)
118.083   2527.7666   1194.83  .       Q.        .        .  V      .
 (PEAK DAY 1, HOUR  22.083)
118.167   2535.9719   1191.40  .       Q.        .        .  V      .
 (PEAK DAY 1, HOUR  22.167)
118.250   2544.1538   1188.00  .       Q.        .        .  V      .
 (PEAK DAY 1, HOUR  22.250)
118.333   2552.3125   1184.64  .       Q.        .        .  V      .
 (PEAK DAY 1, HOUR  22.333)
118.417   2560.4480   1181.27  .       Q.        .        .  V      .
 (PEAK DAY 1, HOUR  22.417)
118.500   2568.5588   1177.69  .       Q.        .        .  V      .
 (PEAK DAY 1, HOUR  22.500)
118.583   2576.6416   1173.61  .       Q.        .        .  V      .
 (PEAK DAY 1, HOUR  22.583)
118.667   2584.6924   1168.98  .       Q.        .        .   V     .
 (PEAK DAY 1, HOUR  22.667)
118.750   2592.7090   1164.02  .       Q.        .        .   V     .
 (PEAK DAY 1, HOUR  22.750)
118.833   2600.6907   1158.93  .       Q.        .        .   V     .
 (PEAK DAY 1, HOUR  22.833)
118.917   2608.6372   1153.82  .       Q.        .        .   V     .
 (PEAK DAY 1, HOUR  22.917)
119.000   2616.5486   1148.72  .       Q.        .        .   V     .
 (PEAK DAY 1, HOUR  23.000)
119.083   2624.4248   1143.64  .      Q .        .        .   V     .
 (PEAK DAY 1, HOUR  23.083)
119.167   2632.2664   1138.59  .      Q .        .        .   V     .
 (PEAK DAY 1, HOUR  23.167)
119.250   2640.0732   1133.58  .      Q .        .        .   V     .
 (PEAK DAY 1, HOUR  23.250)
119.333   2647.8459   1128.59  .      Q .        .        .   V     .
 (PEAK DAY 1, HOUR  23.333)
119.417   2655.5845   1123.63  .      Q .        .        .    V    .
 (PEAK DAY 1, HOUR  23.417)
119.500   2663.2891   1118.69  .      Q .        .        .    V    .
 (PEAK DAY 1, HOUR  23.500)
119.583   2670.9595   1113.75  .      Q .        .        .    V    .
 (PEAK DAY 1, HOUR  23.583)
119.667   2678.5957   1108.78  .      Q .        .        .    V    .
 (PEAK DAY 1, HOUR  23.667)
119.750   2686.1975   1103.79  .      Q .        .        .    V    .
 (PEAK DAY 1, HOUR  23.750)
119.833   2693.7651   1098.80  .      Q .        .        .    V    .
 (PEAK DAY 1, HOUR  23.833)
119.917   2701.2983   1093.83  .       Q .       .        .    V    .
 (PEAK DAY 1, HOUR  23.917)
120.000   2708.7976   1088.89  .       Q .       .        .    V    .
 (PEAK DAY 1, HOUR  24.000)
120.083   2716.2559   1082.95  .       Q .       .        .    V    .
 (PEAK DAY 1, HOUR  24.083)
120.167   2723.6433   1072.66  .       Q .       .        .    V    .
 (PEAK DAY 1, HOUR  24.167)
120.250   2730.9219   1056.85  .       Q .       .        .     V   .
 (PEAK DAY 1, HOUR  24.250)
120.333   2738.0608   1036.57  .       Q .       .        .     V   .
 (PEAK DAY 1, HOUR  24.333)
120.417   2745.0637   1016.83  .      Q  .       .        .     V   .
 (PEAK DAY 1, HOUR  24.417)
120.500   2751.9358    997.81  .      Q  .       .        .     V   .
 (PEAK DAY 1, HOUR  24.500)
120.583   2758.6836    979.78  .      Q  .       .        .     V   .
 (PEAK DAY 1, HOUR  24.583)
120.667   2765.3289    964.89  .      Q  .       .        .     V   .
 (PEAK DAY 1, HOUR  24.667)
120.750   2771.8948    953.36  .      Q  .       .        .     V   .
 (PEAK DAY 1, HOUR  24.750)
120.833   2778.3965    944.04  .      Q  .       .        .     V   .
 (PEAK DAY 1, HOUR  24.833)
120.917   2784.8435    936.12  .      Q  .       .        .     V   .
 (PEAK DAY 1, HOUR  24.917)
121.000   2791.2424    929.13  .      Q  .       .        .     V   .
 (PEAK DAY 1, HOUR  25.000)
121.083   2797.5967    922.65  .      Q  .       .        .     V   .
 (PEAK DAY 1, HOUR  25.083)
121.167   2803.9080    916.41  .      Q  .       .        .     V   .
 (PEAK DAY 1, HOUR  25.167)
121.250   2810.1772    910.31  .      Q  .       .        .      V  .
 (PEAK DAY 1, HOUR  25.250)
121.333   2816.4055    904.36  .      Q  .       .        .      V  .
 (PEAK DAY 1, HOUR  25.333)
121.417   2822.5938    898.55  .      Q  .       .        .      V  .
 (PEAK DAY 1, HOUR  25.417)
121.500   2828.7427    892.82  .      Q  .       .        .      V  .
 (PEAK DAY 1, HOUR  25.500)
121.583   2834.8523    887.10  .    Q    .       .        .      V  .
 (PEAK DAY 1, HOUR  25.583)
121.667   2840.9221    881.32  .    Q    .       .        .      V  .
 (PEAK DAY 1, HOUR  25.667)
121.750   2846.9517    875.50  .    Q    .       .        .      V  .
 (PEAK DAY 1, HOUR  25.750)
121.833   2852.9412    869.67  .    Q    .       .        .      V  .
 (PEAK DAY 1, HOUR  25.833)
121.917   2858.8906    863.85  .    Q    .       .        .      V  .
 (PEAK DAY 1, HOUR  25.917)
122.000   2864.8003    858.07  .    Q    .       .        .      V  .
 (PEAK DAY 1, HOUR  26.000)
122.083   2870.6704    852.33  .    Q    .       .        .      V  .
 (PEAK DAY 1, HOUR  26.083)
122.167   2876.5012    846.63  .    Q    .       .        .      V  .
 (PEAK DAY 1, HOUR  26.167)
122.250   2882.2930    840.97  .    Q    .       .        .       V .
 (PEAK DAY 1, HOUR  26.250)
122.333   2888.0457    835.30  .    Q    .       .        .       V .
 (PEAK DAY 1, HOUR  26.333)
122.417   2893.7583    829.47  .    Q    .       .        .       V .
 (PEAK DAY 1, HOUR  26.417)
122.500   2899.4285    823.31  .    Q    .       .        .       V .
 (PEAK DAY 1, HOUR  26.500)
122.583   2905.0540    816.83  .    Q    .       .        .       V .
 (PEAK DAY 1, HOUR  26.583)
122.667   2910.6338    810.19  .    Q    .       .        .       V .
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 (PEAK DAY 1, HOUR  26.667)
 122.750   2916.1677    803.52  .     Q   .         .         .       V .
 (PEAK DAY 1, HOUR  26.750)
 122.833   2921.6560    796.88  .     Q   .         .         .       V .
 (PEAK DAY 1, HOUR  26.833)
 122.917   2927.0989    790.29  .     Q   .         .         .       V .
 (PEAK DAY 1, HOUR  26.917)
 123.000   2932.4966    783.76  .     Q   .         .         .       V .
 (PEAK DAY 1, HOUR  27.000)
 123.083   2937.8494    777.23  .     Q   .         .         .       V .
 (PEAK DAY 1, HOUR  27.083)
 123.167   2943.1541    770.26  .     Q   .         .         .       V .
 (PEAK DAY 1, HOUR  27.167)
 123.250   2948.4023    762.06  .    Q    .         .         .       V .
 (PEAK DAY 1, HOUR  27.250)
 123.333   2953.5837    752.33  .    Q    .         .         .       V .
 (PEAK DAY 1, HOUR  27.333)
 123.417   2958.6904    741.49  .    Q    .         .         .        V.
 (PEAK DAY 1, HOUR  27.417)
 123.500   2963.7190    730.16  .    Q    .         .         .        V.
 (PEAK DAY 1, HOUR  27.500)
 123.583   2968.6687    718.71  .    Q    .         .         .        V.
 (PEAK DAY 1, HOUR  27.583)
 123.667   2973.5388    707.13  .    Q    .         .         .       V.
 (PEAK DAY 1, HOUR  27.667)
 123.750   2978.3267    695.20  .    Q    .         .         .       V.
 (PEAK DAY 1, HOUR  27.750)
 123.833   2983.0298    682.91  .    Q    .         .         .       V.
 (PEAK DAY 1, HOUR  27.833)
 123.917   2987.6475    670.47  .    Q    .         .         .       V.
 (PEAK DAY 1, HOUR  27.917)
 124.000   2992.1797    658.09  .    Q    .         .         .       V.
 (PEAK DAY 1, HOUR  28.000)
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
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********************************************************************************
  FLOW PROCESS FROM NODE   6371.00 TO NODE   6395.00 IS CODE = 5.2
--------------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  6961.5 Ac. ***

         THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
         TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
         INTERVALS(Reference: the National Engineering Handbook,
         Hydrology, Chapter 17, page 17-52, August,1972,
         U.S. Department of Commerce).


         ASSUMED REGULAR CHANNEL INFORMATION:
           BASEWIDTH(FT) =   35.00     CHANNEL Z =  1.00
           UPSTREAM ELEVATION(FT) =     220.00
           DOWNSTREAM ELEVATION(FT) =     213.00
           CHANNEL LENGTH(FT) =     959.00     MANNING'S FACTOR = 0.040
           CONSTANT LOSS RATE(CFS) =    0.00


         CHANNEL ROUTING COEFFICIENT ESTIMATED:
           MAXIMUM INFLOW(CFS) =  5028.44
           AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  3875.49
           CHANNEL NORMAL VELOCITY FOR Q =  3875.49 CFS =  10.70 FPS
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           ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.863

         MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
         UNIT INTERVALS IS CSTAR = 0.997


         CONVEX METHOD CHANNEL ROUTING RESULTS:
                                                              OUTFLOW LESS
                    CLOCK        INFLOW      ROUTED          LOSS
PEAK     TIME       TIME      (STREAM 1)     FLOW         (STREAM 1)
 DAY     (HRS)      (HRS)        (CFS)       (CFS)          (CFS)
  2    24.000     96.000         88.91       89.08          89.08
  1     0.083     96.083         89.03       89.00          89.00
  1     0.167     96.167         92.58       91.66          91.66
  1     0.250     96.250        100.45       98.40          98.40
  1     0.333     96.333        111.90      108.91         108.91
  1     0.417     96.417        123.31      120.34         120.34
  1     0.500     96.500        135.25      132.13         132.13
  1     0.583     96.583        148.27      144.88         144.88
  1     0.667     96.667        161.31      157.91         157.91
  1     0.750     96.750        174.97      171.41         171.41
  1     0.833     96.833        192.01      187.56         187.56
  1     0.917     96.917        213.44      207.85         207.85
  1     1.000     97.000        235.71      229.90         229.90
  1     1.083     97.083        254.44      249.55         249.55
  1     1.167     97.167        268.63      264.92         264.92
  1     1.250     97.250        279.43      276.61         276.61
  1     1.333     97.333        288.00      285.76         285.76
  1     1.417     97.417        295.10      293.25         293.25
  1     1.500     97.500        301.18      299.60         299.60
  1     1.583     97.583        306.50      305.11         305.11
  1     1.667     97.667        311.20      309.98         309.98
  1     1.750     97.750        315.43      314.33         314.33
  1     1.833     97.833        319.29      318.28         318.28
  1     1.917     97.917        322.82      321.90         321.90
  1     2.000     98.000        326.05      325.20         325.20
  1     2.083     98.083        328.99      328.22         328.22
  1     2.167     98.167        331.67      330.97         330.97
  1     2.250     98.250        334.11      333.48         333.48
  1     2.333     98.333        336.39      335.80         335.80
  1     2.417     98.417        338.50      337.95         337.95
  1     2.500     98.500        340.39      339.89         339.89
  1     2.583     98.583        342.06      341.63         341.63
  1     2.667     98.667        343.62      343.21         343.21
  1     2.750     98.750        345.11      344.72         344.72
  1     2.833     98.833        346.59      346.21         346.21
  1     2.917     98.917        348.07      347.68         347.68
  1     3.000     99.000        349.55      349.16         349.16
  1     3.083     99.083        351.03      350.65         350.65
  1     3.167     99.167        352.53      352.14         352.14
  1     3.250     99.250        354.03      353.64         353.64
  1     3.333     99.333        355.54      355.15         355.15
  1     3.417     99.417        357.07      356.67         356.67
  1     3.500     99.500        358.61      358.21         358.21
  1     3.583     99.583        360.17      359.76         359.76
  1     3.667     99.667        361.74      361.33         361.33
  1     3.750     99.750        363.32      362.91         362.91
  1     3.833     99.833        364.93      364.51         364.51
  1     3.917     99.917        366.54      366.12         366.12
  1     4.000    100.000        368.17      367.74         367.74
  1     4.083    100.083        369.81      369.38         369.38
  1     4.167    100.167        371.47      371.04         371.04
  1     4.250    100.250        373.13      372.69         372.69
  1     4.333    100.333        374.77      374.34         374.34
  1     4.417    100.417        376.38      375.96         375.96
  1     4.500    100.500        377.98      377.57         377.57
  1     4.583    100.583        379.59      379.17         379.17
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1	4.667	100.667	381.20	380.78	380.78
1	4.750	100.750	382.83	382.40	382.40
1	4.833	100.833	384.48	384.05	384.05
1	4.917	100.917	386.14	385.70	385.70
1	5.000	101.000	387.82	387.38	387.38
1	5.083	101.083	389.52	389.08	389.08
1	5.167	101.167	391.25	390.80	390.80
1	5.250	101.250	392.98	392.53	392.53
1	5.333	101.333	394.75	394.29	394.29
1	5.417	101.417	396.53	396.06	396.06
1	5.500	101.500	398.33	397.86	397.86
1	5.583	101.583	400.15	399.68	399.68
1	5.667	101.667	402.00	401.52	401.52
1	5.750	101.750	403.87	403.38	403.38
1	5.833	101.833	405.76	405.27	405.27
1	5.917	101.917	407.67	407.17	407.17
1	6.000	102.000	409.61	409.11	409.11
1	6.083	102.083	411.57	411.06	411.06
1	6.167	102.167	413.56	413.05	413.05
1	6.250	102.250	415.57	415.05	415.05
1	6.333	102.333	417.61	417.08	417.08
1	6.417	102.417	419.68	419.14	419.14
1	6.500	102.500	421.77	421.22	421.22
1	6.583	102.583	423.88	423.33	423.33
1	6.667	102.667	426.03	425.47	425.47
1	6.750	102.750	428.21	427.64	427.64
1	6.833	102.833	430.41	429.84	429.84
1	6.917	102.917	432.64	432.06	432.06
1	7.000	103.000	434.91	434.32	434.32
1	7.083	103.083	437.20	436.60	436.60
1	7.167	103.167	439.53	438.92	438.92
1	7.250	103.250	441.89	441.27	441.27
1	7.333	103.333	444.29	443.66	443.66
1	7.417	103.417	446.71	446.08	446.08
1	7.500	103.500	449.18	448.53	448.53
1	7.583	103.583	451.67	451.02	451.02
1	7.667	103.667	454.21	453.55	453.55
1	7.750	103.750	456.78	456.11	456.11
1	7.833	103.833	459.39	458.71	458.71
1	7.917	103.917	462.04	461.35	461.35
1	8.000	104.000	464.73	464.03	464.03
1	8.083	104.083	467.46	466.75	466.75
1	8.167	104.167	470.23	469.51	469.51
1	8.250	104.250	473.05	472.31	472.31
1	8.333	104.333	475.91	475.17	475.17
1	8.417	104.417	478.82	478.06	478.06
1	8.500	104.500	481.78	481.00	481.00
1	8.583	104.583	484.77	483.99	483.99
1	8.667	104.667	487.83	487.03	487.03
1	8.750	104.750	490.93	490.12	490.12
1	8.833	104.833	494.09	493.26	493.26
1	8.917	104.917	497.29	496.45	496.45
1	9.000	105.000	500.56	499.70	499.70
1	9.083	105.083	503.87	503.01	503.01
1	9.167	105.167	507.25	506.37	506.37
1	9.250	105.250	510.68	509.79	509.79
1	9.333	105.333	514.18	513.27	513.27
1	9.417	105.417	517.74	516.81	516.81
1	9.500	105.500	521.37	520.42	520.42
1	9.583	105.583	525.06	524.10	524.10
1	9.667	105.667	528.83	527.84	527.84
1	9.750	105.750	532.66	531.66	531.66
1	9.833	105.833	536.57	535.55	535.55
1	9.917	105.917	540.55	539.51	539.51
1	10.000	106.000	544.61	543.55	543.55
1	10.083	106.083	548.75	547.67	547.67
1	10.167	106.167	552.98	551.88	551.88
1	10.250	106.250	557.29	556.17	556.17
1	10.333	106.333	561.70	560.55	560.55
1	10.417	106.417	566.18	565.01	565.01
1	10.500	106.500	570.78	569.58	569.58
1	10.583	106.583	575.46	574.24	574.24
1	10.667	106.667	580.25	579.00	579.00
1	10.750	106.750	585.14	583.87	583.87
1	10.833	106.833	590.16	588.85	588.85
1	10.917	106.917	595.27	593.93	593.93
1	11.000	107.000	600.51	599.14	599.14
1	11.083	107.083	605.86	604.46	604.46
1	11.167	107.167	611.32	609.90	609.90
1	11.250	107.250	616.68	615.28	615.28
1	11.333	107.333	621.63	620.34	620.34
1	11.417	107.417	626.05	624.89	624.89
1	11.500	107.500	630.26	629.16	629.16
1	11.583	107.583	634.63	633.49	633.49
1	11.667	107.667	639.39	638.15	638.15
1	11.750	107.750	644.54	643.20	643.20
1	11.833	107.833	650.11	648.66	648.66
1	11.917	107.917	656.02	654.48	654.48
1	12.000	108.000	662.28	660.65	660.65
1	12.083	108.083	670.13	668.08	668.08
1	12.167	108.167	683.78	680.22	680.22
1	12.250	108.250	704.34	698.98	698.98
1	12.333	108.333	729.89	723.23	723.23
1	12.417	108.417	753.55	747.38	747.38
1	12.500	108.500	775.06	769.45	769.45
1	12.583	108.583	795.13	789.89	789.89
1	12.667	108.667	812.66	808.09	808.09
1	12.750	108.750	827.81	823.86	823.86
1	12.833	108.833	842.35	838.56	838.56
1	12.917	108.917	857.42	853.49	853.49
1	13.000	109.000	873.74	869.49	869.49
1	13.083	109.083	890.88	886.41	886.41
1	13.167	109.167	908.02	903.54	903.54
1	13.250	109.250	924.44	920.16	920.16
1	13.333	109.333	940.41	936.25	936.25
1	13.417	109.417	956.26	952.13	952.13
1	13.500	109.500	972.44	968.22	968.22
1	13.583	109.583	988.70	984.46	984.46
1	13.667	109.667	1004.75	1000.56	1000.56
1	13.750	109.750	1020.22	1016.18	1016.18
1	13.833	109.833	1035.59	1031.58	1031.58
1	13.917	109.917	1051.20	1047.13	1047.13
1	14.000	110.000	1067.60	1063.33	1063.33
1	14.083	110.083	1085.34	1080.72	1080.72
1	14.167	110.167	1106.44	1100.94	1100.94
1	14.250	110.250	1131.16	1124.71	1124.71
1	14.333	110.333	1158.83	1151.62	1151.62
1	14.417	110.417	1186.37	1179.19	1179.19
1	14.500	110.500	1214.06	1206.84	1206.84
1	14.583	110.583	1242.50	1235.09	1235.09
1	14.667	110.667	1272.10	1264.38	1264.38
1	14.750	110.750	1302.97	1294.92	1294.92
1	14.833	110.833	1336.61	1327.84	1327.84
1	14.917	110.917	1373.60	1363.96	1363.96
1	15.000	111.000	1415.07	1404.26	1404.26
1	15.083	111.083	1460.64	1448.76	1448.76
1	15.167	111.167	1510.85	1497.75	1497.75
1	15.250	111.250	1565.42	1551.19	1551.19
1	15.333	111.333	1625.91	1610.14	1610.14
1	15.417	111.417	1688.82	1672.41	1672.41
1	15.500	111.500	1745.21	1730.50	1730.50
1	15.583	111.583	1792.16	1779.91	1779.91
1	15.667	111.667	1838.02	1826.06	1826.06
1	15.750	111.750	1902.36	1885.59	1885.59

1	15.833	111.833	1996.65	1972.08	1972.08
1	15.917	111.917	2132.58	2097.16	2097.16
1	16.000	112.000	2351.68	2294.60	2294.60
1	16.083	112.083	2778.98	2667.69	2667.69
1	16.167	112.167	3597.03	3383.97	3383.97
1	16.250	112.250	4457.24	4232.91	4232.91
1	16.333	112.333	5028.44	4879.23	4879.23
1	16.417	112.417	4935.95	4959.55	4959.55
1	16.500	112.500	4721.51	4777.34	4777.34
1	16.583	112.583	4415.47	4495.22	4495.22
1	16.667	112.667	3875.08	4015.84	4015.84
1	16.750	112.750	3315.39	3461.35	3461.35
1	16.833	112.833	2900.90	3009.13	3009.13
1	16.917	112.917	2604.44	2681.86	2681.86
1	17.000	113.000	2386.30	2443.26	2443.26
1	17.083	113.083	2230.04	2270.84	2270.84
1	17.167	113.167	2115.69	2145.55	2145.55
1	17.250	113.250	2023.94	2047.89	2047.89
1	17.333	113.333	1941.48	1963.00	1963.00
1	17.417	113.417	1871.04	1889.42	1889.42
1	17.500	113.500	1814.95	1829.59	1829.59
1	17.583	113.583	1771.27	1782.67	1782.67
1	17.667	113.667	1737.25	1746.13	1746.13
1	17.750	113.750	1709.93	1717.06	1717.06
1	17.833	113.833	1686.33	1692.49	1692.49
1	17.917	113.917	1665.27	1670.77	1670.77
1	18.000	114.000	1645.74	1650.83	1650.83
1	18.083	114.083	1625.45	1630.74	1630.74
1	18.167	114.167	1601.09	1607.44	1607.44
1	18.250	114.250	1571.94	1579.54	1579.54
1	18.333	114.333	1539.29	1547.81	1547.81
1	18.417	114.417	1510.01	1517.65	1517.65
1	18.500	114.500	1485.75	1492.08	1492.08
1	18.583	114.583	1464.34	1469.93	1469.93
1	18.667	114.667	1445.24	1450.23	1450.23
1	18.750	114.750	1428.78	1433.07	1433.07
1	18.833	114.833	1415.01	1418.60	1418.60
1	18.917	114.917	1403.32	1406.37	1406.37
1	19.000	115.000	1392.46	1395.29	1395.29
1	19.083	115.083	1382.08	1384.79	1384.79
1	19.167	115.167	1372.85	1375.26	1375.26
1	19.250	115.250	1364.67	1366.81	1366.81
1	19.333	115.333	1357.05	1359.04	1359.04
1	19.417	115.417	1349.95	1351.80	1351.80
1	19.500	115.500	1343.29	1345.02	1345.02
1	19.583	115.583	1336.88	1338.55	1338.55
1	19.667	115.667	1330.47	1332.14	1332.14
1	19.750	115.750	1324.30	1325.91	1325.91
1	19.833	115.833	1318.31	1319.87	1319.87
1	19.917	115.917	1312.18	1313.78	1313.78
1	20.000	116.000	1305.90	1307.54	1307.54
1	20.083	116.083	1299.81	1301.39	1301.39
1	20.167	116.167	1294.10	1295.59	1295.59
1	20.250	116.250	1288.70	1290.11	1290.11
1	20.333	116.333	1283.47	1284.84	1284.84
1	20.417	116.417	1278.31	1279.66	1279.66
1	20.500	116.500	1272.86	1274.28	1274.28
1	20.583	116.583	1267.43	1268.85	1268.85
1	20.667	116.667	1262.40	1263.71	1263.71
1	20.750	116.750	1257.71	1258.93	1258.93
1	20.833	116.833	1253.20	1254.38	1254.38
1	20.917	116.917	1248.80	1249.94	1249.94
1	21.000	117.000	1244.45	1245.58	1245.58
1	21.083	117.083	1240.13	1241.25	1241.25
1	21.167	117.167	1235.91	1237.01	1237.01
1	21.250	117.250	1231.82	1232.88	1232.88
1	21.333	117.333	1227.79	1228.84	1228.84
1	21.417	117.417	1223.84	1224.87	1224.87
1	21.500	117.500	1219.99	1220.99	1220.99
1	21.583	117.583	1216.23	1217.21	1217.21
1	21.667	117.667	1212.54	1213.50	1213.50
1	21.750	117.750	1208.91	1209.86	1209.86
1	21.833	117.833	1205.33	1206.27	1206.27
1	21.917	117.917	1201.79	1202.72	1202.72
1	22.000	118.000	1198.29	1199.20	1199.20
1	22.083	118.083	1194.83	1195.73	1195.73
1	22.167	118.167	1191.40	1192.29	1192.29
1	22.250	118.250	1188.00	1188.89	1188.89
1	22.333	118.333	1184.64	1185.52	1185.52
1	22.417	118.417	1181.27	1182.15	1182.15
1	22.500	118.500	1177.69	1178.62	1178.62
1	22.583	118.583	1173.61	1174.67	1174.67
1	22.667	118.667	1168.98	1170.19	1170.19
1	22.750	118.750	1164.02	1165.32	1165.32
1	22.833	118.833	1158.93	1160.26	1160.26
1	22.917	118.917	1153.82	1155.15	1155.15
1	23.000	119.000	1148.72	1150.05	1150.05
1	23.083	119.083	1143.64	1144.96	1144.96
1	23.167	119.167	1138.59	1139.91	1139.91
1	23.250	119.250	1133.58	1134.88	1134.88
1	23.333	119.333	1128.59	1129.89	1129.89
1	23.417	119.417	1123.63	1124.93	1124.93
1	23.500	119.500	1118.69	1119.98	1119.98
1	23.583	119.583	1113.75	1115.04	1115.04
1	23.667	119.667	1108.78	1110.08	1110.08
1	23.750	119.750	1103.79	1105.09	1105.09
1	23.833	119.833	1098.80	1100.11	1100.11
1	23.917	119.917	1093.83	1095.13	1095.13
1	24.000	120.000	1088.89	1090.18	1090.18
1	24.083	120.083	1082.95	1084.50	1084.50
1	24.167	120.167	1072.66	1075.34	1075.34
1	24.250	120.250	1056.85	1060.97	1060.97
1	24.333	120.333	1036.57	1041.85	1041.85
1	24.417	120.417	1016.83	1021.98	1021.98
1	24.500	120.500	997.81	1002.77	1002.77
1	24.583	120.583	979.78	984.49	984.49
1	24.667	120.667	964.89	968.78	968.78
1	24.750	120.750	953.36	956.37	956.37
1	24.833	120.833	944.04	946.47	946.47
1	24.917	120.917	936.12	938.19	938.19
1	25.000	121.000	929.13	930.96	930.96
1	25.083	121.083	922.65	924.34	924.34
1	25.167	121.167	916.41	918.04	918.04
1	25.250	121.250	910.31	911.90	911.90
1	25.333	121.333	904.36	905.91	905.91
1	25.417	121.417	898.55	900.06	900.06
1	25.500	121.500	892.82	894.32	894.32
1	25.583	121.583	887.10	888.59	888.59
1	25.667	121.667	881.32	882.83	882.83
1	25.750	121.750	875.50	877.02	877.02
1	25.833	121.833	869.67	871.19	871.19
1	25.917	121.917	863.85	865.37	865.37
1	26.000	122.000	858.07	859.58	859.58
1	26.083	122.083	852.33	853.83	853.83
1	26.167	122.167	846.63	848.12	848.12
1	26.250	122.250	840.97	842.44	842.44
1	26.333	122.333	835.30	836.77	836.77
1	26.417	122.417	829.47	830.99	830.99
1	26.500	122.500	823.31	824.92	824.92
1	26.583	122.583	816.83	818.52	818.52
1	26.667	122.667	810.19	811.92	811.92
1	26.750	122.750	803.52	805.26	805.26
1	26.833	122.833	796.88	798.61	798.61
1	26.917	122.917	790.29	792.01	792.01

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  1   27.000 123.000       783.76      785.47      785.47
  1   27.083 123.083       777.23      778.93      778.93
  1   27.167 123.167       770.26      772.08      772.08
  1   27.250 123.250       762.06      764.20      764.20
  1   27.333 123.333       752.33      754.87      754.87
  1   27.417 123.417       741.49      744.32      744.32
  1   27.500 123.500       730.16      733.11      733.11
  1   27.583 123.583       718.71      721.70      721.70
  1   27.667 123.667       707.13      710.15      710.15
  1   27.750 123.750       695.20      698.31      698.31
  1   27.833 123.833       682.91      686.11      686.11
  1   27.917 123.917       670.47      673.72      673.72
  1   28.000 124.000       658.09      661.32      661.32
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
================================================================================
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   3033.207 AF
    OUTFLOW VOLUME =   3033.198 AF
    LOSS    VOLUME =      0.000 AF
================================================================================



********************************************************************************
  FLOW PROCESS FROM NODE   6380.00 TO NODE   6395.00 IS CODE =   1
--------------------------------------------------------------------------------

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of   329.6 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
================================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #2)

        WATERSHED AREA =     329.600 ACRES
        BASEFLOW =   0.000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    0.330 HOURS
         CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
         THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
         MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
        VALLEY(DEVELOPED):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.900
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
        VALLEY(UNDEVELOPED)/DESERT:
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:
        +------------------+--------+--------+--------+--------+--------+
        | RAINFALL DEPTHS & |        |        |        |        |        |
        |    LOSS RATES     |  DAY 1 |  DAY 2 |  DAY 3 |  DAY 4 |  DAY 5 |
        |==================+========+========+========+========+========|
        | 5-MINUTE (INCHES) |    0.58|    0.27|    0.12|    0.06|    0.04|
        |30-MINUTE (INCHES) |    1.22|    0.56|    0.24|    0.13|    0.09|
        |   1-HOUR (INCHES) |    1.62|    0.75|    0.33|    0.17|    0.12|
        |   3-HOUR (INCHES) |    2.71|    1.25|    0.54|    0.28|    0.21|
        |   6-HOUR (INCHES) |    3.75|    1.73|    0.75|    0.39|    0.29|
        |  24-HOUR (INCHES) |    6.28|    2.89|    1.26|    0.66|    0.48|
        |==================+========+========+========+========+========|
        | LOSS RATE(IN/HR)  |   0.150|   0.150|   0.150|   0.150|   0.150|
        | LOW LOSS FRACTION |   0.500|   0.750|   0.950|   0.990|   0.990|
        +------------------+--------+--------+--------+--------+--------+
          5-MINUTE FACTOR = 0.985
         30-MINUTE FACTOR = 0.985
          1-HOUR FACTOR = 0.985
          3-HOUR FACTOR = 0.998
          6-HOUR FACTOR = 0.999
         24-HOUR FACTOR = 0.999

        UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
        UNIT INTERVAL PERCENTAGE OF LAG-TIME =  25.253


        RUNOFF HYDROGRAPH LISTING LIMITS:
        MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  96.00
        MODEL TIME(HOURS) FOR END OF RESULTS = 124.00


================================================================================
                      UNIT HYDROGRAPH DETERMINATION

--------------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------------
        1                1.602               63.859
        2                7.797              246.932
        3               21.404              542.405
        4               39.370              716.138
        5               60.064              824.885
        6               75.891              630.876
        7               85.613              387.515
        8               91.167              221.417
        9               94.489              132.407
       10               96.293               71.884
       11               97.026               29.243
       12               97.665               25.478
       13               98.270               24.118
       14               98.850               23.087
       15               98.984                5.349
       16               99.089                4.176
       17               99.176                3.468
       18               99.236                2.391
       19               99.292                2.234
       20               99.345                2.124
       21               99.396                2.026
       22               99.445                1.965
       23               99.491                1.826
       24               99.536                1.815
       25               99.577                1.639
       26               99.617                1.559
       27               99.656                1.556
       28               99.690                1.365
       29               99.721                1.257
       30               99.753                1.257
       31               99.784                1.254
       32               99.812                1.082
       33               99.830                0.737
       34               99.848                0.724
       35               99.866                0.724
       36               99.885                0.724
       37               99.900                0.614
       38               99.906                0.230
       39               99.911                0.198
       40               99.916                0.197
       41               99.921                0.199
       42               99.926                0.197
       43               99.930                0.197
       44               99.935                0.198
       45               99.940                0.198
       46               99.945                0.197
       47               99.950                0.199
       48               99.955                0.197
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49	99.960	0.197
50	99.965	0.196
51	99.970	0.197
52	99.975	0.197
53	99.980	0.197
54	99.985	0.196
55	99.990	0.197
56	99.995	0.197
57	100.000	0.197
58	100.000	0.013

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 162.7269

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 154.7721

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5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	200.0	400.0	600.0	800.0
96.000	41.7912	3.86	Q	V	.	.	.
(PEAK DAY 2, HOUR 24.000)							
96.083	41.8189	4.03	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.083)							
96.167	41.8518	4.78	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.167)							
96.250	41.8963	6.45	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.250)							
96.333	41.9561	8.68	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.333)							
96.417	42.0337	11.27	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.417)							
96.500	42.1251	13.26	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.500)							
96.583	42.2250	14.51	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.583)							
96.667	42.3300	15.24	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.667)							
96.750	42.4381	15.70	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.750)							
96.833	42.5482	15.98	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.833)							
96.917	42.6592	16.12	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.917)							
97.000	42.7712	16.26	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.000)							
97.083	42.8840	16.39	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.083)							
97.167	42.9978	16.51	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.167)							
97.250	43.1120	16.59	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.250)							
97.333	43.2267	16.66	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.333)							
97.417	43.3419	16.73	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.417)							
97.500	43.4576	16.79	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.500)							
97.583	43.5737	16.86	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.583)							
97.667	43.6902	16.92	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.667)							
97.750	43.8072	16.99	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.750)							
97.833	43.9247	17.06	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.833)							
97.917	44.0426	17.12	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.917)							
98.000	44.1610	17.19	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.000)							
98.083	44.2799	17.26	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.083)							
98.167	44.3992	17.33	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.167)							
98.250	44.5190	17.40	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.250)							
98.333	44.6393	17.46	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.333)							
98.417	44.7600	17.53	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.417)							
98.500	44.8812	17.60	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.500)							
98.583	45.0029	17.67	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.583)							
98.667	45.1251	17.74	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.667)							
98.750	45.2478	17.81	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.750)							
98.833	45.3710	17.88	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.833)							
98.917	45.4946	17.95	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.917)							
99.000	45.6188	18.03	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.000)							
99.083	45.7434	18.10	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.083)							
99.167	45.8686	18.17	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.167)							
99.250	45.9942	18.24	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.250)							
99.333	46.1204	18.32	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.333)							
99.417	46.2470	18.39	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.417)							
99.500	46.3742	18.47	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.500)							
99.583	46.5019	18.54	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.583)							
99.667	46.6301	18.62	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.667)							
99.750	46.7589	18.70	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.750)							
99.833	46.8882	18.77	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.833)							
99.917	47.0181	18.85	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.917)							
100.000	47.1484	18.93	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.000)							
100.083	47.2794	19.01	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.083)							
100.167	47.4109	19.09	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.167)							
100.250	47.5430	19.18	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.250)							
100.333	47.6756	19.26	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.333)							
100.417	47.8089	19.35	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.417)							
100.500	47.9427	19.43	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.500)							
100.583	48.0771	19.52	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.583)							
100.667	48.2121	19.60	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.667)							
100.750	48.3477	19.69	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.750)							
100.833	48.4840	19.78	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.833)							
100.917	48.6208	19.87	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.917)							
101.000	48.7583	19.96	Q	. V	.	.	.
(PEAK DAY 1, HOUR 5.000)							
101.083	48.8964	20.05	.Q	. V	.	.	.

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(PEAK DAY 1, HOUR   5.083)
101.167     49.0351     20.15  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.167)
101.250     49.1745     20.24  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.250)
101.333     49.3146     20.34  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.333)
101.417     49.4553     20.43  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.417)
101.500     49.5967     20.53  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.500)
101.583     49.7388     20.63  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.583)
101.667     49.8815     20.73  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.667)
101.750     50.0250     20.83  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.750)
101.833     50.1692     20.93  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.833)
101.917     50.3140     21.04  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.917)
102.000     50.4596     21.14  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.000)
102.083     50.6060     21.25  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.083)
102.167     50.7531     21.36  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.167)
102.250     50.9009     21.47  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.250)
102.333     51.0495     21.58  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.333)
102.417     51.1989     21.69  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.417)
102.500     51.3491     21.80  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.500)
102.583     51.5000     21.92  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.583)
102.667     51.6518     22.04  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.667)
102.750     51.8044     22.16  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.750)
102.833     51.9578     22.28  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.833)
102.917     52.1121     22.40  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.917)
103.000     52.2672     22.52  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.000)
103.083     52.4232     22.65  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.083)
103.167     52.5800     22.78  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.167)
103.250     52.7378     22.91  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.250)
103.333     52.8965     23.04  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.333)
103.417     53.0560     23.17  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.417)
103.500     53.2166     23.31  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.500)
103.583     53.3780     23.44  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.583)
103.667     53.5404     23.58  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.667)
103.750     53.7038     23.73  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.750)
103.833     53.8682     23.87  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.833)
103.917     54.0336     24.02  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.917)
104.000     54.2001     24.16  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.000)
104.083     54.3675     24.32  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.083)
104.167     54.5361     24.47  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.167)
104.250     54.7057     24.63  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.250)
104.333     54.8764     24.78  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.333)
104.417     55.0482     24.95  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.417)
104.500     55.2211     25.11  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.500)
104.583     55.3952     25.28  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.583)
104.667     55.5705     25.45  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.667)
104.750     55.7469     25.62  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.750)
104.833     55.9246     25.80  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.833)
104.917     56.1035     25.98  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.917)
105.000     56.2836     26.16  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.000)
105.083     56.4651     26.35  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.083)
105.167     56.6478     26.53  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.167)
105.250     56.8319     26.73  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.250)
105.333     57.0173     26.92  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.333)
105.417     57.2041     27.13  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.417)
105.500     57.3923     27.33  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.500)
105.583     57.5820     27.54  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.583)
105.667     57.7731     27.75  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.667)
105.750     57.9657     27.97  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.750)
105.833     58.1598     28.19  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.833)
105.917     58.3555     28.41  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.917)
106.000     58.5528     28.64  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.000)
106.083     58.7517     28.88  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.083)
106.167     58.9523     29.12  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.167)
106.250     59.1545     29.37  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.250)
106.333     59.3585     29.62  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.333)
106.417     59.5643     29.88  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.417)
106.500     59.7718     30.14  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.500)
106.583     59.9813     30.41  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.583)
106.667     60.1926     30.68  .Q        .    V    .         .         .
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 (PEAK DAY 1, HOUR  10.667)
106.750     60.4058     30.97  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.750)
106.833     60.6211     31.25  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.833)
106.917     60.8384     31.55  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.917)
107.000     61.0578     31.85  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.000)
107.083     61.2793     32.17  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.083)
107.167     61.5030     32.48  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.167)
107.250     61.7290     32.81  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.250)
107.333     61.9573     33.15  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.333)
107.417     62.1880     33.50  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.417)
107.500     62.4211     33.85  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.500)
107.583     62.6567     34.21  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.583)
107.667     62.8950     34.59  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.667)
107.750     63.1358     34.98  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.750)
107.833     63.3794     35.37  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.833)
107.917     63.6259     35.78  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.917)
108.000     63.8752     36.20  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  12.000)
108.083     64.1287     36.80  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  12.083)
108.167     64.3896     37.88  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  12.167)
108.250     64.6632     39.74  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  12.250)
108.333     64.9529     42.06  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.333)
108.417     65.2611     44.75  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.417)
108.500     65.5850     47.04  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.500)
108.583     65.9215     48.85  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.583)
108.667     66.2684     50.37  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.667)
108.750     66.6252     51.80  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.750)
108.833     66.9912     53.15  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.833)
108.917     67.3665     54.49  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.917)
109.000     67.7512     55.86  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.000)
109.083     68.1459     57.30  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.083)
109.167     68.5507     58.79  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.167)
109.250     68.9661     60.31  .  Q      .      V  .         .         .
 (PEAK DAY 1, HOUR  13.250)
109.333     69.3921     61.87  .  Q      .      V  .         .         .
 (PEAK DAY 1, HOUR  13.333)
109.417     69.8296     63.52  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.417)
109.500     70.2787     65.21  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.500)
109.583     70.7402     67.01  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.583)
109.667     71.2144     68.86  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.667)
109.750     71.7022     70.83  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.750)
109.833     72.2041     72.87  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.833)
109.917     72.7209     75.04  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.917)
110.000     73.2533     77.30  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  14.000)
110.083     73.8026     79.76  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  14.083)
110.167     74.3704     82.45  .   Q     .        V.         .         .
 (PEAK DAY 1, HOUR  14.167)
110.250     74.9596     85.54  .   Q     .        V.         .         .
 (PEAK DAY 1, HOUR  14.250)
110.333     75.5717     88.89  .   Q     .        V.         .         .
 (PEAK DAY 1, HOUR  14.333)
110.417     76.2090     92.53  .   Q     .        V.         .         .
 (PEAK DAY 1, HOUR  14.417)
110.500     76.8715     96.20  .   Q     .        V.         .         .
 (PEAK DAY 1, HOUR  14.500)
110.583     77.5600     99.96  .   Q     .         V         .         .
 (PEAK DAY 1, HOUR  14.583)
110.667     78.2749    103.81  .    Q    .         V         .         .
 (PEAK DAY 1, HOUR  14.667)
110.750     79.0182    107.93  .    Q    .         V         .         .
 (PEAK DAY 1, HOUR  14.750)
110.833     79.7914    112.27  .    Q    .         V         .         .
 (PEAK DAY 1, HOUR  14.833)
110.917     80.5973    117.01  .    Q    .         V         .         .
 (PEAK DAY 1, HOUR  14.917)
111.000     81.4383    122.11  .     Q   .         .V        .         .
 (PEAK DAY 1, HOUR  15.000)
111.083     82.3183    127.78  .     Q   .         .V        .         .
 (PEAK DAY 1, HOUR  15.083)
111.167     83.2408    133.95  .     Q   .         .V        .         .
 (PEAK DAY 1, HOUR  15.167)
111.250     84.2112    140.89  .      Q  .         .V        .         .
 (PEAK DAY 1, HOUR  15.250)
111.333     85.2343    148.56  .      Q  .         . V       .         .
 (PEAK DAY 1, HOUR  15.333)
111.417     86.3140    156.77  .      Q  .         . V       .         .
 (PEAK DAY 1, HOUR  15.417)
111.500     87.4461    164.38  .       Q .         . V       .         .
 (PEAK DAY 1, HOUR  15.500)
111.583     88.6237    170.99  .       Q .         . V       .         .
 (PEAK DAY 1, HOUR  15.583)
111.667     89.8487    177.87  .       Q .         .  V      .         .
 (PEAK DAY 1, HOUR  15.667)
111.750     91.1366    187.00  .        Q.         .  V      .         .
 (PEAK DAY 1, HOUR  15.750)
111.833     92.5291    202.19  .         Q         .  V      .         .
 (PEAK DAY 1, HOUR  15.833)
111.917     94.0982    227.84  .         .Q        .   V     .         .
 (PEAK DAY 1, HOUR  15.917)
112.000     95.9486    268.68  .         .  Q      .   V     .         .
 (PEAK DAY 1, HOUR  16.000)
112.083     98.3970    355.50  .         .     Q   .    V    .         .
 (PEAK DAY 1, HOUR  16.083)
112.167    101.8439    500.50  .         .         .    QV   .         .
 (PEAK DAY 1, HOUR  16.167)
112.250    106.5117    677.76  .         .         .      V  .  Q      .
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 (PEAK DAY 1, HOUR  16.250)
112.333    111.8129    769.73  .         .         .       V .       Q .
 (PEAK DAY 1, HOUR  16.333)
112.417    117.2284    786.33  .         .         .         V        Q.
 (PEAK DAY 1, HOUR  16.417)
112.500    121.6811    646.54  .         .         .         .VQ       .
 (PEAK DAY 1, HOUR  16.500)
112.583    124.9948    481.15  .         .         .   Q     . V       .
 (PEAK DAY 1, HOUR  16.583)
112.667    127.4627    358.33  .         .      Q  .         . V       .
 (PEAK DAY 1, HOUR  16.667)
112.750    129.3967    280.83  .         .   Q     .         .  V      .
 (PEAK DAY 1, HOUR  16.750)
112.833    130.9455    224.88  .         .Q        .         .  V      .
 (PEAK DAY 1, HOUR  16.833)
112.917    132.2140    184.19  .        Q.         .         .   V     .
 (PEAK DAY 1, HOUR  16.917)
113.000    133.3513    165.13  .       Q .         .         .   V     .
 (PEAK DAY 1, HOUR  17.000)
113.083    134.3849    150.08  .      Q  .         .         .   V     .
 (PEAK DAY 1, HOUR  17.083)
113.167    135.3235    136.28  .     Q   .         .         .   V     .
 (PEAK DAY 1, HOUR  17.167)
113.250    136.1315    117.32  .    Q    .         .         .    V    .
 (PEAK DAY 1, HOUR  17.250)
113.333    136.8693    107.13  .    Q    .         .         .    V    .
 (PEAK DAY 1, HOUR  17.333)
113.417    137.5491     98.70  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  17.417)
113.500    138.1786     91.40  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  17.500)
113.583    138.7664     85.36  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  17.583)
113.667    139.3183     80.13  .   Q     .         .         .     V   .
 (PEAK DAY 1, HOUR  17.667)
113.750    139.8382     75.50  .  Q      .         .         .     V   .
 (PEAK DAY 1, HOUR  17.750)
113.833    140.3296     71.35  .  Q      .         .         .     V   .
 (PEAK DAY 1, HOUR  17.833)
113.917    140.7949     67.57  .  Q      .         .         .     V   .
 (PEAK DAY 1, HOUR  17.917)
114.000    141.2367     64.15  .  Q      .         .         .     V   .
 (PEAK DAY 1, HOUR  18.000)
114.083    141.6554     60.80  .  Q      .         .         .     V   .
 (PEAK DAY 1, HOUR  18.083)
114.167    142.0503     57.33  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.167)
114.250    142.4188     53.51  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.250)
114.333    142.7600     49.55  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.333)
114.417    143.0749     45.72  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.417)
114.500    143.3691     42.72  . Q       .         .         .      V  .
 (PEAK DAY 1, HOUR  18.500)
114.583    143.6481     40.51  . Q       .         .         .      V  .
 (PEAK DAY 1, HOUR  18.583)
114.667    143.9151     38.78  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  18.667)
114.750    144.1721     37.31  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  18.750)
114.833    144.4216     36.23  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  18.833)
114.917    144.6648     35.31  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  18.917)
115.000    144.9020     34.45  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.000)
115.083    145.1332     33.56  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.083)
115.167    145.3579     32.63  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.167)
115.250    145.5779     31.94  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.250)
115.333    145.7936     31.32  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.333)
115.417    146.0053     30.74  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.417)
115.500    146.2132     30.18  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.500)
115.583    146.4174     29.65  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.583)
115.667    146.6181     29.15  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.667)
115.750    146.8156     28.67  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.750)
115.833    147.0098     28.20  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.833)
115.917    147.2010     27.76  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  19.917)
116.000    147.3893     27.34  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.000)
116.083    147.5748     26.93  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.083)
116.167    147.7575     26.54  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.167)
116.250    147.9377     26.16  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.250)
116.333    148.1153     25.80  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.333)
116.417    148.2906     25.44  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.417)
116.500    148.4634     25.10  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.500)
116.583    148.6340     24.76  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.583)
116.667    148.8022     24.43  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.667)
116.750    148.9682     24.10  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.750)
116.833    149.1315     23.71  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.833)
116.917    149.2927     23.41  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.917)
117.000    149.4519     23.12  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.000)
117.083    149.6093     22.85  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.083)
117.167    149.7649     22.59  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.167)
117.250    149.9187     22.34  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.250)
117.333    150.0708     22.09  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.333)
117.417    150.2213     21.85  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.417)
117.500    150.3702     21.62  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.500)
117.583    150.5176     21.40  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.583)
117.667    150.6634     21.18  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.667)
117.750    150.8078     20.96  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.750)
117.833    150.9508     20.76  .Q        .         .         .        V.
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(PEAK DAY 1, HOUR 21.833)
117.917 151.0923 20.56 .Q . . . V.
(PEAK DAY 1, HOUR 21.917)
118.000 151.2325 20.36 .Q . . . V.
(PEAK DAY 1, HOUR 22.000)
118.083 151.3714 20.17 .Q . . . V.
(PEAK DAY 1, HOUR 22.083)
118.167 151.5090 19.98 Q . . . V.
(PEAK DAY 1, HOUR 22.167)
118.250 151.6454 19.80 Q . . . V.
(PEAK DAY 1, HOUR 22.250)
118.333 151.7805 19.62 Q . . . V.
(PEAK DAY 1, HOUR 22.333)
118.417 151.9144 19.45 Q . . . V.
(PEAK DAY 1, HOUR 22.417)
118.500 152.0472 19.28 Q . . . V.
(PEAK DAY 1, HOUR 22.500)
118.583 152.1788 19.11 Q . . . V.
(PEAK DAY 1, HOUR 22.583)
118.667 152.3093 18.95 Q . . . V.
(PEAK DAY 1, HOUR 22.667)
118.750 152.4387 18.79 Q . . . V.
(PEAK DAY 1, HOUR 22.750)
118.833 152.5670 18.63 Q . . . V.
(PEAK DAY 1, HOUR 22.833)
118.917 152.6943 18.48 Q . . . V.
(PEAK DAY 1, HOUR 22.917)
119.000 152.8205 18.33 Q . . . V.
(PEAK DAY 1, HOUR 23.000)
119.083 152.9458 18.19 Q . . . V.
(PEAK DAY 1, HOUR 23.083)
119.167 153.0701 18.05 Q . . . V.
(PEAK DAY 1, HOUR 23.167)
119.250 153.1934 17.91 Q . . . V.
(PEAK DAY 1, HOUR 23.250)
119.333 153.3158 17.77 Q . . . V.
(PEAK DAY 1, HOUR 23.333)
119.417 153.4372 17.64 Q . . . V.
(PEAK DAY 1, HOUR 23.417)
119.500 153.5578 17.50 Q . . . V.
(PEAK DAY 1, HOUR 23.500)
119.583 153.6774 17.38 Q . . . V.
(PEAK DAY 1, HOUR 23.583)
119.667 153.7962 17.25 Q . . . V.
(PEAK DAY 1, HOUR 23.667)
119.750 153.9142 17.12 Q . . . V.
(PEAK DAY 1, HOUR 23.750)
119.833 154.0313 17.00 Q . . . V.
(PEAK DAY 1, HOUR 23.833)
119.917 154.1475 16.88 Q . . . V.
(PEAK DAY 1, HOUR 23.917)
120.000 154.2630 16.77 Q . . . V.
(PEAK DAY 1, HOUR 24.000)
120.083 154.3759 16.39 Q . . . V.
(PEAK DAY 1, HOUR 24.083)
120.167 154.4811 15.28 Q . . . V.
(PEAK DAY 1, HOUR 24.167)
120.250 154.5705 12.98 Q . . . V.
(PEAK DAY 1, HOUR 24.250)
120.333 154.6393 9.99 Q . . . V.
(PEAK DAY 1, HOUR 24.333)
120.417 154.6846 6.58 Q . . . V.
(PEAK DAY 1, HOUR 24.417)
120.500 154.7121 3.98 Q . . . V.
(PEAK DAY 1, HOUR 24.500)
120.583 154.7285 2.38 Q . . . V.
(PEAK DAY 1, HOUR 24.583)
120.667 154.7386 1.47 Q . . . V.
(PEAK DAY 1, HOUR 24.667)
120.750 154.7450 0.92 Q . . . V.
(PEAK DAY 1, HOUR 24.750)
120.833 154.7493 0.63 Q . . . V.
(PEAK DAY 1, HOUR 24.833)
120.917 154.7528 0.50 Q . . . V.
(PEAK DAY 1, HOUR 24.917)
121.000 154.7555 0.40 Q . . . V.
(PEAK DAY 1, HOUR 25.000)
121.083 154.7576 0.30 Q . . . V.
(PEAK DAY 1, HOUR 25.083)
121.167 154.7589 0.20 Q . . . V.
(PEAK DAY 1, HOUR 25.167)
121.250 154.7602 0.18 Q . . . V.
(PEAK DAY 1, HOUR 25.250)
121.333 154.7613 0.16 Q . . . V.
(PEAK DAY 1, HOUR 25.333)
121.417 154.7623 0.14 Q . . . V.
(PEAK DAY 1, HOUR 25.417)
121.500 154.7632 0.13 Q . . . V.
(PEAK DAY 1, HOUR 25.500)
121.583 154.7640 0.12 Q . . . V.
(PEAK DAY 1, HOUR 25.583)
121.667 154.7648 0.11 Q . . . V.
(PEAK DAY 1, HOUR 25.667)
121.750 154.7655 0.11 Q . . . V.
(PEAK DAY 1, HOUR 25.750)
121.833 154.7662 0.10 Q . . . V.
(PEAK DAY 1, HOUR 25.833)
121.917 154.7668 0.09 Q . . . V.
(PEAK DAY 1, HOUR 25.917)
122.000 154.7674 0.08 Q . . . V.
(PEAK DAY 1, HOUR 26.000)
122.083 154.7679 0.07 Q . . . V.
(PEAK DAY 1, HOUR 26.083)
122.167 154.7683 0.07 Q . . . V.
(PEAK DAY 1, HOUR 26.167)
122.250 154.7688 0.06 Q . . . V.
(PEAK DAY 1, HOUR 26.250)
122.333 154.7691 0.05 Q . . . V.
(PEAK DAY 1, HOUR 26.333)
122.417 154.7695 0.05 Q . . . V.
(PEAK DAY 1, HOUR 26.417)
122.500 154.7697 0.04 Q . . . V.
(PEAK DAY 1, HOUR 26.500)
122.583 154.7700 0.04 Q . . . V.
(PEAK DAY 1, HOUR 26.583)
122.667 154.7702 0.03 Q . . . V.
(PEAK DAY 1, HOUR 26.667)
122.750 154.7704 0.03 Q . . . V.
(PEAK DAY 1, HOUR 26.750)
122.833 154.7706 0.03 Q . . . V.
(PEAK DAY 1, HOUR 26.833)
122.917 154.7708 0.02 Q . . . V.
(PEAK DAY 1, HOUR 26.917)
123.000 154.7709 0.02 Q . . . V.
(PEAK DAY 1, HOUR 27.000)
123.083 154.7710 0.02 Q . . . V.
(PEAK DAY 1, HOUR 27.083)
123.167 154.7711 0.02 Q . . . V.
(PEAK DAY 1, HOUR 27.167)
123.250 154.7712 0.02 Q . . . V.
(PEAK DAY 1, HOUR 27.250)
123.333 154.7713 0.01 Q . . . V.
(PEAK DAY 1, HOUR 27.333)
123.417 154.7714 0.01 Q . . . V.

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 (PEAK DAY 1, HOUR  27.417)
 123.500    154.7715      0.01  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.500)
 123.583    154.7716      0.01  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.583)
 123.667    154.7717      0.01  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.667)
 123.750    154.7718      0.01  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.750)
 123.833    154.7718      0.01  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.833)
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********************************************************************************
  FLOW PROCESS FROM NODE   6395.00 TO NODE   6395.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  7291.1 Ac. ***
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6395.00 TO NODE   6395.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  7291.1 Ac. ***

           STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
         (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.     1450.0    2900.0    4350.0    5800.0
--------------------------------------------------------------------------------
  96.000    847.9338     92.94  Q         V         .         .         .
 (PEAK DAY 2, HOUR  24.000)
  96.083    848.5746     93.03  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.083)
  96.167    849.2387     96.44  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.167)
  96.250    849.9609    104.85  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.250)
  96.333    850.7708    117.60  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.333)
  96.417    851.6772    131.60  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.417)
  96.500    852.6785    145.40  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.500)
  96.583    853.7762    159.39  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.583)
  96.667    854.9688    173.15  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.667)
  96.750    856.2574    187.11  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.750)
  96.833    857.6592    203.54  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.833)
  96.917    859.2017    223.97  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.917)
  97.000    860.8970    246.16  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   1.000)
  97.083    862.7286    265.94  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   1.083)
  97.167    864.6669    281.44  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   1.167)
  97.250    866.6861    293.19  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.250)
  97.333    868.7689    302.42  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.333)
  97.417    870.9037    309.97  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.417)
  97.500    873.0826    316.39  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.500)
  97.583    875.3000    321.97  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.583)
  97.667    877.5514    326.90  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   1.667)
  97.750    879.8332    331.32  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   1.750)
  97.833    882.1427    335.34  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   1.833)
  97.917    884.4775    339.02  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   1.917)
  98.000    886.8356    342.39  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.000)
  98.083    889.2150    345.48  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.083)
  98.167    891.6137    348.30  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.167)
  98.250    894.0302    350.87  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.250)
  98.333    896.4631    353.26  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.333)
  98.417    898.9113    355.48  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.417)
  98.500    901.3734    357.49  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.500)
  98.583    903.8479    359.30  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.583)
  98.667    906.3338    360.95  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.667)
  98.750    908.8306    362.53  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.750)
  98.833    911.3381    364.09  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.833)
  98.917    913.8563    365.64  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.917)
  99.000    916.3851    367.19  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.000)
  99.083    918.9247    368.75  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.083)
  99.167    921.4751    370.31  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.167)
  99.250    924.0363    371.88  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.250)
  99.333    926.6083    373.46  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.333)
  99.417    929.1914    375.06  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.417)
  99.500    931.7856    376.67  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.500)
  99.583    934.3910    378.30  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.583)
  99.667    937.0077    379.95  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.667)
  99.750    939.6358    381.61  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.750)
  99.833    942.2755    383.28  . Q       .V        .         .         .
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(PEAK DAY 1, HOUR   3.833)
 99.917    944.9268    384.97  . Q       .V        .         .         .
(PEAK DAY 1, HOUR   3.917)
100.000    947.5899    386.68  . Q       .V        .         .         .
(PEAK DAY 1, HOUR   4.000)
100.083    950.2648    388.40  . Q       .V        .         .         .
(PEAK DAY 1, HOUR   4.083)
100.167    952.9517    390.13  . Q       .V        .         .         .
(PEAK DAY 1, HOUR   4.167)
100.250    955.6505    391.87  . Q       .V        .         .         .
(PEAK DAY 1, HOUR   4.250)
100.333    958.3613    393.60  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   4.333)
100.417    961.0837    395.31  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   4.417)
100.500    963.8179    397.00  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   4.500)
100.583    966.5637    398.69  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   4.583)
100.667    969.3211    400.38  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   4.667)
100.750    972.0903    402.10  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   4.750)
100.833    974.8715    403.83  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   4.833)
100.917    977.6647    405.57  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   4.917)
101.000    980.4702    407.34  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   5.000)
101.083    983.2878    409.13  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   5.083)
101.167    986.1180    410.94  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   5.167)
101.250    988.9608    412.77  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   5.250)
101.333    991.8163    414.62  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   5.333)
101.417    994.6848    416.50  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   5.417)
101.500    997.5662    418.39  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   5.500)
101.583   1000.4609    420.31  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   5.583)
101.667   1003.3689    422.25  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   5.667)
101.750   1006.2905    424.21  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   5.750)
101.833   1009.2257    426.20  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   5.833)
101.917   1012.1748    428.21  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   5.917)
102.000   1015.1379    430.25  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   6.000)
102.083   1018.1153    432.31  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   6.083)
102.167   1021.1071    434.40  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   6.167)
102.250   1024.1134    436.52  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   6.250)
102.333   1027.1345    438.66  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   6.333)
102.417   1030.1705    440.83  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   6.417)
102.500   1033.2217    443.03  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   6.500)
102.583   1036.2882    445.25  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   6.583)
102.667   1039.3702    447.51  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   6.667)
102.750   1042.4680    449.80  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   6.750)
102.833   1045.5818    452.11  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   6.833)
102.917   1048.7117    454.46  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   6.917)
103.000   1051.8579    456.84  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.000)
103.083   1055.0208    459.25  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.083)
103.167   1058.2006    461.70  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.167)
103.250   1061.3975    464.18  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.250)
103.333   1064.6116    466.70  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.333)
103.417   1067.8433    469.25  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.417)
103.500   1071.0929    471.84  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.500)
103.583   1074.3606    474.46  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.583)
103.667   1077.6466    477.13  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.667)
103.750   1080.9513    479.83  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.750)
103.833   1084.2748    482.58  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.833)
103.917   1087.6176    485.36  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.917)
104.000   1090.9797    488.19  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   8.000)
104.083   1094.3617    491.06  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   8.083)
104.167   1097.7638    493.98  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   8.167)
104.250   1101.1863    496.94  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   8.250)
104.333   1104.6295    499.95  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   8.333)
104.417   1108.0938    503.01  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   8.417)
104.500   1111.5793    506.11  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   8.500)
104.583   1115.0867    509.27  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   8.583)
104.667   1118.6161    512.48  .  Q      .   V     .         .         .
(PEAK DAY 1, HOUR   8.667)
104.750   1122.1680    515.74  .  Q      .   V     .         .         .
(PEAK DAY 1, HOUR   8.750)
104.833   1125.7428    519.06  .  Q      .   V     .         .         .
(PEAK DAY 1, HOUR   8.833)
104.917   1129.3408    522.43  .  Q      .   V     .         .         .
(PEAK DAY 1, HOUR   8.917)
105.000   1132.9624    525.86  .  Q      .   V     .         .         .
(PEAK DAY 1, HOUR   9.000)
105.083   1136.6080    529.35  .  Q      .   V     .         .         .
(PEAK DAY 1, HOUR   9.083)
105.167   1140.2782    532.90  .  Q      .   V     .         .         .
(PEAK DAY 1, HOUR   9.167)
105.250   1143.9731    536.52  .  Q      .   V     .         .         .
(PEAK DAY 1, HOUR   9.250)
105.333   1147.6935    540.19  .  Q      .   V     .         .         .
(PEAK DAY 1, HOUR   9.333)
105.417   1151.4396    543.94  .  Q      .   V     .         .         .
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(PEAK DAY 1, HOUR   9.417)
105.500   1155.2119    547.75  .  Q      .   V     .         .         .
(PEAK DAY 1, HOUR   9.500)
105.583   1159.0111    551.64  .  Q      .   V     .         .         .
(PEAK DAY 1, HOUR   9.583)
105.667   1162.8375    555.59  .  Q      .   V     .         .         .
(PEAK DAY 1, HOUR   9.667)
105.750   1166.6917    559.63  .  Q      .   V     .         .         .
(PEAK DAY 1, HOUR   9.750)
105.833   1170.5741    563.74  .  Q      .   V     .         .         .
(PEAK DAY 1, HOUR   9.833)
105.917   1174.4855    567.92  .  Q      .   V     .         .         .
(PEAK DAY 1, HOUR   9.917)
106.000   1178.4263    572.20  .  Q      .   V     .         .         .
(PEAK DAY 1, HOUR  10.000)
106.083   1182.3970    576.55  .  Q      .   V     .         .         .
(PEAK DAY 1, HOUR  10.083)
106.167   1186.3983    581.00  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.167)
106.250   1190.4309    585.53  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.250)
106.333   1194.4954    590.16  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.333)
106.417   1198.5924    594.89  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  10.417)
106.500   1202.7227    599.72  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  10.500)
106.583   1206.8868    604.65  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  10.583)
106.667   1211.0858    609.69  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  10.667)
106.750   1215.3202    614.84  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  10.750)
106.833   1219.5908    620.10  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  10.833)
106.917   1223.8986    625.49  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  10.917)
107.000   1228.2443    631.00  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.000)
107.083   1232.6288    636.63  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.083)
107.167   1237.0529    642.38  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.167)
107.250   1241.5164    648.10  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.250)
107.333   1246.0170    653.49  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.333)
107.417   1250.5513    658.39  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.417)
107.500   1255.1174    663.01  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.500)
107.583   1259.7159    667.71  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.583)
107.667   1264.3491    672.73  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.667)
107.750   1269.0198    678.17  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.750)
107.833   1273.7307    684.03  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.833)
107.917   1278.4846    690.26  .   Q     .     V   .         .         .
(PEAK DAY 1, HOUR  11.917)
108.000   1283.2838    696.85  .   Q     .     V   .         .         .
(PEAK DAY 1, HOUR  12.000)
108.083   1288.1384    704.89  .   Q     .     V   .         .         .
(PEAK DAY 1, HOUR  12.083)
108.167   1293.0841    718.10  .   Q     .     V   .         .         .
(PEAK DAY 1, HOUR  12.167)
108.250   1298.1716    738.72  .   Q     .     V   .         .         .
(PEAK DAY 1, HOUR  12.250)
108.333   1303.4423    765.29  .   Q     .     V   .         .         .
(PEAK DAY 1, HOUR  12.333)
108.417   1308.8977    792.13  .   Q     .     V   .         .         .
(PEAK DAY 1, HOUR  12.417)
108.500   1314.5209    816.48  .   Q     .     V   .         .         .
(PEAK DAY 1, HOUR  12.500)
108.583   1320.2974    838.75  .   Q     .     V   .         .         .
(PEAK DAY 1, HOUR  12.583)
108.667   1326.2096    858.46  .   Q     .     V   .         .         .
(PEAK DAY 1, HOUR  12.667)
108.750   1332.2404    875.66  .    Q    .     V   .         .         .
(PEAK DAY 1, HOUR  12.750)
108.833   1338.3816    891.71  .    Q    .     V   .         .         .
(PEAK DAY 1, HOUR  12.833)
108.917   1344.6349    907.98  .    Q    .     V   .         .         .
(PEAK DAY 1, HOUR  12.917)
109.000   1351.0078    925.34  .    Q    .     V   .         .         .
(PEAK DAY 1, HOUR  13.000)
109.083   1357.5072    943.71  .    Q    .      V  .         .         .
(PEAK DAY 1, HOUR  13.083)
109.167   1364.1349    962.33  .    Q    .      V  .         .         .
(PEAK DAY 1, HOUR  13.167)
109.250   1370.8873    980.46  .    Q    .      V  .         .         .
(PEAK DAY 1, HOUR  13.250)
109.333   1377.7614    998.11  .    Q    .      V  .         .         .
(PEAK DAY 1, HOUR  13.333)
109.417   1384.7561   1015.64  .     Q   .      V  .         .         .
(PEAK DAY 1, HOUR  13.417)
109.500   1391.8734   1033.43  .     Q   .      V  .         .         .
(PEAK DAY 1, HOUR  13.500)
109.583   1399.1149   1051.47  .     Q   .      V  .         .         .
(PEAK DAY 1, HOUR  13.583)
109.667   1406.4801   1069.43  .     Q   .      V  .         .         .
(PEAK DAY 1, HOUR  13.667)
109.750   1413.9664   1087.02  .     Q   .      V  .         .         .
(PEAK DAY 1, HOUR  13.750)
109.833   1421.5729   1104.45  .     Q   .      V  .         .         .
(PEAK DAY 1, HOUR  13.833)
109.917   1429.3014   1122.18  .     Q   .      V  .         .         .
(PEAK DAY 1, HOUR  13.917)
110.000   1437.1570   1140.63  .     Q   .       V .         .         .
(PEAK DAY 1, HOUR  14.000)
110.083   1445.1492   1160.47  .      Q  .       V .         .         .
(PEAK DAY 1, HOUR  14.083)
110.167   1453.2992   1183.39  .      Q  .       V .         .         .
(PEAK DAY 1, HOUR  14.167)
110.250   1461.6343   1210.25  .      Q  .       V .         .         .
(PEAK DAY 1, HOUR  14.250)
110.333   1470.1777   1240.50  .      Q  .       V .         .         .
(PEAK DAY 1, HOUR  14.333)
110.417   1478.9362   1271.72  .      Q  .       V .         .         .
(PEAK DAY 1, HOUR  14.417)
110.500   1487.9103   1303.04  .      Q  .       V .         .         .
(PEAK DAY 1, HOUR  14.500)
110.583   1497.1049   1335.05  .       Q.        V .         .         .
(PEAK DAY 1, HOUR  14.583)
110.667   1506.5276   1368.19  .       Q.        V .         .         .
(PEAK DAY 1, HOUR  14.667)
110.750   1516.1891   1402.84  .       Q.         V.         .         .
(PEAK DAY 1, HOUR  14.750)
110.833   1526.1072   1440.10  .       Q.         V.         .         .
(PEAK DAY 1, HOUR  14.833)
110.917   1536.3068   1480.97  .        Q         V.         .         .
(PEAK DAY 1, HOUR  14.917)
111.000   1546.8190   1526.37  .        Q         V.         .         .
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 (PEAK DAY 1, HOUR  15.000)
111.083   1557.6766   1576.54  .         Q        V.         .         .
 (PEAK DAY 1, HOUR  15.083)
111.167   1568.9143   1631.70  .         .Q       V.         .         .
 (PEAK DAY 1, HOUR  15.167)
111.250   1580.5677   1692.09  .         .Q       V.         .         .
 (PEAK DAY 1, HOUR  15.250)
111.333   1592.6799   1758.69  .         . Q      V.         .         .
 (PEAK DAY 1, HOUR  15.333)
111.417   1605.2776   1829.19  .         . Q       V         .         .
 (PEAK DAY 1, HOUR  15.417)
111.500   1618.3278   1894.88  .         .  Q      V         .         .
 (PEAK DAY 1, HOUR  15.500)
111.583   1631.7637   1950.90  .         .  Q      V         .         .
 (PEAK DAY 1, HOUR  15.583)
111.667   1645.5648   2003.93  .         .  Q      V         .         .
 (PEAK DAY 1, HOUR  15.667)
111.750   1659.8389   2072.59  .         .   Q     V         .         .
 (PEAK DAY 1, HOUR  15.750)
111.833   1674.8132   2174.27  .         .   Q     .V        .         .
 (PEAK DAY 1, HOUR  15.833)
111.917   1690.8256   2324.99  .         .     Q   .V        .         .
 (PEAK DAY 1, HOUR  15.917)
112.000   1708.4790   2563.27  .         .      Q  .V        .         .
 (PEAK DAY 1, HOUR  16.000)
112.083   1729.2999   3023.19  .         .         QV        .         .
 (PEAK DAY 1, HOUR  16.083)
112.167   1756.0525   3884.47  .         .         . V   Q   .         .
 (PEAK DAY 1, HOUR  16.167)
112.250   1789.8726   4910.67  .         .         . V       .  Q      .
 (PEAK DAY 1, HOUR  16.250)
112.333   1828.7772   5648.96  .         .         . V       .       Q .
 (PEAK DAY 1, HOUR  16.333)
112.417   1868.3494   5745.88  .         .         .  V      .        Q.
 (PEAK DAY 1, HOUR  16.417)
112.500   1905.7039   5423.88  .         .         .  V      .      Q  .
 (PEAK DAY 1, HOUR  16.500)
112.583   1939.9764   4976.37  .         .         .   V     .   Q     .
 (PEAK DAY 1, HOUR  16.583)
112.667   1970.1016   4374.17  .         .         .   V     Q         .
 (PEAK DAY 1, HOUR  16.667)
112.750   1995.8741   3742.18  .         .         .    Q    .         .
 (PEAK DAY 1, HOUR  16.750)
112.833   2018.1469   3234.01  .         .         . Q  V    .         .
 (PEAK DAY 1, HOUR  16.833)
112.917   2037.8855   2866.05  .         .        Q.    V    .         .
 (PEAK DAY 1, HOUR  16.917)
113.000   2055.8496   2608.39  .         .      Q  .    V    .         .
 (PEAK DAY 1, HOUR  17.000)
113.083   2072.5227   2420.92  .         .     Q   .     V   .         .
 (PEAK DAY 1, HOUR  17.083)
113.167   2088.2378   2281.83  .         .    Q    .     V   .         .
 (PEAK DAY 1, HOUR  17.167)
113.250   2103.1497   2165.21  .         .   Q     .     V   .         .
 (PEAK DAY 1, HOUR  17.250)
113.333   2117.4067   2070.13  .         .   Q     .     V   .         .
 (PEAK DAY 1, HOUR  17.333)
113.417   2131.0991   1988.13  .         .  Q      .     V   .         .
 (PEAK DAY 1, HOUR  17.417)
113.500   2144.3291   1920.99  .         .  Q      .     V   .         .
 (PEAK DAY 1, HOUR  17.500)
113.583   2157.1943   1868.03  .         . Q       .      V  .         .
 (PEAK DAY 1, HOUR  17.583)
113.667   2169.7720   1826.26  .         . Q       .      V  .         .
 (PEAK DAY 1, HOUR  17.667)
113.750   2182.1174   1792.56  .         . Q       .      V  .         .
 (PEAK DAY 1, HOUR  17.750)
113.833   2194.2651   1763.84  .         . Q       .      V  .         .
 (PEAK DAY 1, HOUR  17.833)
113.917   2206.2371   1738.33  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  17.917)
114.000   2218.0483   1714.98  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  18.000)
114.083   2229.6980   1691.53  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  18.083)
114.167   2241.1633   1664.77  .         .Q        .       V .         .
 (PEAK DAY 1, HOUR  18.167)
114.250   2252.4102   1633.05  .         .Q        .       V .         .
 (PEAK DAY 1, HOUR  18.250)
114.333   2263.4111   1597.36  .         .Q        .       V .         .
 (PEAK DAY 1, HOUR  18.333)
114.417   2274.1782   1563.37  .         Q         .       V .         .
 (PEAK DAY 1, HOUR  18.417)
114.500   2284.7485   1534.80  .         Q         .       V .         .
 (PEAK DAY 1, HOUR  18.500)
114.583   2295.1511   1510.44  .         Q         .       V .         .
 (PEAK DAY 1, HOUR  18.583)
114.667   2305.4060   1489.00  .         Q         .       V .         .
 (PEAK DAY 1, HOUR  18.667)
114.750   2315.5327   1470.39  .         Q         .        V.         .
 (PEAK DAY 1, HOUR  18.750)
114.833   2325.5522   1454.83  .         Q         .        V.         .
 (PEAK DAY 1, HOUR  18.833)
114.917   2335.4812   1441.69  .        Q.         .        V.         .
 (PEAK DAY 1, HOUR  18.917)
115.000   2345.3279   1429.74  .        Q.         .        V.         .
 (PEAK DAY 1, HOUR  19.000)
115.083   2355.0962   1418.35  .        Q.         .        V.         .
 (PEAK DAY 1, HOUR  19.083)
115.167   2364.7925   1407.89  .        Q.         .        V.         .
 (PEAK DAY 1, HOUR  19.167)
115.250   2374.4258   1398.75  .        Q.         .        V.         .
 (PEAK DAY 1, HOUR  19.250)
115.333   2384.0012   1390.36  .        Q.         .        V.         .
 (PEAK DAY 1, HOUR  19.333)
115.417   2393.5227   1382.54  .        Q.         .         V         .
 (PEAK DAY 1, HOUR  19.417)
115.500   2402.9939   1375.20  .        Q.         .         V         .
 (PEAK DAY 1, HOUR  19.500)
115.583   2412.4167   1368.20  .        Q.         .         V         .
 (PEAK DAY 1, HOUR  19.583)
115.667   2421.7920   1361.29  .        Q.         .         V         .
 (PEAK DAY 1, HOUR  19.667)
115.750   2431.1211   1354.57  .        Q.         .         V         .
 (PEAK DAY 1, HOUR  19.750)
115.833   2440.4053   1348.08  .        Q.         .         V         .
 (PEAK DAY 1, HOUR  19.833)
115.917   2449.6445   1341.54  .        Q.         .         V         .
 (PEAK DAY 1, HOUR  19.917)
116.000   2458.8379   1334.87  .        Q.         .         V         .
 (PEAK DAY 1, HOUR  20.000)
116.083   2467.9861   1328.32  .        Q.         .         V         .
 (PEAK DAY 1, HOUR  20.083)
116.167   2477.0916   1322.13  .        Q.         .         .V        .
 (PEAK DAY 1, HOUR  20.167)
116.250   2486.1567   1316.27  .        Q.         .         .V        .
 (PEAK DAY 1, HOUR  20.250)
116.333   2495.1831   1310.63  .        Q.         .         .V        .
 (PEAK DAY 1, HOUR  20.333)
116.417   2504.1714   1305.10  .        Q.         .         .V        .
 (PEAK DAY 1, HOUR  20.417)
116.500   2513.1204   1299.38  .       Q .         .         .V        .
 (PEAK DAY 1, HOUR  20.500)
116.583   2522.0295   1293.61  .       Q .         .         .V        .
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 (PEAK DAY 1, HOUR  20.583)
116.667   2530.9011   1288.15  .       Q .         .         .V        .
 (PEAK DAY 1, HOUR  20.667)
116.750   2539.7375   1283.03  .       Q .         .         .V        .
 (PEAK DAY 1, HOUR  20.750)
116.833   2548.5398   1278.09  .       Q .         .         .V        .
 (PEAK DAY 1, HOUR  20.833)
116.917   2557.3093   1273.35  .       Q .         .         . V       .
 (PEAK DAY 1, HOUR  20.917)
117.000   2566.0469   1268.71  .       Q .         .         . V       .
 (PEAK DAY 1, HOUR  21.000)
117.083   2574.7529   1264.11  .       Q .         .         . V       .
 (PEAK DAY 1, HOUR  21.083)
117.167   2583.4280   1259.60  .       Q .         .         . V       .
 (PEAK DAY 1, HOUR  21.167)
117.250   2592.0728   1255.22  .       Q .         .         . V       .
 (PEAK DAY 1, HOUR  21.250)
117.333   2600.6880   1250.93  .       Q .         .         . V       .
 (PEAK DAY 1, HOUR  21.333)
117.417   2609.2742   1246.73  .       Q .         .         . V       .
 (PEAK DAY 1, HOUR  21.417)
117.500   2617.8320   1242.61  .       Q .         .         . V       .
 (PEAK DAY 1, HOUR  21.500)
117.583   2626.3623   1238.60  .       Q .         .         . V       .
 (PEAK DAY 1, HOUR  21.583)
117.667   2634.8657   1234.68  .       Q .         .         .  V      .
 (PEAK DAY 1, HOUR  21.667)
117.750   2643.3425   1230.82  .       Q .         .         .  V      .
 (PEAK DAY 1, HOUR  21.750)
117.833   2651.7932   1227.02  .       Q .         .         .  V      .
 (PEAK DAY 1, HOUR  21.833)
117.917   2660.2180   1223.27  .       Q .         .         .  V      .
 (PEAK DAY 1, HOUR  21.917)
118.000   2668.6172   1219.56  .       Q .         .         .  V      .
 (PEAK DAY 1, HOUR  22.000)
118.083   2676.9912   1215.90  .       Q .         .         .  V      .
 (PEAK DAY 1, HOUR  22.083)
118.167   2685.3401   1212.27  .       Q .         .         .  V      .
 (PEAK DAY 1, HOUR  22.167)
118.250   2693.6643   1208.69  .       Q .         .         .  V      .
 (PEAK DAY 1, HOUR  22.250)
118.333   2701.9641   1205.13  .       Q .         .         .  V      .
 (PEAK DAY 1, HOUR  22.333)
118.417   2710.2395   1201.59  .       Q .         .         .   V     .
 (PEAK DAY 1, HOUR  22.417)
118.500   2718.4895   1197.90  .       Q .         .         .   V     .
 (PEAK DAY 1, HOUR  22.500)
118.583   2726.7112   1193.78  .       Q .         .         .   V     .
 (PEAK DAY 1, HOUR  22.583)
118.667   2734.9009   1189.14  .       Q .         .         .   V     .
 (PEAK DAY 1, HOUR  22.667)
118.750   2743.0559   1184.10  .       Q .         .         .   V     .
 (PEAK DAY 1, HOUR  22.750)
118.833   2751.1750   1178.89  .       Q .         .         .   V     .
 (PEAK DAY 1, HOUR  22.833)
118.917   2759.2578   1173.63  .       Q .         .         .   V     .
 (PEAK DAY 1, HOUR  22.917)
119.000   2767.3044   1168.38  .       Q .         .         .   V     .
 (PEAK DAY 1, HOUR  23.000)
119.083   2775.3152   1163.15  .       Q .         .         .   V     .
 (PEAK DAY 1, HOUR  23.083)
119.167   2783.2900   1157.95  .      Q  .         .         .   V     .
 (PEAK DAY 1, HOUR  23.167)
119.250   2791.2292   1152.79  .      Q  .         .         .    V    .
 (PEAK DAY 1, HOUR  23.250)
119.333   2799.1333   1147.66  .      Q  .         .         .    V    .
 (PEAK DAY 1, HOUR  23.333)
119.417   2807.0022   1142.56  .       Q .         .         .    V    .
 (PEAK DAY 1, HOUR  23.417)
119.500   2814.8362   1137.49  .       Q .         .         .    V    .
 (PEAK DAY 1, HOUR  23.500)
119.583   2822.6353   1132.42  .       Q .         .         .    V    .
 (PEAK DAY 1, HOUR  23.583)
119.667   2830.3992   1127.33  .       Q .         .         .    V    .
 (PEAK DAY 1, HOUR  23.667)
119.750   2838.1279   1122.22  .       Q .         .         .    V    .
 (PEAK DAY 1, HOUR  23.750)
119.833   2845.8215   1117.11  .       Q .         .         .    V    .
 (PEAK DAY 1, HOUR  23.833)
119.917   2853.4800   1112.01  .       Q .         .         .    V    .
 (PEAK DAY 1, HOUR  23.917)
120.000   2861.1035   1106.94  .       Q .         .         .    V    .
 (PEAK DAY 1, HOUR  24.000)
120.083   2868.6853   1100.89  .       Q .         .         .    V    .
 (PEAK DAY 1, HOUR  24.083)
120.167   2876.1965   1090.62  .       Q .         .         .     V   .
 (PEAK DAY 1, HOUR  24.167)
120.250   2883.5928   1073.95  .       Q .         .         .     V   .
 (PEAK DAY 1, HOUR  24.250)
120.333   2890.8369   1051.84  .       Q .         .         .     V   .
 (PEAK DAY 1, HOUR  24.333)
120.417   2897.9207   1028.56  .       Q .         .         .     V   .
 (PEAK DAY 1, HOUR  24.417)
120.500   2904.8542   1006.75  .     Q   .         .         .     V   .
 (PEAK DAY 1, HOUR  24.500)
120.583   2911.6509    986.87  .     Q   .         .         .     V   .
 (PEAK DAY 1, HOUR  24.583)
120.667   2918.3330    970.25  .     Q   .         .         .     V   .
 (PEAK DAY 1, HOUR  24.667)
120.750   2924.9260    957.29  .     Q   .         .         .     V   .
 (PEAK DAY 1, HOUR  24.750)
120.833   2931.4487    947.10  .     Q   .         .         .     V   .
 (PEAK DAY 1, HOUR  24.833)
120.917   2937.9136    938.69  .     Q   .         .         .     V   .
 (PEAK DAY 1, HOUR  24.917)
121.000   2944.3279    931.36  .     Q   .         .         .     V   .
 (PEAK DAY 1, HOUR  25.000)
121.083   2950.6960    924.64  .     Q   .         .         .      V  .
 (PEAK DAY 1, HOUR  25.083)
121.167   2957.0200    918.24  .     Q   .         .         .      V  .
 (PEAK DAY 1, HOUR  25.167)
121.250   2963.3015    912.08  .     Q   .         .         .      V  .
 (PEAK DAY 1, HOUR  25.250)
121.333   2969.5417    906.07  .     Q   .         .         .      V  .
 (PEAK DAY 1, HOUR  25.333)
121.417   2975.7415    900.21  .     Q   .         .         .      V  .
 (PEAK DAY 1, HOUR  25.417)
121.500   2981.9016    894.45  .     Q   .         .         .      V  .
 (PEAK DAY 1, HOUR  25.500)
121.583   2988.0222    888.72  .     Q   .         .         .      V  .
 (PEAK DAY 1, HOUR  25.583)
121.667   2994.1030    882.94  .     Q   .         .         .      V  .
 (PEAK DAY 1, HOUR  25.667)
121.750   3000.1438    877.12  .     Q   .         .         .      V  .
 (PEAK DAY 1, HOUR  25.750)
121.833   3006.1443    871.29  .     Q   .         .         .      V  .
 (PEAK DAY 1, HOUR  25.833)
121.917   3012.1047    865.46  .    Q    .         .         .      V  .
 (PEAK DAY 1, HOUR  25.917)
122.000   3018.0251    859.66  .    Q    .         .         .      V  .
 (PEAK DAY 1, HOUR  26.000)
122.083   3023.9060    853.90  .    Q    .         .         .      V  .
 (PEAK DAY 1, HOUR  26.083)
122.167   3029.7476    848.18  .    Q    .         .         .       V .
```

```
 (PEAK DAY 1, HOUR  26.167)
122.250   3035.5498    842.50  .    Q    .         .         .       V .
 (PEAK DAY 1, HOUR  26.250)
122.333   3041.3130    836.83  .    Q    .         .         .       V .
 (PEAK DAY 1, HOUR  26.333)
122.417   3047.0364    831.04  .    Q    .         .         .       V .
 (PEAK DAY 1, HOUR  26.417)
122.500   3052.7180    824.96  .    Q    .         .         .       V .
 (PEAK DAY 1, HOUR  26.500)
122.583   3058.3555    818.56  .    Q    .         .         .       V .
 (PEAK DAY 1, HOUR  26.583)
122.667   3063.9475    811.95  .    Q    .         .         .       V .
 (PEAK DAY 1, HOUR  26.667)
122.750   3069.4937    805.29  .    Q    .         .         .       V .
 (PEAK DAY 1, HOUR  26.750)
122.833   3074.9939    798.64  .    Q    .         .         .       V .
 (PEAK DAY 1, HOUR  26.833)
122.917   3080.4487    792.03  .    Q    .         .         .       V .
 (PEAK DAY 1, HOUR  26.917)
123.000   3085.8584    785.49  .    Q    .         .         .       V .
 (PEAK DAY 1, HOUR  27.000)
123.083   3091.2231    778.95  .    Q    .         .         .       V .
 (PEAK DAY 1, HOUR  27.083)
123.167   3096.5405    772.09  .    Q    .         .         .       V .
 (PEAK DAY 1, HOUR  27.167)
123.250   3101.8037    764.22  .    Q    .         .         .       V .
 (PEAK DAY 1, HOUR  27.250)
123.333   3107.0027    754.88  .    Q    .         .         .       V .
 (PEAK DAY 1, HOUR  27.333)
123.417   3112.1289    744.33  .    Q    .         .         .        V.
 (PEAK DAY 1, HOUR  27.417)
123.500   3117.1780    733.13  .    Q    .         .         .        V.
 (PEAK DAY 1, HOUR  27.500)
123.583   3122.1484    721.71  .   Q     .         .         .        V.
 (PEAK DAY 1, HOUR  27.583)
123.667   3127.0393    710.16  .   Q     .         .         .        V.
 (PEAK DAY 1, HOUR  27.667)
123.750   3131.8486    698.32  .   Q     .         .         .        V.
 (PEAK DAY 1, HOUR  27.750)
123.833   3136.5740    686.12  .   Q     .         .         .        V.
 (PEAK DAY 1, HOUR  27.833)
123.917   3141.2139    673.72  .   Q     .         .         .        V.
 (PEAK DAY 1, HOUR  27.917)
124.000   3145.7686    661.33  .   Q     .         .         .        V.
 (PEAK DAY 1, HOUR  28.000)
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
================================================================================
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**************************************************************************

             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
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                         Analysis prepared by:

                          Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: CP63CHO8.FLD
  TIME/DATE OF STUDY: 13:23 04/01/2004


**************************************************************************
  FLOW PROCESS FROM NODE    100.00 TO NODE    780.00 IS CODE =   1
--------------------------------------------------------------------------

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  4741.3 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    4741.300 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.480 HOURS
          CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
          THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
          MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  1.000
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:
         +------------------+--------+--------+--------+--------+--------+
         | RAINFALL DEPTHS & |        |        |        |        |        |
         |    LOSS RATES     |  DAY 1 |  DAY 2 |  DAY 3 |  DAY 4 |  DAY 5 |
         |==================+========+========+========+========+========|
         | 5-MINUTE (INCHES) |    0.58|    0.27|    0.12|    0.06|    0.04|
         |30-MINUTE (INCHES) |    1.22|    0.56|    0.24|    0.13|    0.09|
         |   1-HOUR (INCHES) |    1.62|    0.75|    0.33|    0.17|    0.12|
         |   3-HOUR (INCHES) |    2.71|    1.25|    0.54|    0.28|    0.21|
         |   6-HOUR (INCHES) |    3.75|    1.73|    0.75|    0.39|    0.29|
         |  24-HOUR (INCHES) |    6.28|    2.89|    1.26|    0.66|    0.48|
         |==================+========+========+========+========+========|
         | LOSS RATE(IN/HR)  |   0.190|   0.190|   0.190|   0.190|   0.190|
         | LOW LOSS FRACTION |   0.550|   0.750|   0.900|   0.970|   0.990|
         +------------------+--------+--------+--------+--------+--------+
           5-MINUTE FACTOR = 0.793
          30-MINUTE FACTOR = 0.793
           1-HOUR FACTOR = 0.793
           3-HOUR FACTOR = 0.969
           6-HOUR FACTOR = 0.984
          24-HOUR FACTOR = 0.990
```

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         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  17.361


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  96.00
         MODEL TIME(HOURS) FOR END OF RESULTS = 124.00


==========================================================================
                      UNIT HYDROGRAPH DETERMINATION

--------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------
        1                1.137               652.130
        2                4.082              1688.625
        3                8.525              2547.514
        4               14.577              3470.279
        5               24.203              5519.575
        6               43.203             10894.611
        7               57.937              8448.228
        8               65.484              4327.674
        9               70.911              3111.621
       10               75.443              2599.076
       11               78.982              2029.171
       12               82.133              1806.516
       13               84.749              1499.854
       14               87.075              1334.078
       15               88.974              1088.566
       16               90.645               958.165
       17               92.163               870.854
       18               93.467               747.418
       19               94.550               621.273
       20               95.489               538.119
       21               96.255               439.106
       22               96.815               321.374
       23               97.375               321.055
       24               97.900               301.316
       25               98.079               102.631
       26               98.169                51.477
       27               98.259                51.411
       28               98.349                51.608
       29               98.439                51.604
       30               98.528                51.219
       31               98.618                51.477
       32               98.708                51.477
       33               98.798                51.608
       34               98.887                51.346
       35               98.977                51.608
       36               99.067                51.604
       37               99.157                51.604
       38               99.247                51.604
       39               99.337                51.604
       40               99.427                51.604
       41               99.517                51.604
       42               99.607                51.604
       43               99.697                51.604
       44               99.787                51.604
       45               99.877                51.604
       46               99.967                51.604
       47              100.000                18.785


--------------------------------------------------------------------------
    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =    2535.6968
```

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1991.0461

5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	2025.0	4050.0	6075.0	8100.0
96.000	524.3721	57.05	Q	V	.	.	.
(PEAK DAY 2, HOUR 24.000)							
96.083	524.7745	58.43	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.083)							
96.167	525.2059	62.64	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.167)							
96.250	525.6828	69.24	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.250)							
96.333	526.2228	78.41	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.333)							
96.417	526.8649	93.23	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.417)							
96.500	527.7108	122.82	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.500)							
96.583	528.7158	145.93	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.583)							
96.667	529.8037	157.97	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.667)							
96.750	530.9523	166.77	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.750)							
96.833	532.1523	174.25	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.833)							
96.917	533.3935	180.21	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.917)							
97.000	534.6719	185.62	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.000)							
97.083	535.9819	190.22	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.083)							
97.167	537.3209	194.42	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.167)							
97.250	538.6843	197.97	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.250)							
97.333	540.0699	201.20	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.333)							
97.417	541.4763	204.20	.Q	V	.	.	.
(PEAK DAY 1, HOUR 1.417)							
97.500	542.9012	206.90	.Q	V	.	.	.
(PEAK DAY 1, HOUR 1.500)							
97.583	544.3423	209.26	.Q	V	.	.	.
(PEAK DAY 1, HOUR 1.583)							
97.667	545.7985	211.43	.Q	V	.	.	.
(PEAK DAY 1, HOUR 1.667)							
97.750	547.2676	213.33	.Q	V	.	.	.
(PEAK DAY 1, HOUR 1.750)							
97.833	548.7479	214.94	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.833)							
97.917	550.2393	216.54	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.917)							
98.000	551.7415	218.12	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.000)							
98.083	553.2509	219.16	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.083)							
98.167	554.7665	220.08	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.167)							
98.250	556.2885	220.99	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.250)							
98.333	557.8170	221.93	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.333)							
98.417	559.3518	222.86	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.417)							
98.500	560.8932	223.82	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.500)							
98.583	562.4412	224.77	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.583)							
98.667	563.9959	225.74	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.667)							
98.750	565.5573	226.71	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.750)							
98.833	567.1254	227.70	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.833)							
98.917	568.7004	228.68	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.917)							
99.000	570.2823	229.69	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.000)							
99.083	571.8711	230.70	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.083)							
99.167	573.4670	231.73	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.167)							
99.250	575.0699	232.75	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.250)							
99.333	576.6802	233.80	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.333)							
99.417	578.2975	234.84	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.417)							
99.500	579.9223	235.92	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.500)							
99.583	581.5544	236.98	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.583)							
99.667	583.1940	238.07	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.667)							
99.750	584.8411	239.16	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.750)							
99.833	586.4959	240.27	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.833)							
99.917	588.1577	241.29	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.917)							
100.000	589.8264	242.29	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.000)							
100.083	591.5018	243.27	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.083)							
100.167	593.1842	244.29	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.167)							
100.250	594.8736	245.30	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.250)							
100.333	596.5702	246.34	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.333)							
100.417	598.2739	247.37	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.417)							
100.500	599.9849	248.44	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.500)							
100.583	601.7031	249.49	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.583)							
100.667	603.4288	250.58	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.667)							
100.750	605.1620	251.66	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.750)							
100.833	606.9028	252.77	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.833)							
100.917	608.6512	253.87	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.917)							
101.000	610.4075	255.01	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 5.000)							
101.083	612.1716	256.14	.Q	. V	.	.	.

```
 (PEAK DAY 1, HOUR   5.083)
 101.167    613.9436    257.30  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.167)
 101.250    615.7236    258.46  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.250)
 101.333    617.5119    259.65  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.333)
 101.417    619.3083    260.84  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.417)
 101.500    621.1131    262.06  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.500)
 101.583    622.9263    263.27  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.583)
 101.667    624.7480    264.52  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.667)
 101.750    626.5784    265.76  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.750)
 101.833    628.4175    267.05  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.833)
 101.917    630.2655    268.32  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.917)
 102.000    632.1225    269.64  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   6.000)
 102.083    633.9885    270.94  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   6.083)
 102.167    635.8638    272.29  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   6.167)
 102.250    637.7483    273.63  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   6.250)
 102.333    639.6423    275.02  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   6.333)
 102.417    641.5458    276.39  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   6.417)
 102.500    643.4592    277.81  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   6.500)
 102.583    645.3822    279.23  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   6.583)
 102.667    647.3153    280.69  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.667)
 102.750    649.2584    282.14  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.750)
 102.833    651.2119    283.64  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.833)
 102.917    653.1755    285.13  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.917)
 103.000    655.1499    286.67  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.000)
 103.083    657.1348    288.21  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.083)
 103.167    659.1306    289.79  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.167)
 103.250    661.1373    291.37  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.250)
 103.333    663.1552    293.00  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.333)
 103.417    665.1843    294.63  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.417)
 103.500    667.2250    296.31  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.500)
 103.583    669.2772    297.98  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.583)
 103.667    671.3414    299.71  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.667)
 103.750    673.4174    301.43  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.750)
 103.833    675.5057    303.22  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.833)
 103.917    677.6062    305.00  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.917)
 104.000    679.7194    306.84  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   8.000)
 104.083    681.8453    308.67  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   8.083)
 104.167    683.9842    310.57  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   8.167)
 104.250    686.1362    312.46  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   8.250)
 104.333    688.3016    314.43  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   8.333)
 104.417    690.4805    316.38  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   8.417)
 104.500    692.6734    318.41  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   8.500)
 104.583    694.8802    320.42  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   8.583)
 104.667    697.1014    322.52  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.667)
 104.750    699.3370    324.61  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.750)
 104.833    701.5876    326.78  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.833)
 104.917    703.8530    328.94  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.917)
 105.000    706.1339    331.18  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.000)
 105.083    708.4301    333.42  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.083)
 105.167    710.7424    335.75  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.167)
 105.250    713.0707    338.07  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.250)
 105.333    715.4156    340.48  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.333)
 105.417    717.7772    342.89  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.417)
 105.500    720.1559    345.39  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.500)
 105.583    722.5518    347.89  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.583)
 105.667    724.9657    350.49  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.667)
 105.750    727.3975    353.09  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.750)
 105.833    729.8478    355.80  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.833)
 105.917    732.3168    358.50  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   9.917)
 106.000    734.8052    361.31  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR  10.000)
 106.083    737.3130    364.13  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR  10.083)
 106.167    739.8409    367.06  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR  10.167)
 106.250    742.3892    370.00  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR  10.250)
 106.333    744.9584    373.06  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR  10.333)
 106.417    747.5488    376.12  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.417)
 106.500    750.1611    379.32  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.500)
 106.583    752.7955    382.51  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.583)
 106.667    755.4529    385.85  .Q        .    V    .         .         .
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 (PEAK DAY 1, HOUR  10.667)
106.750    758.1334    389.20  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.750)
106.833    760.8378    392.69  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.833)
106.917    763.5665    396.19  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.917)
107.000    766.3203    399.86  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.000)
107.083    769.0995    403.53  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.083)
107.167    771.9052    407.38  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  11.167)
107.250    774.7374    411.24  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  11.250)
107.333    777.5974    415.28  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  11.333)
107.417    780.4854    419.34  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  11.417)
107.500    783.4028    423.60  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  11.500)
107.583    786.3495    427.88  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  11.583)
107.667    789.3273    432.36  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  11.667)
107.750    792.3361    436.88  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  11.750)
107.833    795.3776    441.62  . Q       .    V    .         .         .
 (PEAK DAY 1, HOUR  11.833)
107.917    798.4520    446.40  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  11.917)
108.000    801.5609    451.42  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.000)
108.083    804.7167    458.21  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.083)
108.167    807.9401    468.03  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.167)
108.250    811.2471    480.19  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.250)
108.333    814.6569    495.10  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.333)
108.417    818.2075    515.54  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.417)
108.500    821.9995    550.61  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.500)
108.583    825.9893    579.32  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.583)
108.667    830.1044    597.50  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.667)
108.750    834.3231    612.56  .  Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.750)
108.833    838.6390    626.67  .  Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.833)
108.917    843.0424    639.37  .  Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.917)
109.000    847.5322    651.92  .  Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.000)
109.083    852.1049    663.96  .  Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.083)
109.167    856.7635    676.43  .  Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.167)
109.250    861.5088    689.01  .  Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.250)
109.333    866.3477    702.61  .  Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.333)
109.417    871.2896    717.55  .  Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.417)
109.500    876.3552    735.54  .  Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.500)
109.583    881.5556    755.09  .  Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.583)
109.667    886.9045    776.66  .  Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.667)
109.750    892.4076    799.06  .  Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.750)
109.833    898.0772    823.23  .   Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.833)
109.917    903.9202    848.40  .   Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.917)
110.000    909.9514    875.72  .   Q      .       V .         .         .
 (PEAK DAY 1, HOUR  14.000)
110.083    916.2261    911.09  .   Q      .       V .         .         .
 (PEAK DAY 1, HOUR  14.083)
110.167    922.8422    960.67  .   Q      .       V .         .         .
 (PEAK DAY 1, HOUR  14.167)
110.250    929.8752   1021.19  .    Q     .       V .         .         .
 (PEAK DAY 1, HOUR  14.250)
110.333    937.4159   1094.90  .    Q     .       V .         .         .
 (PEAK DAY 1, HOUR  14.333)
110.417    945.6345   1193.34  .    Q     .       V .         .         .
 (PEAK DAY 1, HOUR  14.417)
110.500    954.9769   1356.53  .     Q    .        V.         .         .
 (PEAK DAY 1, HOUR  14.500)
110.583    965.2540   1492.23  .      Q   .        V.         .         .
 (PEAK DAY 1, HOUR  14.583)
110.667    976.1564   1583.02  .      Q   .        V.         .         .
 (PEAK DAY 1, HOUR  14.667)
110.750    987.5969   1661.17  .       Q  .        V.         .         .
 (PEAK DAY 1, HOUR  14.750)
110.833    999.5599   1737.02  .       Q  .         V         .         .
 (PEAK DAY 1, HOUR  14.833)
110.917   1012.0135   1808.27  .       Q  .         V         .         .
 (PEAK DAY 1, HOUR  14.917)
111.000   1024.9714   1881.49  .        Q.         V         .         .
 (PEAK DAY 1, HOUR  15.000)
111.083   1038.4275   1953.82  .        Q.         V         .         .
 (PEAK DAY 1, HOUR  15.083)
111.167   1052.4082   2029.99  .         Q         .V        .         .
 (PEAK DAY 1, HOUR  15.167)
111.250   1066.9198   2107.09  .         Q         .V        .         .
 (PEAK DAY 1, HOUR  15.250)
111.333   1082.0043   2190.26  .         Q         .V        .         .
 (PEAK DAY 1, HOUR  15.333)
111.417   1097.5770   2261.16  .         .Q        . V       .         .
 (PEAK DAY 1, HOUR  15.417)
111.500   1113.5178   2314.61  .         .Q        . V       .         .
 (PEAK DAY 1, HOUR  15.500)
111.583   1129.7285   2353.79  .         .Q        . V       .         .
 (PEAK DAY 1, HOUR  15.583)
111.667   1146.1561   2385.29  .         .Q        .  V      .         .
 (PEAK DAY 1, HOUR  15.667)
111.750   1162.5571   2381.42  .         .Q        .  V      .         .
 (PEAK DAY 1, HOUR  15.750)
111.833   1178.1958   2270.74  .         .Q        .  V      .         .
 (PEAK DAY 1, HOUR  15.833)
111.917   1193.8363   2271.00  .         .Q        .  V      .         .
 (PEAK DAY 1, HOUR  15.917)
112.000   1210.8542   2471.00  .         . Q       .   V     .         .
 (PEAK DAY 1, HOUR  16.000)
112.083   1231.4600   2991.95  .         .   Q     .   V     .         .
 (PEAK DAY 1, HOUR  16.083)
112.167   1257.0110   3710.00  .         .       Q .    V    .         .
 (PEAK DAY 1, HOUR  16.167)
112.250   1287.2900   4396.52  .         .         .Q   V    .         .
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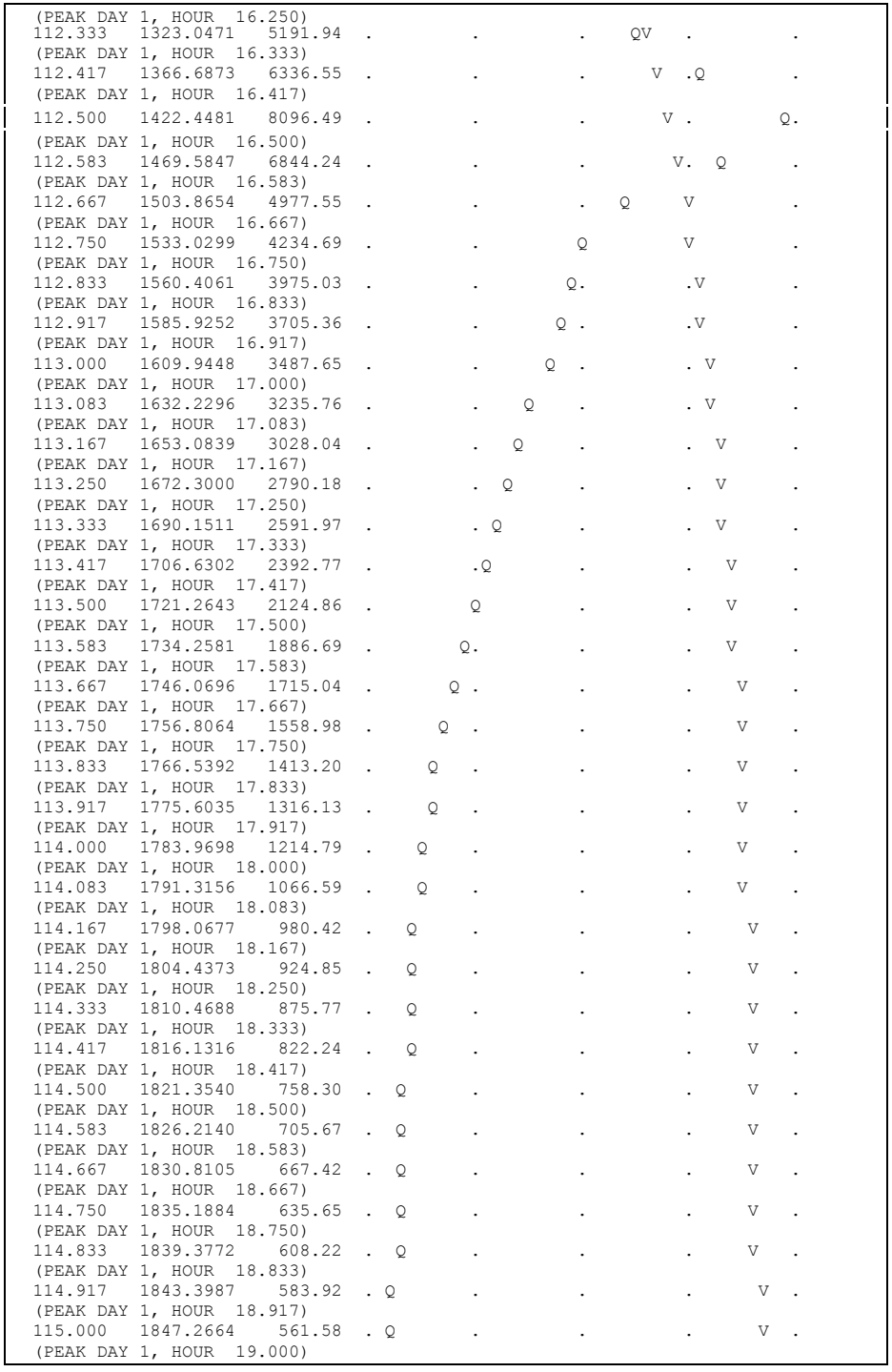
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112.333 1323.0471 5191.94
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112.417 1366.6873 6336.55
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112.500 1422.4481 8096.49
(PEAK DAY 1, HOUR 16.500)
112.583 1469.5847 6844.24
(PEAK DAY 1, HOUR 16.583)
112.667 1503.8654 4977.55
(PEAK DAY 1, HOUR 16.667)
112.750 1533.0299 4234.69
(PEAK DAY 1, HOUR 16.750)
112.833 1560.4061 3975.03
(PEAK DAY 1, HOUR 16.833)
112.917 1585.9252 3705.36
(PEAK DAY 1, HOUR 16.917)
113.000 1609.9448 3487.65
(PEAK DAY 1, HOUR 17.000)
113.083 1632.2296 3235.76
(PEAK DAY 1, HOUR 17.083)
113.167 1653.0839 3028.04
(PEAK DAY 1, HOUR 17.167)
113.250 1672.3000 2790.18
(PEAK DAY 1, HOUR 17.250)
113.333 1690.1511 2591.97
(PEAK DAY 1, HOUR 17.333)
113.417 1706.6302 2392.77
(PEAK DAY 1, HOUR 17.417)
113.500 1721.2643 2124.86
(PEAK DAY 1, HOUR 17.500)
113.583 1734.2581 1886.69
(PEAK DAY 1, HOUR 17.583)
113.667 1746.0696 1715.04
(PEAK DAY 1, HOUR 17.667)
113.750 1756.8064 1558.98
(PEAK DAY 1, HOUR 17.750)
113.833 1766.5392 1413.20
(PEAK DAY 1, HOUR 17.833)
113.917 1775.6035 1316.13
(PEAK DAY 1, HOUR 17.917)
114.000 1783.9698 1214.79
(PEAK DAY 1, HOUR 18.000)
114.083 1791.3156 1066.59
(PEAK DAY 1, HOUR 18.083)
114.167 1798.0677 980.42
(PEAK DAY 1, HOUR 18.167)
114.250 1804.4373 924.85
(PEAK DAY 1, HOUR 18.250)
114.333 1810.4688 875.77
(PEAK DAY 1, HOUR 18.333)
114.417 1816.1316 822.24
(PEAK DAY 1, HOUR 18.417)
114.500 1821.3540 758.30
(PEAK DAY 1, HOUR 18.500)
114.583 1826.2140 705.67
(PEAK DAY 1, HOUR 18.583)
114.667 1830.8105 667.42
(PEAK DAY 1, HOUR 18.667)
114.750 1835.1884 635.65
(PEAK DAY 1, HOUR 18.750)
114.833 1839.3772 608.22
(PEAK DAY 1, HOUR 18.833)
114.917 1843.3987 583.92
(PEAK DAY 1, HOUR 18.917)
115.000 1847.2664 561.58
(PEAK DAY 1, HOUR 19.000)
115.083 1851.0087 543.39
(PEAK DAY 1, HOUR 19.083)
115.167 1854.6389 527.11
(PEAK DAY 1, HOUR 19.167)
115.250 1858.1722 513.04
(PEAK DAY 1, HOUR 19.250)
115.333 1861.6184 500.38
(PEAK DAY 1, HOUR 19.333)
115.417 1864.9816 488.33
(PEAK DAY 1, HOUR 19.417)
115.500 1868.2661 476.91
(PEAK DAY 1, HOUR 19.500)
115.583 1871.4744 465.84
(PEAK DAY 1, HOUR 19.583)
115.667 1874.6071 454.86
(PEAK DAY 1, HOUR 19.667)
115.750 1877.6595 443.22
(PEAK DAY 1, HOUR 19.750)
115.833 1880.6226 430.23
(PEAK DAY 1, HOUR 19.833)
115.917 1883.4233 406.68
(PEAK DAY 1, HOUR 19.917)
116.000 1886.1075 389.75
(PEAK DAY 1, HOUR 20.000)
116.083 1888.7346 381.46
(PEAK DAY 1, HOUR 20.083)
116.167 1891.3137 374.48
(PEAK DAY 1, HOUR 20.167)
116.250 1893.8436 367.34
(PEAK DAY 1, HOUR 20.250)
116.333 1896.3243 360.20
(PEAK DAY 1, HOUR 20.333)
116.417 1898.7587 353.47
(PEAK DAY 1, HOUR 20.417)
116.500 1901.1489 347.07
(PEAK DAY 1, HOUR 20.500)
116.583 1903.4972 340.98
(PEAK DAY 1, HOUR 20.583)
116.667 1905.8054 335.15
(PEAK DAY 1, HOUR 20.667)
116.750 1908.0751 329.56
(PEAK DAY 1, HOUR 20.750)
116.833 1910.3079 324.20
(PEAK DAY 1, HOUR 20.833)
116.917 1912.5077 319.41
(PEAK DAY 1, HOUR 20.917)
117.000 1914.6774 315.04
(PEAK DAY 1, HOUR 21.000)
117.083 1916.8182 310.85
(PEAK DAY 1, HOUR 21.083)
117.167 1918.9313 306.82
(PEAK DAY 1, HOUR 21.167)
117.250 1921.0177 302.95
(PEAK DAY 1, HOUR 21.250)
117.333 1923.0785 299.22
(PEAK DAY 1, HOUR 21.333)
117.417 1925.1145 295.63
(PEAK DAY 1, HOUR 21.417)
117.500 1927.1267 292.16
(PEAK DAY 1, HOUR 21.500)
117.583 1929.1157 288.80
(PEAK DAY 1, HOUR 21.583)
117.667 1931.0822 285.53
(PEAK DAY 1, HOUR 21.667)
117.750 1933.0267 282.35
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117.833 1934.9500 279.25

(PEAK DAY 1, HOUR 21.833)
117.917 1936.8530 276.33 .Q . . . V .
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118.000 1938.7368 273.53 .Q . . . V .
(PEAK DAY 1, HOUR 22.000)
118.083 1940.6019 270.81 .Q . . . V .
(PEAK DAY 1, HOUR 22.083)
118.167 1942.4487 268.16 .Q . . . V.
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118.250 1944.2778 265.58 .Q . . . V.
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118.333 1946.0896 263.06 .Q . . . V.
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118.417 1947.8844 260.61 .Q . . . V.
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118.500 1949.6627 258.22 .Q . . . V.
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118.583 1951.4249 255.88 .Q . . . V.
(PEAK DAY 1, HOUR 22.583)
118.667 1953.1715 253.60 .Q . . . V.
(PEAK DAY 1, HOUR 22.667)
118.750 1954.9027 251.37 .Q . . . V.
(PEAK DAY 1, HOUR 22.750)
118.833 1956.6189 249.19 .Q . . . V.
(PEAK DAY 1, HOUR 22.833)
118.917 1958.3204 247.06 .Q . . . V.
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119.000 1960.0077 244.98 .Q . . . V.
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119.083 1961.6809 242.95 .Q . . . V.
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119.250 1964.9863 239.01 .Q . . . V.
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119.333 1966.6193 237.10 .Q . . . V.
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119.417 1968.2393 235.23 .Q . . . V.
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119.500 1969.8467 233.40 .Q . . . V.
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119.750 1974.5959 228.13 .Q . . . V.
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119.833 1976.1555 226.44 .Q . . . V.
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119.917 1977.7036 224.79 .Q . . . V.
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120.000 1979.2406 223.16 .Q . . . V.
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120.083 1980.7501 219.19 .Q . . . V.
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120.167 1982.2065 211.46 .Q . . . V.
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120.250 1983.5886 200.67 Q . . . V.
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120.333 1984.8737 186.59 Q . . . V.
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120.417 1986.0109 165.13 Q . . . V.
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120.500 1986.8660 124.17 Q . . . V.
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120.583 1987.5026 92.43 Q . . . V.
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120.667 1988.0258 75.96 Q . . . V.
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120.750 1988.4669 64.06 Q . . . V.
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120.833 1988.8396 54.11 Q . . . V.
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120.917 1989.1586 46.31 Q . . . V.
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121.000 1989.4298 39.39 Q . . . V.
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121.083 1989.6614 33.63 Q . . . V.
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121.167 1989.8578 28.51 Q . . . V.
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121.250 1990.0254 24.33 Q . . . V.
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121.333 1990.1677 20.66 Q . . . V.
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121.417 1990.2871 17.33 Q . . . V.
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121.500 1990.3868 14.48 Q . . . V.
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121.583 1990.4702 12.10 Q . . . V.
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121.667 1990.5394 10.05 Q . . . V.
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121.750 1990.5970 8.37 Q . . . V.
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121.833 1990.6462 7.14 Q . . . V.
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121.917 1990.6870 5.91 Q . . . V.
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122.000 1990.7198 4.77 Q . . . V.
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122.083 1990.7499 4.36 Q . . . V.
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122.167 1990.7784 4.14 Q . . . V.
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122.250 1990.8054 3.92 Q . . . V.
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122.833 1990.9534 2.44 Q . . . V.
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122.917 1990.9688 2.24 Q . . . V.
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(PEAK DAY 1, HOUR 27.000)
123.083 1990.9954 1.83 Q . . . V.
(PEAK DAY 1, HOUR 27.083)
123.167 1991.0066 1.63 Q . . . V.
(PEAK DAY 1, HOUR 27.167)
123.250 1991.0165 1.43 Q . . . V.
(PEAK DAY 1, HOUR 27.250)
123.333 1991.0249 1.23 Q . . . V.
(PEAK DAY 1, HOUR 27.333)
123.417 1991.0320 1.03 Q . . . V.

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 (PEAK DAY 1, HOUR  27.417)
123.500   1991.0377      0.84  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.500)
123.583   1991.0421      0.64  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.583)
123.667   1991.0452      0.45  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.667)
123.750   1991.0470      0.26  Q         .         .         .         V
 (PEAK DAY 1, HOUR  27.750)
123.833   1991.0475      0.07  Q         .         .         .         V
 (PEAK DAY 1, HOUR  27.833)
================================================================================

  END OF FLOODSCx ROUTING ANALYSIS



********************************************************************************
  FLOW PROCESS FROM NODE    780.00 TO NODE    780.00 IS CODE = 3.1
--------------------------------------------------------------------------------
  >>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #1<<<<<
================================================================================

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  4741.3 Ac. ***

                  INFLOW
                (STREAM 1)
                     |
                     |
                     V                __effective depth
                 -----------          |   (and volume)
                |           |    |    |
                |           |    |....V.........
                | detention |<-->|           outflow
                |   basin   |    |.........._______
                 -----------     |    ^     |  \
                     |           |  dead    |   basin outlet
                     V           | storage  |
                   OUTFLOW        ---------
                (STREAM 1)



        ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 1
        THROUGH A FLOW-THROUGH DETENTION BASIN
        SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
          DEAD STORAGE(AF) =      0.000
          SPECIFIED DEAD STORAGE(AF) FILLED =      0.000
          SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET =      0.000
          DETENTION BASIN CONSTANT LOSS RATE(CFS) =    0.00


        BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

         INTERVAL    DEPTH      OUTFLOW     STORAGE
          NUMBER      (FT)       (CFS)       (AF)
              1       0.00         0.00       0.000
              2       4.00       280.30       0.800
              3       5.00       318.80       2.500
              4       6.00       352.80       6.300
              5       7.00       384.60      12.800
              6       9.00       442.50      35.900
              7      11.00       494.10      67.800
              8      13.00       541.30     102.100
              9      15.00       585.20     163.800
             10      17.00       625.80     235.800
             11      19.00       664.60     310.000
             12      21.00       701.20     386.400
             13      23.00       737.10     465.200
             14      25.00       755.70     546.200
             15      27.00       776.60     630.000
             16      29.00       800.00     716.100
             17      31.00       824.90     804.500


================================================================================
 MODIFIED-PULS BASIN ROUTING MODEL RESULTS(5-MINUTE COMPUTATION INTERVALS):
 (Note: Computed EFFECTIVE DEPTH and VOLUME are estimated at the clock time;
        MEAN OUTFLOW is the average value during the unit interval.)

                    CLOCK                                          MEAN
PEAK TIME          TIME     DEAD-STORAGE    INFLOW     LOSS  EFFECTIVE OUTFLOW  EFFECTIVE
DAY  (HRS)         (HRS)    FILLED(AF)       (CFS)     (CFS)  DEPTH(FT)  (CFS)  VOLUME(AF)
---------------------------------------------------------------------------------------
 1   0.001  96.001          0.000      57.05      0.00       0.81     57.2       0.163
 1   0.084  96.084          0.000      58.43      0.00       0.84     57.8       0.167
 1   0.167  96.167          0.000      62.64      0.00       0.90     60.8       0.180
 1   0.251  96.251          0.000      69.24      0.00       1.00     66.4       0.199
 1   0.334  96.334          0.000      78.41      0.00       1.13     74.5       0.226
 1   0.417  96.417          0.000      93.23      0.00       1.35     86.9       0.270
 1   0.501  96.501          0.000     122.82      0.00       1.79    110.0       0.358
 1   0.584  96.584          0.000     145.93      0.00       2.11    136.7       0.422
 1   0.667  96.667          0.000     157.97      0.00       2.27    153.4       0.454
 1   0.751  96.751          0.000     166.77      0.00       2.39    163.2       0.478
 1   0.834  96.834          0.000     174.25      0.00       2.50    171.2       0.499
 1   0.917  96.917          0.000     180.21      0.00       2.58    177.8       0.516
 1   1.001  97.001          0.000     185.62      0.00       2.66    183.4       0.531
 1   1.084  97.084          0.000     190.22      0.00       2.72    188.3       0.544
 1   1.167  97.167          0.000     194.42      0.00       2.78    192.7       0.556
 1   1.251  97.251          0.000     197.97      0.00       2.83    196.5       0.566
 1   1.334  97.334          0.000     201.20      0.00       2.88    199.9       0.575
 1   1.417  97.417          0.000     204.20      0.00       2.92    203.0       0.584
 1   1.501  97.501          0.000     206.90      0.00       2.96    205.8       0.591
 1   1.584  97.584          0.000     209.26      0.00       2.99    208.3       0.598
 1   1.667  97.667          0.000     211.43      0.00       3.02    210.5       0.604
 1   1.751  97.751          0.000     213.33      0.00       3.05    212.6       0.609
 1   1.834  97.834          0.000     214.94      0.00       3.07    214.3       0.614
 1   1.917  97.917          0.000     216.54      0.00       3.09    215.9       0.618
 1   2.001  98.001          0.000     218.12      0.00       3.11    217.5       0.623
 1   2.084  98.084          0.000     219.16      0.00       3.13    218.8       0.626
 1   2.167  98.167          0.000     220.08      0.00       3.14    219.7       0.628
 1   2.251  98.251          0.000     220.99      0.00       3.15    220.6       0.631
 1   2.334  98.334          0.000     221.93      0.00       3.17    221.5       0.634
 1   2.417  98.417          0.000     222.86      0.00       3.18    222.5       0.636
 1   2.501  98.501          0.000     223.82      0.00       3.20    223.4       0.639
 1   2.584  98.584          0.000     224.77      0.00       3.21    224.4       0.642
 1   2.667  98.667          0.000     225.74      0.00       3.22    225.3       0.645
 1   2.751  98.751          0.000     226.71      0.00       3.24    226.3       0.647
 1   2.834  98.834          0.000     227.70      0.00       3.25    227.3       0.650
 1   2.917  98.917          0.000     228.68      0.00       3.26    228.3       0.653
 1   3.001  99.001          0.000     229.69      0.00       3.28    229.3       0.656
 1   3.084  99.084          0.000     230.70      0.00       3.29    230.3       0.659
 1   3.167  99.167          0.000     231.73      0.00       3.31    231.3       0.662
 1   3.251  99.251          0.000     232.75      0.00       3.32    232.3       0.665
 1   3.334  99.334          0.000     233.80      0.00       3.34    233.4       0.668
 1   3.417  99.417          0.000     234.84      0.00       3.35    234.4       0.671
 1   3.501  99.501          0.000     235.92      0.00       3.37    235.5       0.674
 1   3.584  99.584          0.000     236.98      0.00       3.38    236.5       0.677
 1   3.667  99.667          0.000     238.07      0.00       3.40    237.6       0.680
 1   3.751  99.751          0.000     239.16      0.00       3.41    238.7       0.683
 1   3.834  99.834          0.000     240.27      0.00       3.43    239.8       0.686
 1   3.917  99.917          0.000     241.29      0.00       3.44    240.9       0.689
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1	4.001 100.001	0.000	242.29	0.00	3.46	241.9	0.692
1	4.084 100.084	0.000	243.27	0.00	3.47	242.9	0.695
1	4.167 100.167	0.000	244.29	0.00	3.49	243.9	0.697
1	4.251 100.251	0.000	245.30	0.00	3.50	244.9	0.700
1	4.334 100.334	0.000	246.34	0.00	3.52	245.9	0.703
1	4.417 100.417	0.000	247.37	0.00	3.53	246.9	0.706
1	4.501 100.501	0.000	248.44	0.00	3.55	248.0	0.709
1	4.584 100.584	0.000	249.49	0.00	3.56	249.1	0.712
1	4.667 100.667	0.000	250.58	0.00	3.58	250.1	0.715
1	4.751 100.751	0.000	251.66	0.00	3.59	251.2	0.719
1	4.834 100.834	0.000	252.77	0.00	3.61	252.3	0.722
1	4.917 100.917	0.000	253.87	0.00	3.62	253.4	0.725
1	5.001 101.001	0.000	255.01	0.00	3.64	254.5	0.728
1	5.084 101.084	0.000	256.14	0.00	3.66	255.7	0.731
1	5.167 101.167	0.000	257.30	0.00	3.67	256.8	0.735
1	5.251 101.251	0.000	258.46	0.00	3.69	258.0	0.738
1	5.334 101.334	0.000	259.65	0.00	3.71	259.2	0.741
1	5.417 101.417	0.000	260.84	0.00	3.72	260.3	0.745
1	5.501 101.501	0.000	262.06	0.00	3.74	261.6	0.748
1	5.584 101.584	0.000	263.27	0.00	3.76	262.8	0.752
1	5.667 101.667	0.000	264.52	0.00	3.78	264.0	0.755
1	5.751 101.751	0.000	265.76	0.00	3.79	265.3	0.759
1	5.834 101.834	0.000	267.05	0.00	3.81	266.5	0.762
1	5.917 101.917	0.000	268.32	0.00	3.83	267.8	0.766
1	6.001 102.001	0.000	269.64	0.00	3.85	269.1	0.770
1	6.084 102.084	0.000	270.94	0.00	3.87	270.4	0.774
1	6.167 102.167	0.000	272.29	0.00	3.89	271.7	0.777
1	6.251 102.251	0.000	273.63	0.00	3.91	273.1	0.781
1	6.334 102.334	0.000	275.02	0.00	3.93	274.4	0.785
1	6.417 102.417	0.000	276.39	0.00	3.95	275.8	0.789
1	6.501 102.501	0.000	277.81	0.00	3.97	277.2	0.793
1	6.584 102.584	0.000	279.23	0.00	3.99	278.6	0.797
1	6.667 102.667	0.000	280.69	0.00	4.00	279.9	0.803
1	6.751 102.751	0.000	282.14	0.00	4.01	280.5	0.814
1	6.834 102.834	0.000	283.64	0.00	4.02	280.8	0.834
1	6.917 102.917	0.000	285.13	0.00	4.04	281.4	0.860
1	7.001 103.001	0.000	286.67	0.00	4.05	282.0	0.892
1	7.084 103.084	0.000	288.21	0.00	4.08	282.8	0.929
1	7.167 103.167	0.000	289.79	0.00	4.10	283.7	0.971
1	7.251 103.251	0.000	291.37	0.00	4.13	284.7	1.017
1	7.334 103.334	0.000	293.00	0.00	4.16	285.8	1.067
1	7.417 103.417	0.000	294.63	0.00	4.19	286.9	1.120
1	7.501 103.501	0.000	296.31	0.00	4.22	288.2	1.176
1	7.584 103.584	0.000	297.98	0.00	4.26	289.5	1.234
1	7.667 103.667	0.000	299.71	0.00	4.29	290.8	1.295
1	7.751 103.751	0.000	301.43	0.00	4.33	292.2	1.359
1	7.834 103.834	0.000	303.22	0.00	4.37	293.7	1.424
1	7.917 103.917	0.000	305.00	0.00	4.41	295.2	1.492
1	8.001 104.001	0.000	306.84	0.00	4.45	296.8	1.561
1	8.084 104.084	0.000	308.67	0.00	4.49	298.3	1.632
1	8.167 104.167	0.000	310.57	0.00	4.53	300.0	1.705
1	8.251 104.251	0.000	312.46	0.00	4.58	301.6	1.780
1	8.334 104.334	0.000	314.43	0.00	4.62	303.4	1.856
1	8.418 104.418	0.000	316.38	0.00	4.67	305.1	1.934
1	8.501 104.501	0.000	318.41	0.00	4.71	306.9	2.013
1	8.584 104.584	0.000	320.42	0.00	4.76	308.7	2.094
1	8.668 104.668	0.000	322.52	0.00	4.81	310.5	2.177
1	8.751 104.751	0.000	324.61	0.00	4.86	312.4	2.260
1	8.834 104.834	0.000	326.78	0.00	4.91	314.3	2.346
1	8.918 104.918	0.000	328.94	0.00	4.96	316.3	2.433
1	9.001 105.001	0.000	331.18	0.00	5.01	318.1	2.523
1	9.084 105.084	0.000	333.42	0.00	5.03	319.4	2.619
1	9.168 105.168	0.000	335.75	0.00	5.06	320.3	2.725
1	9.251 105.251	0.000	338.07	0.00	5.09	321.3	2.841
1	9.334 105.334	0.000	340.48	0.00	5.12	322.4	2.965
1	9.418 105.418	0.000	342.89	0.00	5.16	323.6	3.098
1	9.501 105.501	0.000	345.39	0.00	5.19	324.8	3.240
1	9.584 105.584	0.000	347.89	0.00	5.23	326.1	3.390
1	9.668 105.668	0.000	350.49	0.00	5.28	327.5	3.549
1	9.751 105.751	0.000	353.09	0.00	5.32	328.9	3.715
1	9.834 105.834	0.000	355.80	0.00	5.37	330.5	3.890
1	9.918 105.918	0.000	358.50	0.00	5.41	332.0	4.072
1	10.001 106.001	0.000	361.31	0.00	5.46	333.7	4.262
1	10.084 106.084	0.000	364.13	0.00	5.52	335.4	4.459
1	10.168 106.168	0.000	367.06	0.00	5.57	337.3	4.665
1	10.251 106.251	0.000	370.00	0.00	5.63	339.1	4.877
1	10.334 106.334	0.000	373.06	0.00	5.68	341.1	5.098
1	10.418 106.418	0.000	376.12	0.00	5.74	343.1	5.325
1	10.501 106.501	0.000	379.32	0.00	5.81	345.1	5.561
1	10.584 106.584	0.000	382.51	0.00	5.87	347.3	5.804
1	10.668 106.668	0.000	385.85	0.00	5.94	349.5	6.054
1	10.751 106.751	0.000	389.20	0.00	6.00	351.7	6.312
1	10.834 106.834	0.000	392.69	0.00	6.04	353.5	6.582
1	10.918 106.918	0.000	396.19	0.00	6.09	354.9	6.866
1	11.001 107.001	0.000	399.86	0.00	6.13	356.3	7.166
1	11.084 107.084	0.000	403.53	0.00	6.18	357.8	7.481
1	11.168 107.168	0.000	407.38	0.00	6.23	359.4	7.812
1	11.251 107.251	0.000	411.24	0.00	6.29	361.0	8.158
1	11.334 107.334	0.000	415.28	0.00	6.34	362.8	8.519
1	11.418 107.418	0.000	419.34	0.00	6.40	364.6	8.896
1	11.501 107.501	0.000	423.60	0.00	6.46	366.5	9.290
1	11.584 107.584	0.000	427.88	0.00	6.52	368.4	9.699
1	11.668 107.668	0.000	432.36	0.00	6.59	370.5	10.125
1	11.751 107.751	0.000	436.88	0.00	6.66	372.6	10.568
1	11.834 107.834	0.000	441.62	0.00	6.73	374.8	11.028
1	11.918 107.918	0.000	446.40	0.00	6.80	377.1	11.506
1	12.001 108.001	0.000	451.42	0.00	6.88	379.5	12.001
1	12.084 108.084	0.000	458.21	0.00	6.96	382.0	12.526
1	12.168 108.168	0.000	468.03	0.00	7.03	384.3	13.103
1	12.251 108.251	0.000	480.19	0.00	7.08	386.2	13.750
1	12.334 108.334	0.000	495.10	0.00	7.15	387.9	14.489
1	12.418 108.418	0.000	515.54	0.00	7.22	389.9	15.354
1	12.501 108.501	0.000	550.61	0.00	7.32	392.4	16.444
1	12.584 108.584	0.000	579.32	0.00	7.43	395.3	17.711
1	12.668 108.668	0.000	597.50	0.00	7.54	398.6	19.080
1	12.751 108.751	0.000	612.56	0.00	7.67	402.2	20.530
1	12.834 108.834	0.000	626.67	0.00	7.80	405.9	22.050
1	12.918 108.918	0.000	639.37	0.00	7.94	409.8	23.631
1	13.001 109.001	0.000	651.92	0.00	8.08	413.8	25.271
1	13.084 109.084	0.000	663.96	0.00	8.23	418.0	26.965
1	13.168 109.168	0.000	676.43	0.00	8.38	422.3	28.716
1	13.251 109.251	0.000	689.01	0.00	8.53	426.8	30.522
1	13.334 109.334	0.000	702.61	0.00	8.70	431.4	32.390
1	13.418 109.418	0.000	717.55	0.00	8.86	436.1	34.328
1	13.501 109.501	0.000	735.54	0.00	9.03	440.9	36.357
1	13.584 109.584	0.000	755.09	0.00	9.16	445.0	38.493
1	13.668 109.668	0.000	776.66	0.00	9.30	448.5	40.753
1	13.751 109.751	0.000	799.06	0.00	9.45	452.3	43.141
1	13.834 109.834	0.000	823.23	0.00	9.61	456.3	45.669
1	13.918 109.918	0.000	848.40	0.00	9.78	460.5	48.340
1	14.001 110.001	0.000	875.72	0.00	9.96	464.9	51.170
1	14.084 110.084	0.000	911.09	0.00	10.15	469.7	54.210
1	14.168 110.168	0.000	960.67	0.00	10.36	474.8	57.556
1	14.251 110.251	0.000	1021.19	0.00	10.59	480.5	61.279
1	14.334 110.334	0.000	1094.90	0.00	10.85	486.9	65.466
1	14.418 110.418	0.000	1193.34	0.00	11.14	493.9	70.283
1	14.501 110.501	0.000	1356.53	0.00	11.49	501.6	76.171
1	14.584 110.584	0.000	1492.23	0.00	11.88	510.3	82.934
1	14.668 110.668	0.000	1583.02	0.00	12.31	520.0	90.256
1	14.751 110.751	0.000	1661.17	0.00	12.76	530.4	98.043
1	14.834 110.834	0.000	1737.02	0.00	13.14	540.0	106.287
1	14.918 110.918	0.000	1808.27	0.00	13.42	547.4	114.971
1	15.001 111.001	0.000	1881.49	0.00	13.71	553.7	124.116
1	15.084 111.084	0.000	1953.82	0.00	14.02	560.4	133.713

1	15.168	111.168	0.000	2029.99	0.00	14.35	567.4	143.786
1	15.251	111.251	0.000	2107.09	0.00	14.69	574.7	154.339
1	15.334	111.334	0.000	2190.26	0.00	15.04	582.3	165.413
1	15.418	111.418	0.000	2261.16	0.00	15.36	589.4	176.927
1	15.501	111.501	0.000	2314.61	0.00	15.69	595.9	188.764
1	15.584	111.584	0.000	2353.79	0.00	16.03	602.7	200.824
1	15.668	111.668	0.000	2385.29	0.00	16.37	609.5	213.054
1	15.751	111.751	0.000	2381.42	0.00	16.71	616.4	225.209
1	15.834	111.834	0.000	2270.74	0.00	17.02	623.0	236.557
1	15.918	111.918	0.000	2271.00	0.00	17.33	629.2	247.865
1	16.001	112.001	0.000	2471.00	0.00	17.67	635.4	260.507
1	16.084	112.084	0.000	2991.95	0.00	18.10	642.9	276.684
1	16.168	112.168	0.000	3710.00	0.00	18.67	652.7	297.740
1	16.251	112.251	0.000	4396.52	0.00	19.35	664.6	323.442
1	16.334	112.334	0.000	5191.94	0.00	20.17	678.5	354.526
1	16.418	112.418	0.000	6336.55	0.00	21.18	695.2	393.379
1	16.501	112.501	0.000	8096.49	0.00	22.47	716.0	444.209
1	16.584	112.584	0.000	6844.24	0.00	23.52	734.7	486.285
1	16.668	112.668	0.000	4977.55	0.00	24.24	745.3	515.433
1	16.751	112.751	0.000	4234.69	0.00	24.83	751.4	539.423
1	16.834	112.834	0.000	3975.03	0.00	25.37	756.8	561.587
1	16.918	112.918	0.000	3705.36	0.00	25.85	762.1	581.857
1	17.001	113.001	0.000	3487.65	0.00	26.30	766.9	600.595
1	17.084	113.084	0.000	3235.76	0.00	26.70	771.4	617.567
1	17.168	113.168	0.000	3028.04	0.00	27.07	775.5	633.081
1	17.251	113.251	0.000	2790.18	0.00	27.39	779.3	646.930
1	17.334	113.334	0.000	2591.97	0.00	27.68	782.9	659.389
1	17.418	113.418	0.000	2392.77	0.00	27.94	786.1	670.454
1	17.501	113.501	0.000	2124.86	0.00	28.15	788.8	679.656
1	17.584	113.584	0.000	1886.69	0.00	28.33	791.1	687.201
1	17.668	113.668	0.000	1715.04	0.00	28.48	793.0	693.551
1	17.751	113.751	0.000	1558.98	0.00	28.60	794.6	698.815
1	17.834	113.834	0.000	1413.20	0.00	28.70	795.9	703.067
1	17.918	113.918	0.000	1316.13	0.00	28.78	796.9	706.643
1	18.001	114.001	0.000	1214.79	0.00	28.85	797.8	709.514
1	18.084	114.084	0.000	1066.59	0.00	28.89	798.5	711.361
1	18.168	114.168	0.000	980.42	0.00	28.92	798.9	712.611
1	18.251	114.251	0.000	924.85	0.00	28.94	799.2	713.477
1	18.334	114.334	0.000	875.77	0.00	28.95	799.4	714.003
1	18.418	114.418	0.000	822.24	0.00	28.95	799.5	714.160
1	18.501	114.501	0.000	758.30	0.00	28.95	799.4	713.877
1	18.584	114.584	0.000	705.67	0.00	28.93	799.3	713.232
1	18.668	114.668	0.000	667.42	0.00	28.91	799.1	712.325
1	18.751	114.751	0.000	635.65	0.00	28.89	798.8	711.201
1	18.834	114.834	0.000	608.22	0.00	28.86	798.5	709.891
1	18.918	114.918	0.000	583.92	0.00	28.82	798.1	708.416
1	19.001	115.001	0.000	561.58	0.00	28.78	797.7	706.789
1	19.084	115.084	0.000	543.39	0.00	28.74	797.2	705.041
1	19.168	115.168	0.000	527.11	0.00	28.70	796.7	703.184
1	19.251	115.251	0.000	513.04	0.00	28.65	796.2	701.234
1	19.335	115.335	0.000	500.38	0.00	28.61	795.7	699.200
1	19.418	115.418	0.000	488.33	0.00	28.56	795.1	697.087
1	19.501	115.501	0.000	476.91	0.00	28.51	794.5	694.900
1	19.585	115.585	0.000	465.84	0.00	28.46	793.9	692.640
1	19.668	115.668	0.000	454.86	0.00	28.40	793.3	690.309
1	19.751	115.751	0.000	443.22	0.00	28.35	792.7	687.903
1	19.835	115.835	0.000	430.23	0.00	28.29	792.0	685.411
1	19.918	115.918	0.000	406.68	0.00	28.23	791.3	682.762
1	20.001	116.001	0.000	389.75	0.00	28.16	790.6	680.002
1	20.085	116.085	0.000	381.46	0.00	28.10	789.8	677.189
1	20.168	116.168	0.000	374.48	0.00	28.03	789.0	674.334
1	20.251	116.251	0.000	367.34	0.00	27.96	788.3	671.435
1	20.335	116.335	0.000	360.20	0.00	27.89	787.5	668.493
1	20.418	116.418	0.000	353.47	0.00	27.82	786.7	665.509
1	20.501	116.501	0.000	347.07	0.00	27.75	785.8	662.488
1	20.585	116.585	0.000	340.98	0.00	27.68	785.0	659.430
1	20.668	116.668	0.000	335.15	0.00	27.61	784.2	656.337
1	20.751	116.751	0.000	329.56	0.00	27.54	783.3	653.212
1	20.835	116.835	0.000	324.20	0.00	27.47	782.5	650.056
1	20.918	116.918	0.000	319.41	0.00	27.39	781.6	646.872
1	21.001	117.001	0.000	315.04	0.00	27.32	780.7	643.665
1	21.085	117.085	0.000	310.85	0.00	27.24	779.9	640.435
1	21.168	117.168	0.000	306.82	0.00	27.17	779.0	637.183
1	21.251	117.251	0.000	302.95	0.00	27.09	778.1	633.911
1	21.335	117.335	0.000	299.22	0.00	27.01	777.2	630.619
1	21.418	117.418	0.000	295.63	0.00	26.94	776.3	627.308
1	21.501	117.501	0.000	292.16	0.00	26.86	775.5	623.979
1	21.585	117.585	0.000	288.80	0.00	26.78	774.7	620.633
1	21.668	117.668	0.000	285.53	0.00	26.70	773.8	617.270
1	21.751	117.751	0.000	282.35	0.00	26.62	773.0	613.890
1	21.835	117.835	0.000	279.25	0.00	26.53	772.2	610.496
1	21.918	117.918	0.000	276.33	0.00	26.45	771.3	607.087
1	22.001	118.001	0.000	273.53	0.00	26.37	770.5	603.664
1	22.085	118.085	0.000	270.81	0.00	26.29	769.6	600.229
1	22.168	118.168	0.000	268.16	0.00	26.21	768.7	596.782
1	22.251	118.251	0.000	265.58	0.00	26.12	767.9	593.322
1	22.335	118.335	0.000	263.06	0.00	26.04	767.0	589.851
1	22.418	118.418	0.000	260.61	0.00	25.96	766.2	586.370
1	22.501	118.501	0.000	258.22	0.00	25.88	765.3	582.877
1	22.585	118.585	0.000	255.88	0.00	25.79	764.4	579.375
1	22.668	118.668	0.000	253.60	0.00	25.71	763.5	575.863
1	22.751	118.751	0.000	251.37	0.00	25.62	762.7	572.342
1	22.835	118.835	0.000	249.19	0.00	25.54	761.8	568.812
1	22.918	118.918	0.000	247.06	0.00	25.46	760.9	565.273
1	23.001	119.001	0.000	244.98	0.00	25.37	760.0	561.726
1	23.085	119.085	0.000	242.95	0.00	25.29	759.1	558.171
1	23.168	119.168	0.000	240.95	0.00	25.20	758.2	554.608
1	23.251	119.251	0.000	239.01	0.00	25.12	757.4	551.038
1	23.335	119.335	0.000	237.10	0.00	25.03	756.5	547.461
1	23.418	119.418	0.000	235.23	0.00	24.94	755.6	543.878
1	23.501	119.501	0.000	233.40	0.00	24.85	754.8	540.287
1	23.585	119.585	0.000	231.61	0.00	24.77	753.9	536.690
1	23.668	119.668	0.000	229.85	0.00	24.68	753.1	533.086
1	23.751	119.751	0.000	228.13	0.00	24.59	752.3	529.476
1	23.835	119.835	0.000	226.44	0.00	24.50	751.4	525.861
1	23.918	119.918	0.000	224.79	0.00	24.41	750.6	522.239
1	24.001	120.001	0.000	223.16	0.00	24.32	749.8	518.612
1	24.085	120.085	0.000	219.19	0.00	24.23	748.9	514.964
1	24.168	120.168	0.000	211.46	0.00	24.14	748.1	511.268
1	24.251	120.251	0.000	200.67	0.00	24.04	747.2	507.504
1	24.335	120.335	0.000	186.59	0.00	23.95	746.4	503.648
1	24.418	120.418	0.000	165.13	0.00	23.85	745.5	499.652
1	24.501	120.501	0.000	124.17	0.00	23.75	744.5	495.379
1	24.585	120.585	0.000	92.43	0.00	23.63	743.5	490.895
1	24.668	120.668	0.000	75.96	0.00	23.52	742.5	486.305
1	24.751	120.751	0.000	64.06	0.00	23.41	741.4	481.640
1	24.835	120.835	0.000	54.11	0.00	23.29	740.3	476.914
1	24.918	120.918	0.000	46.31	0.00	23.17	739.2	472.142
1	25.001	121.001	0.000	39.39	0.00	23.05	738.1	467.329
1	25.085	121.085	0.000	33.63	0.00	22.93	736.7	462.487
1	25.168	121.168	0.000	28.51	0.00	22.81	734.8	457.623
1	25.251	121.251	0.000	24.33	0.00	22.68	732.5	452.746
1	25.335	121.335	0.000	20.66	0.00	22.56	730.3	447.858
1	25.418	121.418	0.000	17.33	0.00	22.44	728.1	442.963
1	25.501	121.501	0.000	14.48	0.00	22.31	725.9	438.064
1	25.585	121.585	0.000	12.10	0.00	22.19	723.6	433.164
1	25.668	121.668	0.000	10.05	0.00	22.06	721.4	428.265
1	25.751	121.751	0.000	8.37	0.00	21.94	719.2	423.370
1	25.835	121.835	0.000	7.14	0.00	21.81	716.9	418.481
1	25.918	121.918	0.000	5.91	0.00	21.69	714.7	413.600
1	26.001	122.001	0.000	4.77	0.00	21.57	712.5	408.726
1	26.085	122.085	0.000	4.36	0.00	21.44	710.3	403.864
1	26.168	122.168	0.000	4.14	0.00	21.32	708.1	399.016
1	26.251	122.251	0.000	3.92	0.00	21.20	705.8	394.182

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  1  26.335 122.335        0.000     3.70     0.00     21.08    703.6    389.361
  1  26.418 122.418        0.000     3.49     0.00     20.95    701.4    384.555
  1  26.501 122.501        0.000     3.28     0.00     20.83    699.2    379.762
  1  26.585 122.585        0.000     3.07     0.00     20.70    696.9    374.984
  1  26.668 122.668        0.000     2.86     0.00     20.58    694.6    370.220
  1  26.751 122.751        0.000     2.65     0.00     20.45    692.3    365.470
  1  26.835 122.835        0.000     2.44     0.00     20.33    690.0    360.734
  1  26.918 122.918        0.000     2.24     0.00     20.20    687.8    356.013
  1  27.001 123.001        0.000     2.03     0.00     20.08    685.5    351.306
  1  27.085 123.085        0.000     1.83     0.00     19.96    683.3    346.613
  1  27.168 123.168        0.000     1.63     0.00     19.84    681.0    341.934
  1  27.251 123.251        0.000     1.43     0.00     19.71    678.8    337.269
  1  27.335 123.335        0.000     1.23     0.00     19.59    676.5    332.618
  1  27.418 123.418        0.000     1.03     0.00     19.47    674.3    327.981
  1  27.501 123.501        0.000     0.84     0.00     19.35    672.1    323.358
  1  27.585 123.585        0.000     0.64     0.00     19.23    669.9    318.749
  1  27.668 123.668        0.000     0.45     0.00     19.11    667.7    314.153
  1  27.751 123.751        0.000     0.26     0.00     18.99    665.5    309.572
  1  27.835 123.835        0.000     0.07     0.00     18.87    663.2    305.005
  1  27.918 123.918        0.000     0.00     0.00     18.74    660.8    300.454
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
--------------------------------------------------------------------------------
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   1991.048 AF
    BASIN  STORAGE =      0.000 AF (WITH      0.000 AF INITIALLY FILLED)
    OUTFLOW VOLUME =   1991.116 AF
    LOSS    VOLUME =      0.000 AF
================================================================================

  END OF FLOODSCx ROUTING ANALYSIS



********************************************************************************
  FLOW PROCESS FROM NODE    780.00 TO NODE    780.00 IS CODE =  11
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  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  4741.3 Ac. ***

            STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
        (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      200.0     400.0     600.0     800.0
--------------------------------------------------------------------------------
  96.000    524.2094     57.23  . Q       V         .         .         .
 (PEAK DAY 2, HOUR  24.000)
  96.083    524.6074     57.79  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   0.083)
  96.167    525.0261     60.79  .  Q      V         .         .         .
 (PEAK DAY 1, HOUR   0.167)
  96.250    525.4836     66.42  .  Q      V         .         .         .
 (PEAK DAY 1, HOUR   0.250)
  96.333    525.9968     74.52  .  Q      V         .         .         .
 (PEAK DAY 1, HOUR   0.333)
  96.417    526.5951     86.88  .   Q     V         .         .         .
 (PEAK DAY 1, HOUR   0.417)
  96.500    527.3527    110.01  .    Q    V         .         .         .
 (PEAK DAY 1, HOUR   0.500)
  96.583    528.2939    136.66  .     Q   V         .         .         .
 (PEAK DAY 1, HOUR   0.583)
  96.667    529.3502    153.38  .      Q  V         .         .         .
 (PEAK DAY 1, HOUR   0.667)
  96.750    530.4742    163.21  .       Q V         .         .         .
 (PEAK DAY 1, HOUR   0.750)
  96.833    531.6533    171.19  .       Q V         .         .         .
 (PEAK DAY 1, HOUR   0.833)
  96.917    532.8777    177.79  .       Q V         .         .         .
 (PEAK DAY 1, HOUR   0.917)
  97.000    534.1408    183.40  .        QV         .         .         .
 (PEAK DAY 1, HOUR   1.000)
  97.083    535.4380    188.35  .        QV         .         .         .
 (PEAK DAY 1, HOUR   1.083)
  97.167    536.7651    192.70  .        QV         .         .         .
 (PEAK DAY 1, HOUR   1.167)
  97.250    538.1185    196.52  .        QV         .         .         .
 (PEAK DAY 1, HOUR   1.250)
  97.333    539.4950    199.87  .        QV         .         .         .
 (PEAK DAY 1, HOUR   1.333)
  97.417    540.8928    202.96  .         Q         .         .         .
 (PEAK DAY 1, HOUR   1.417)
  97.500    542.3101    205.79  .         Q         .         .         .
 (PEAK DAY 1, HOUR   1.500)
  97.583    543.7446    208.29  .         Q         .         .         .
 (PEAK DAY 1, HOUR   1.583)
  97.667    545.1946    210.54  .         Q         .         .         .
 (PEAK DAY 1, HOUR   1.667)
  97.750    546.6584    212.55  .         Q         .         .         .
 (PEAK DAY 1, HOUR   1.750)
  97.833    548.1342    214.28  .        QV         .         .         .
 (PEAK DAY 1, HOUR   1.833)
  97.917    549.6210    215.88  .        QV         .         .         .
 (PEAK DAY 1, HOUR   1.917)
  98.000    551.1187    217.47  .        QV         .         .         .
 (PEAK DAY 1, HOUR   2.000)
  98.083    552.6252    218.75  .        QV         .         .         .
 (PEAK DAY 1, HOUR   2.083)
  98.167    554.1383    219.70  .        QV         .         .         .
 (PEAK DAY 1, HOUR   2.167)
  98.250    555.6577    220.62  .        .Q         .         .         .
 (PEAK DAY 1, HOUR   2.250)
  98.333    557.1835    221.54  .        .Q         .         .         .
 (PEAK DAY 1, HOUR   2.333)
  98.417    558.7157    222.48  .        .Q         .         .         .
 (PEAK DAY 1, HOUR   2.417)
  98.500    560.2544    223.42  .        .Q         .         .         .
 (PEAK DAY 1, HOUR   2.500)
  98.583    561.7997    224.37  .        .Q         .         .         .
 (PEAK DAY 1, HOUR   2.583)
  98.667    563.3516    225.34  .        .Q         .         .         .
 (PEAK DAY 1, HOUR   2.667)
  98.750    564.9102    226.31  .        .Q         .         .         .
 (PEAK DAY 1, HOUR   2.750)
  98.833    566.4755    227.28  .        .Q         .         .         .
 (PEAK DAY 1, HOUR   2.833)
  98.917    568.0476    228.27  .        .Q         .         .         .
 (PEAK DAY 1, HOUR   2.917)
  99.000    569.6266    229.27  .        .Q         .         .         .
 (PEAK DAY 1, HOUR   3.000)
  99.083    571.2126    230.28  .        .Q         .         .         .
 (PEAK DAY 1, HOUR   3.083)
  99.167    572.8055    231.30  .        .Q         .         .         .
 (PEAK DAY 1, HOUR   3.167)
  99.250    574.4056    232.33  .        .Q         .         .         .
 (PEAK DAY 1, HOUR   3.250)
  99.333    576.0128    233.37  .        .Q         .         .         .
 (PEAK DAY 1, HOUR   3.333)
  99.417    577.6272    234.41  .        .Q         .         .         .
 (PEAK DAY 1, HOUR   3.417)
  99.500    579.2489    235.47  .        .Q         .         .         .
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(PEAK DAY 1, HOUR   3.500)
 99.583    580.8779    236.54  .         .Q        .         .         .
(PEAK DAY 1, HOUR   3.583)
 99.667    582.5144    237.62  .         .Q        .         .         .
(PEAK DAY 1, HOUR   3.667)
 99.750    584.1584    238.71  .         .Q        .         .         .
(PEAK DAY 1, HOUR   3.750)
 99.833    585.8100    239.81  .         .Q        .         .         .
(PEAK DAY 1, HOUR   3.833)
 99.917    587.4689    240.87  .         .VQ       .         .         .
(PEAK DAY 1, HOUR   3.917)
100.000    589.1347    241.87  .         .VQ       .         .         .
(PEAK DAY 1, HOUR   4.000)
100.083    590.8073    242.87  .         .VQ       .         .         .
(PEAK DAY 1, HOUR   4.083)
100.167    592.4869    243.87  .         .VQ       .         .         .
(PEAK DAY 1, HOUR   4.167)
100.250    594.1734    244.88  .         .VQ       .         .         .
(PEAK DAY 1, HOUR   4.250)
100.333    595.8670    245.91  .         .VQ       .         .         .
(PEAK DAY 1, HOUR   4.333)
100.417    597.5677    246.95  .         . Q       .         .         .
(PEAK DAY 1, HOUR   4.417)
100.500    599.2757    247.99  .         . Q       .         .         .
(PEAK DAY 1, HOUR   4.500)
100.583    600.9909    249.05  .         . Q       .         .         .
(PEAK DAY 1, HOUR   4.583)
100.667    602.7135    250.12  .         . Q       .         .         .
(PEAK DAY 1, HOUR   4.667)
100.750    604.4436    251.21  .         . Q       .         .         .
(PEAK DAY 1, HOUR   4.750)
100.833    606.1813    252.31  .         . Q       .         .         .
(PEAK DAY 1, HOUR   4.833)
100.917    607.9266    253.42  .         . Q       .         .         .
(PEAK DAY 1, HOUR   4.917)
101.000    609.6796    254.54  .         . Q       .         .         .
(PEAK DAY 1, HOUR   5.000)
101.083    611.4404    255.67  .         . Q       .         .         .
(PEAK DAY 1, HOUR   5.083)
101.167    613.2091    256.82  .         . Q       .         .         .
(PEAK DAY 1, HOUR   5.167)
101.250    614.9858    257.98  .         . Q       .         .         .
(PEAK DAY 1, HOUR   5.250)
101.333    616.7707    259.16  .         . Q       .         .         .
(PEAK DAY 1, HOUR   5.333)
101.417    618.5637    260.35  .         . VQ      .         .         .
(PEAK DAY 1, HOUR   5.417)
101.500    620.3651    261.55  .         . VQ      .         .         .
(PEAK DAY 1, HOUR   5.500)
101.583    622.1747    262.77  .         . VQ      .         .         .
(PEAK DAY 1, HOUR   5.583)
101.667    623.9929    264.00  .         . VQ      .         .         .
(PEAK DAY 1, HOUR   5.667)
101.750    625.8197    265.25  .         . VQ      .         .         .
(PEAK DAY 1, HOUR   5.750)
101.833    627.6552    266.51  .         . VQ      .         .         .
(PEAK DAY 1, HOUR   5.833)
101.917    629.4995    267.79  .         . VQ      .         .         .
(PEAK DAY 1, HOUR   5.917)
102.000    631.3527    269.09  .         . VQ      .         .         .
(PEAK DAY 1, HOUR   6.000)
102.083    633.2150    270.40  .         . VQ      .         .         .
(PEAK DAY 1, HOUR   6.083)
102.167    635.0864    271.73  .         . VQ      .         .         .
(PEAK DAY 1, HOUR   6.167)
102.250    636.9670    273.08  .         . VQ      .         .         .
(PEAK DAY 1, HOUR   6.250)
102.333    638.8571    274.44  .         . VQ      .         .         .
(PEAK DAY 1, HOUR   6.333)
102.417    640.7567    275.82  .         . VQ      .         .         .
(PEAK DAY 1, HOUR   6.417)
102.500    642.6660    277.22  .         . VQ      .         .         .
(PEAK DAY 1, HOUR   6.500)
102.583    644.5850    278.64  .         . VQ      .         .         .
(PEAK DAY 1, HOUR   6.583)
102.667    646.5123    279.86  .         . VQ      .         .         .
(PEAK DAY 1, HOUR   6.667)
102.750    648.4441    280.50  .         .  VQ     .         .         .
(PEAK DAY 1, HOUR   6.750)
102.833    650.3782    280.84  .         .  VQ     .         .         .
(PEAK DAY 1, HOUR   6.833)
102.917    652.3159    281.35  .         .  VQ     .         .         .
(PEAK DAY 1, HOUR   6.917)
103.000    654.2582    282.01  .         .  VQ     .         .         .
(PEAK DAY 1, HOUR   7.000)
103.083    656.2058    282.80  .         .  VQ     .         .         .
(PEAK DAY 1, HOUR   7.083)
103.167    658.1596    283.69  .         .  VQ     .         .         .
(PEAK DAY 1, HOUR   7.167)
103.250    660.1203    284.69  .         .  VQ     .         .         .
(PEAK DAY 1, HOUR   7.250)
103.333    662.0884    285.78  .         .  VQ     .         .         .
(PEAK DAY 1, HOUR   7.333)
103.417    664.0646    286.94  .         .  VQ     .         .         .
(PEAK DAY 1, HOUR   7.417)
103.500    666.0493    288.17  .         .  VQ     .         .         .
(PEAK DAY 1, HOUR   7.500)
103.583    668.0428    289.47  .         .  VQ     .         .         .
(PEAK DAY 1, HOUR   7.583)
103.667    670.0458    290.83  .         .  VQ     .         .         .
(PEAK DAY 1, HOUR   7.667)
103.750    672.0584    292.24  .         .  VQ     .         .         .
(PEAK DAY 1, HOUR   7.750)
103.833    674.0811    293.70  .         .  VQ     .         .         .
(PEAK DAY 1, HOUR   7.833)
103.917    676.1142    295.20  .         .  VQ     .         .         .
(PEAK DAY 1, HOUR   7.917)
104.000    678.1580    296.75  .         .  VQ     .         .         .
(PEAK DAY 1, HOUR   8.000)
104.083    680.2127    298.35  .         .  VQ     .         .         .
(PEAK DAY 1, HOUR   8.083)
104.167    682.2787    299.98  .         .  VQ     .         .         .
(PEAK DAY 1, HOUR   8.167)
104.250    684.3561    301.65  .         .  V Q    .         .         .
(PEAK DAY 1, HOUR   8.250)
104.333    686.4454    303.35  .         .  V Q    .         .         .
(PEAK DAY 1, HOUR   8.333)
104.417    688.5466    305.10  .         .  V Q    .         .         .
(PEAK DAY 1, HOUR   8.417)
104.500    690.6600    306.88  .         .  V Q    .         .         .
(PEAK DAY 1, HOUR   8.500)
104.583    692.7860    308.69  .         .  V Q    .         .         .
(PEAK DAY 1, HOUR   8.583)
104.667    694.9247    310.54  .         .  V Q    .         .         .
(PEAK DAY 1, HOUR   8.667)
104.750    697.0764    312.42  .         .   VQ    .         .         .
(PEAK DAY 1, HOUR   8.750)
104.833    699.2413    314.34  .         .   VQ    .         .         .
(PEAK DAY 1, HOUR   8.833)
104.917    701.4197    316.30  .         .   VQ    .         .         .
(PEAK DAY 1, HOUR   8.917)
105.000    703.6108    318.14  .         .   VQ    .         .         .
(PEAK DAY 1, HOUR   9.000)
105.083    705.8107    319.44  .         .   VQ    .         .         .
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 (PEAK DAY 1, HOUR   9.083)
105.167    708.0169    320.34  .         .   V Q   .         .         .
 (PEAK DAY 1, HOUR   9.167)
105.250    710.2299    321.33  .         .   V Q   .         .         .
 (PEAK DAY 1, HOUR   9.250)
105.333    712.4503    322.40  .         .   V Q   .         .         .
 (PEAK DAY 1, HOUR   9.333)
105.417    714.6786    323.56  .         .   V Q   .         .         .
 (PEAK DAY 1, HOUR   9.417)
105.500    716.9155    324.79  .         .   V Q   .         .         .
 (PEAK DAY 1, HOUR   9.500)
105.583    719.1613    326.09  .         .   V Q   .         .         .
 (PEAK DAY 1, HOUR   9.583)
105.667    721.4166    327.47  .         .   V Q   .         .         .
 (PEAK DAY 1, HOUR   9.667)
105.750    723.6819    328.93  .         .   V Q   .         .         .
 (PEAK DAY 1, HOUR   9.750)
105.833    725.9578    330.45  .         .   V Q   .         .         .
 (PEAK DAY 1, HOUR   9.833)
105.917    728.2447    332.05  .         .   V Q   .         .         .
 (PEAK DAY 1, HOUR   9.917)
106.000    730.5430    333.71  .         .   V Q   .         .         .
 (PEAK DAY 1, HOUR  10.000)
106.083    732.8532    335.45  .         .   V Q   .         .         .
 (PEAK DAY 1, HOUR  10.083)
106.167    735.1758    337.25  .         .   V Q   .         .         .
 (PEAK DAY 1, HOUR  10.167)
106.250    737.5114    339.12  .         .   V Q   .         .         .
 (PEAK DAY 1, HOUR  10.250)
106.333    739.8602    341.06  .         .   V  Q  .         .         .
 (PEAK DAY 1, HOUR  10.333)
106.417    742.2229    343.06  .         .   V  Q  .         .         .
 (PEAK DAY 1, HOUR  10.417)
106.500    744.5999    345.13  .         .   V  Q  .         .         .
 (PEAK DAY 1, HOUR  10.500)
106.583    746.9915    347.27  .         .    V Q  .         .         .
 (PEAK DAY 1, HOUR  10.583)
106.667    749.3984    349.48  .         .    V Q  .         .         .
 (PEAK DAY 1, HOUR  10.667)
106.750    751.8207    351.73  .         .    V Q  .         .         .
 (PEAK DAY 1, HOUR  10.750)
106.833    754.2554    353.52  .         .    V Q  .         .         .
 (PEAK DAY 1, HOUR  10.833)
106.917    756.6995    354.88  .         .    V Q  .         .         .
 (PEAK DAY 1, HOUR  10.917)
107.000    759.1534    356.31  .         .    V Q  .         .         .
 (PEAK DAY 1, HOUR  11.000)
107.083    761.6176    357.81  .         .    V Q  .         .         .
 (PEAK DAY 1, HOUR  11.083)
107.167    764.0927    359.39  .         .    V Q  .         .         .
 (PEAK DAY 1, HOUR  11.167)
107.250    766.5792    361.04  .         .    V  Q .         .         .
 (PEAK DAY 1, HOUR  11.250)
107.333    769.0776    362.77  .         .    V  Q .         .         .
 (PEAK DAY 1, HOUR  11.333)
107.417    771.5885    364.58  .         .    V  Q .         .         .
 (PEAK DAY 1, HOUR  11.417)
107.500    774.1124    366.46  .         .    V  Q .         .         .
 (PEAK DAY 1, HOUR  11.500)
107.583    776.6498    368.43  .         .    V  Q .         .         .
 (PEAK DAY 1, HOUR  11.583)
107.667    779.2012    370.47  .         .    V  Q .         .         .
 (PEAK DAY 1, HOUR  11.667)
107.750    781.7673    372.60  .         .    V  Q .         .         .
 (PEAK DAY 1, HOUR  11.750)
107.833    784.3486    374.81  .         .    V  Q .         .         .
 (PEAK DAY 1, HOUR  11.833)
107.917    786.9457    377.10  .         .    V  Q .         .         .
 (PEAK DAY 1, HOUR  11.917)
108.000    789.5593    379.48  .         .    V  Q .         .         .
 (PEAK DAY 1, HOUR  12.000)
108.083    792.1899    381.98  .         .    V   Q.         .         .
 (PEAK DAY 1, HOUR  12.083)
108.167    794.8367    384.31  .         .    V   Q.         .         .
 (PEAK DAY 1, HOUR  12.167)
108.250    797.4963    386.17  .         .     V  Q.         .         .
 (PEAK DAY 1, HOUR  12.250)
108.333    800.1678    387.91  .         .     V  Q.         .         .
 (PEAK DAY 1, HOUR  12.333)
108.417    802.8531    389.92  .         .     V  Q.         .         .
 (PEAK DAY 1, HOUR  12.417)
108.500    805.5554    392.37  .         .     V  Q.         .         .
 (PEAK DAY 1, HOUR  12.500)
108.583    808.2780    395.32  .         .     V  Q.         .         .
 (PEAK DAY 1, HOUR  12.583)
108.667    811.0234    398.63  .         .     V  Q.         .         .
 (PEAK DAY 1, HOUR  12.667)
108.750    813.7930    402.16  .         .     V   Q         .         .
 (PEAK DAY 1, HOUR  12.750)
108.833    816.5883    405.88  .         .     V   Q         .         .
 (PEAK DAY 1, HOUR  12.833)
108.917    819.4104    409.77  .         .     V   Q         .         .
 (PEAK DAY 1, HOUR  12.917)
109.000    822.2603    413.80  .         .     V   Q         .         .
 (PEAK DAY 1, HOUR  13.000)
109.083    825.1390    417.98  .         .     V   Q         .         .
 (PEAK DAY 1, HOUR  13.083)
109.167    828.0474    422.30  .         .     V   .Q        .         .
 (PEAK DAY 1, HOUR  13.167)
109.250    830.9865    426.76  .         .     V   .Q        .         .
 (PEAK DAY 1, HOUR  13.250)
109.333    833.9573    431.36  .         .     V   .Q        .         .
 (PEAK DAY 1, HOUR  13.333)
109.417    836.9609    436.13  .         .     V   .Q        .         .
 (PEAK DAY 1, HOUR  13.417)
109.500    839.9974    440.90  .         .     V   . Q       .         .
 (PEAK DAY 1, HOUR  13.500)
109.583    843.0620    444.97  .         .     V   . Q       .         .
 (PEAK DAY 1, HOUR  13.583)
109.667    846.1509    448.52  .         .     V   . Q       .         .
 (PEAK DAY 1, HOUR  13.667)
109.750    849.2658    452.28  .         .      V  . Q       .         .
 (PEAK DAY 1, HOUR  13.750)
109.833    852.4081    456.26  .         .      V  . Q       .         .
 (PEAK DAY 1, HOUR  13.833)
109.917    855.5793    460.46  .         .      V  .  Q      .         .
 (PEAK DAY 1, HOUR  13.917)
110.000    858.7811    464.91  .         .      V  .  Q      .         .
 (PEAK DAY 1, HOUR  14.000)
110.083    862.0157    469.66  .         .      V  .  Q      .         .
 (PEAK DAY 1, HOUR  14.083)
110.167    865.2858    474.82  .         .      V  .  Q      .         .
 (PEAK DAY 1, HOUR  14.167)
110.250    868.5953    480.54  .         .      V  .   Q     .         .
 (PEAK DAY 1, HOUR  14.250)
110.333    871.9489    486.94  .         .      V  .   Q     .         .
 (PEAK DAY 1, HOUR  14.333)
110.417    875.3506    493.92  .         .      V  .   Q     .         .
 (PEAK DAY 1, HOUR  14.417)
110.500    878.8049    501.57  .         .      V  .    Q    .         .
 (PEAK DAY 1, HOUR  14.500)
110.583    882.3192    510.27  .         .      V  .    Q    .         .
 (PEAK DAY 1, HOUR  14.583)
110.667    885.9002    519.96  .         .      V  .    Q    .         .
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 (PEAK DAY 1, HOUR  14.667)
110.750    889.5528    530.36  .         .      V  .     Q   .         .
 (PEAK DAY 1, HOUR  14.750)
110.833    893.2718    540.00  .         .      V  .     Q   .         .
 (PEAK DAY 1, HOUR  14.833)
110.917    897.0416    547.37  .         .       V .      Q  .         .
 (PEAK DAY 1, HOUR  14.917)
111.000    900.8550    553.71  .         .       V .      Q  .         .
 (PEAK DAY 1, HOUR  15.000)
111.083    904.7144    560.38  .         .       V .       Q .         .
 (PEAK DAY 1, HOUR  15.083)
111.167    908.6219    567.38  .         .       V .       Q .         .
 (PEAK DAY 1, HOUR  15.167)
111.250    912.5800    574.71  .         .       V .       Q .         .
 (PEAK DAY 1, HOUR  15.250)
111.333    916.5902    582.29  .         .       V .        Q.         .
 (PEAK DAY 1, HOUR  15.333)
111.417    920.6491    589.36  .         .       V .        Q.         .
 (PEAK DAY 1, HOUR  15.417)
111.500    924.7534    595.94  .         .       V .        Q.         .
 (PEAK DAY 1, HOUR  15.500)
111.583    928.9041    602.68  .         .       V .         Q         .
 (PEAK DAY 1, HOUR  15.583)
111.667    933.1019    609.53  .         .       V .         Q         .
 (PEAK DAY 1, HOUR  15.667)
111.750    937.3470    616.40  .         .       V .         Q         .
 (PEAK DAY 1, HOUR  15.750)
111.833    941.6378    623.01  .         .       V .         .Q        .
 (PEAK DAY 1, HOUR  15.833)
111.917    945.9708    629.15  .         .        V.         .Q        .
 (PEAK DAY 1, HOUR  15.917)
112.000    950.3469    635.41  .         .        V.         .Q        .
 (PEAK DAY 1, HOUR  16.000)
112.083    954.7750    642.95  .         .        V.         . Q       .
 (PEAK DAY 1, HOUR  16.083)
112.167    959.2700    652.68  .         .        V.         . Q       .
 (PEAK DAY 1, HOUR  16.167)
112.250    963.8472    664.61  .         .        V.         .  Q      .
 (PEAK DAY 1, HOUR  16.250)
112.333    968.5200    678.49  .         .        V.         .  Q      .
 (PEAK DAY 1, HOUR  16.333)
112.417    973.3076    695.16  .         .        V.         .   Q     .
 (PEAK DAY 1, HOUR  16.417)
112.500    978.2385    715.96  .         .        V.         .    Q    .
 (PEAK DAY 1, HOUR  16.500)
112.583    983.2986    734.74  .         .        V.         .     Q   .
 (PEAK DAY 1, HOUR  16.583)
112.667    988.4315    745.29  .         .        V.         .      Q  .
 (PEAK DAY 1, HOUR  16.667)
112.750    993.6063    751.39  .         .        V.         .      Q  .
 (PEAK DAY 1, HOUR  16.750)
112.833    998.8187    756.84  .         .         V         .      Q  .
 (PEAK DAY 1, HOUR  16.833)
112.917   1004.0671    762.07  .         .         V         .       Q .
 (PEAK DAY 1, HOUR  16.917)
113.000   1009.3490    766.93  .         .         V         .       Q .
 (PEAK DAY 1, HOUR  17.000)
113.083   1014.6616    771.38  .         .         V         .       Q .
 (PEAK DAY 1, HOUR  17.083)
113.167   1020.0023    775.47  .         .         V         .       Q .
 (PEAK DAY 1, HOUR  17.167)
113.250   1025.3695    779.32  .         .         V         .       Q .
 (PEAK DAY 1, HOUR  17.250)
113.333   1030.7614    782.89  .         .         V         .        Q.
 (PEAK DAY 1, HOUR  17.333)
113.417   1036.1752    786.09  .         .         V         .        Q.
 (PEAK DAY 1, HOUR  17.417)
113.500   1041.6080    788.84  .         .         V         .        Q.
 (PEAK DAY 1, HOUR  17.500)
113.583   1047.0565    791.12  .         .         .V        .        Q.
 (PEAK DAY 1, HOUR  17.583)
113.667   1052.5181    793.01  .         .         .V        .        Q.
 (PEAK DAY 1, HOUR  17.667)
113.750   1057.9905    794.59  .         .         .V        .        Q.
 (PEAK DAY 1, HOUR  17.750)
113.833   1063.4718    795.88  .         .         .V        .        Q.
 (PEAK DAY 1, HOUR  17.833)
113.917   1068.9604    796.94  .         .         .V        .        Q.
 (PEAK DAY 1, HOUR  17.917)
114.000   1074.4551    797.82  .         .         .V        .        Q.
 (PEAK DAY 1, HOUR  18.000)
114.083   1079.9541    798.46  .         .         .V        .        Q.
 (PEAK DAY 1, HOUR  18.083)
114.167   1085.4561    798.88  .         .         .V        .        Q.
 (PEAK DAY 1, HOUR  18.167)
114.250   1090.9600    799.17  .         .         .V        .        Q.
 (PEAK DAY 1, HOUR  18.250)
114.333   1096.4652    799.36  .         .         . V       .        Q.
 (PEAK DAY 1, HOUR  18.333)
114.417   1101.9711    799.45  .         .         . V       .        Q.
 (PEAK DAY 1, HOUR  18.417)
114.500   1107.4768    799.43  .         .         . V       .        Q.
 (PEAK DAY 1, HOUR  18.500)
114.583   1112.9817    799.31  .         .         . V       .        Q.
 (PEAK DAY 1, HOUR  18.583)
114.667   1118.4851    799.10  .         .         . V       .        Q.
 (PEAK DAY 1, HOUR  18.667)
114.750   1123.9866    798.82  .         .         . V       .        Q.
 (PEAK DAY 1, HOUR  18.750)
114.833   1129.4858    798.49  .         .         . V       .        Q.
 (PEAK DAY 1, HOUR  18.833)
114.917   1134.9824    798.11  .         .         . V       .        Q.
 (PEAK DAY 1, HOUR  18.917)
115.000   1140.4762    797.69  .         .         . V       .        Q.
 (PEAK DAY 1, HOUR  19.000)
115.083   1145.9668    797.23  .         .         .  V      .        Q.
 (PEAK DAY 1, HOUR  19.083)
115.167   1151.4540    796.74  .         .         .  V      .        Q.
 (PEAK DAY 1, HOUR  19.167)
115.250   1156.9376    796.22  .         .         .  V      .        Q.
 (PEAK DAY 1, HOUR  19.250)
115.333   1162.4175    795.68  .         .         .  V      .        Q.
 (PEAK DAY 1, HOUR  19.333)
115.417   1167.8936    795.12  .         .         .  V      .        Q.
 (PEAK DAY 1, HOUR  19.417)
115.500   1173.3656    794.54  .         .         .  V      .        Q.
 (PEAK DAY 1, HOUR  19.500)
115.583   1178.8335    793.93  .         .         .  V      .        Q.
 (PEAK DAY 1, HOUR  19.583)
115.667   1184.2970    793.31  .         .         .  V      .        Q.
 (PEAK DAY 1, HOUR  19.667)
115.750   1189.7561    792.66  .         .         .  V      .        Q.
 (PEAK DAY 1, HOUR  19.750)
115.833   1195.2107    792.00  .         .         .   V     .        Q.
 (PEAK DAY 1, HOUR  19.833)
115.917   1200.6604    791.30  .         .         .   V     .        Q.
 (PEAK DAY 1, HOUR  19.917)
116.000   1206.1051    790.56  .         .         .   V     .        Q.
 (PEAK DAY 1, HOUR  20.000)
116.083   1211.5446    789.81  .         .         .   V     .        Q.
 (PEAK DAY 1, HOUR  20.083)
116.167   1216.9786    789.04  .         .         .   V     .        Q.
 (PEAK DAY 1, HOUR  20.167)
116.250   1222.4073    788.26  .         .         .   V     .        Q.
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 (PEAK DAY 1, HOUR  20.250)
116.333   1227.8307    787.46  .         .         .   V     .         Q.
 (PEAK DAY 1, HOUR  20.333)
116.417   1233.2484    786.66  .         .         .   V     .         Q.
 (PEAK DAY 1, HOUR  20.417)
116.500   1238.6605    785.84  .         .         .   V     .         Q.
 (PEAK DAY 1, HOUR  20.500)
116.583   1244.0669    785.01  .         .         .   V     .         Q.
 (PEAK DAY 1, HOUR  20.583)
116.667   1249.4675    784.18  .         .         .    V    .         Q.
 (PEAK DAY 1, HOUR  20.667)
116.750   1254.8624    783.33  .         .         .    V    .         Q.
 (PEAK DAY 1, HOUR  20.750)
116.833   1260.2515    782.48  .         .         .    V    .         Q.
 (PEAK DAY 1, HOUR  20.833)
116.917   1265.6345    781.62  .         .         .    V    .         Q.
 (PEAK DAY 1, HOUR  20.917)
117.000   1271.0116    780.75  .         .         .    V    .         Q.
 (PEAK DAY 1, HOUR  21.000)
117.083   1276.3827    779.87  .         .         .    V    .       Q .
 (PEAK DAY 1, HOUR  21.083)
117.167   1281.7477    778.99  .         .         .    V    .       Q .
 (PEAK DAY 1, HOUR  21.167)
117.250   1287.1066    778.11  .         .         .    V    .       Q .
 (PEAK DAY 1, HOUR  21.250)
117.333   1292.4594    777.22  .         .         .    V    .       Q .
 (PEAK DAY 1, HOUR  21.333)
117.417   1297.8062    776.35  .         .         .     V   .       Q .
 (PEAK DAY 1, HOUR  21.417)
117.500   1303.1471    775.51  .         .         .     V   .       Q .
 (PEAK DAY 1, HOUR  21.500)
117.583   1308.4824    774.68  .         .         .     V   .       Q .
 (PEAK DAY 1, HOUR  21.583)
117.667   1313.8119    773.84  .         .         .     V   .       Q .
 (PEAK DAY 1, HOUR  21.667)
117.750   1319.1356    773.00  .         .         .     V   .       Q .
 (PEAK DAY 1, HOUR  21.750)
117.833   1324.4535    772.16  .         .         .     V   .       Q .
 (PEAK DAY 1, HOUR  21.833)
117.917   1329.7655    771.31  .         .         .     V   .       Q .
 (PEAK DAY 1, HOUR  21.917)
118.000   1335.0717    770.46  .         .         .     V   .       Q .
 (PEAK DAY 1, HOUR  22.000)
118.083   1340.3719    769.60  .         .         .     V   .       Q .
 (PEAK DAY 1, HOUR  22.083)
118.167   1345.6664    768.75  .         .         .      V  .       Q .
 (PEAK DAY 1, HOUR  22.167)
118.250   1350.9548    767.88  .         .         .      V  .       Q .
 (PEAK DAY 1, HOUR  22.250)
118.333   1356.2373    767.02  .         .         .      V  .       Q .
 (PEAK DAY 1, HOUR  22.333)
118.417   1361.5138    766.15  .         .         .      V  .       Q .
 (PEAK DAY 1, HOUR  22.417)
118.500   1366.7843    765.28  .         .         .      V  .       Q .
 (PEAK DAY 1, HOUR  22.500)
118.583   1372.0488    764.41  .         .         .      V  .       Q .
 (PEAK DAY 1, HOUR  22.583)
118.667   1377.3074    763.54  .         .         .      V  .       Q .
 (PEAK DAY 1, HOUR  22.667)
118.750   1382.5598    762.66  .         .         .      V  .       Q .
 (PEAK DAY 1, HOUR  22.750)
118.833   1387.8063    761.78  .         .         .      V  .       Q .
 (PEAK DAY 1, HOUR  22.833)
118.917   1393.0466    760.90  .         .         .      V  .       Q .
 (PEAK DAY 1, HOUR  22.917)
119.000   1398.2809    760.01  .         .         .       V .       Q .
 (PEAK DAY 1, HOUR  23.000)
119.083   1403.5090    759.13  .         .         .       V .       Q .
 (PEAK DAY 1, HOUR  23.083)
119.167   1408.7311    758.24  .         .         .       V .       Q .
 (PEAK DAY 1, HOUR  23.167)
119.250   1413.9470    757.35  .         .         .       V .       Q .
 (PEAK DAY 1, HOUR  23.250)
119.333   1419.1569    756.46  .         .         .       V .       Q .
 (PEAK DAY 1, HOUR  23.333)
119.417   1424.3606    755.59  .         .         .       V .       Q .
 (PEAK DAY 1, HOUR  23.417)
119.500   1429.5586    754.75  .         .         .       V .       Q .
 (PEAK DAY 1, HOUR  23.500)
119.583   1434.7510    753.93  .         .         .       V .       Q .
 (PEAK DAY 1, HOUR  23.583)
119.667   1439.9376    753.10  .         .         .       V .       Q .
 (PEAK DAY 1, HOUR  23.667)
119.750   1445.1185    752.27  .         .         .        V.       Q .
 (PEAK DAY 1, HOUR  23.750)
119.833   1450.2938    751.44  .         .         .        V.       Q .
 (PEAK DAY 1, HOUR  23.833)
119.917   1455.4634    750.61  .         .         .        V.       Q .
 (PEAK DAY 1, HOUR  23.917)
120.000   1460.6272    749.78  .         .         .        V.       Q .
 (PEAK DAY 1, HOUR  24.000)
120.083   1465.7853    748.95  .         .         .        V.       Q .
 (PEAK DAY 1, HOUR  24.083)
120.167   1470.9375    748.10  .         .         .        V.       Q .
 (PEAK DAY 1, HOUR  24.167)
120.250   1476.0839    747.25  .         .         .        V.       Q .
 (PEAK DAY 1, HOUR  24.250)
120.333   1481.2241    746.37  .         .         .        V.       Q .
 (PEAK DAY 1, HOUR  24.333)
120.417   1486.3582    745.47  .         .         .        V.       Q .
 (PEAK DAY 1, HOUR  24.417)
120.500   1491.4857    744.52  .         .         .        V.       Q .
 (PEAK DAY 1, HOUR  24.500)
120.583   1496.6063    743.52  .         .         .         V       Q .
 (PEAK DAY 1, HOUR  24.583)
120.667   1501.7197    742.47  .         .         .         V       Q .
 (PEAK DAY 1, HOUR  24.667)
120.750   1506.8258    741.41  .         .         .         V       Q .
 (PEAK DAY 1, HOUR  24.750)
120.833   1511.9246    740.33  .         .         .         V       Q .
 (PEAK DAY 1, HOUR  24.833)
120.917   1517.0157    739.24  .         .         .         V     Q   .
 (PEAK DAY 1, HOUR  24.917)
121.000   1522.0994    738.14  .         .         .         V     Q   .
 (PEAK DAY 1, HOUR  25.000)
121.083   1527.1732    736.73  .         .         .         V     Q   .
 (PEAK DAY 1, HOUR  25.083)
121.167   1532.2335    734.76  .         .         .         V     Q   .
 (PEAK DAY 1, HOUR  25.167)
121.250   1537.2786    732.54  .         .         .         V     Q   .
 (PEAK DAY 1, HOUR  25.250)
121.333   1542.3082    730.31  .         .         .         V     Q   .
 (PEAK DAY 1, HOUR  25.333)
121.417   1547.3226    728.08  .         .         .         .V    Q   .
 (PEAK DAY 1, HOUR  25.417)
121.500   1552.3217    725.85  .         .         .         .V    Q   .
 (PEAK DAY 1, HOUR  25.500)
121.583   1557.3053    723.62  .         .         .         .V    Q   .
 (PEAK DAY 1, HOUR  25.583)
121.667   1562.2736    721.39  .         .         .         .V    Q   .
 (PEAK DAY 1, HOUR  25.667)
121.750   1567.2264    719.16  .         .         .         .V  Q     .
 (PEAK DAY 1, HOUR  25.750)
121.833   1572.1639    716.93  .         .         .         .V  Q     .
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 (PEAK DAY 1, HOUR  25.833)
 121.917   1577.0862    714.70  .         .         .         .V   Q    .
 (PEAK DAY 1, HOUR  25.917)
 122.000   1581.9930    712.48  .         .         .         .V   Q    .
 (PEAK DAY 1, HOUR  26.000)
 122.083   1586.8846    710.26  .         .         .         .V   Q    .
 (PEAK DAY 1, HOUR  26.083)
 122.167   1591.7610    708.05  .         .         .         .V   Q    .
 (PEAK DAY 1, HOUR  26.167)
 122.250   1596.6222    705.85  .         .         .         . V  Q    .
 (PEAK DAY 1, HOUR  26.250)
 122.333   1601.4683    703.65  .         .         .         . V  Q    .
 (PEAK DAY 1, HOUR  26.333)
 122.417   1606.2991    701.43  .         .         .         . V  Q    .
 (PEAK DAY 1, HOUR  26.417)
 122.500   1611.1143    699.17  .         .         .         . V Q     .
 (PEAK DAY 1, HOUR  26.500)
 122.583   1615.9137    696.88  .         .         .         . V Q     .
 (PEAK DAY 1, HOUR  26.583)
 122.667   1620.6974    694.59  .         .         .         . V Q     .
 (PEAK DAY 1, HOUR  26.667)
 122.750   1625.4653    692.31  .         .         .         . V Q     .
 (PEAK DAY 1, HOUR  26.750)
 122.833   1630.2177    690.04  .         .         .         . V Q     .
 (PEAK DAY 1, HOUR  26.833)
 122.917   1634.9543    687.77  .         .         .         . V Q     .
 (PEAK DAY 1, HOUR  26.917)
 123.000   1639.6755    685.52  .         .         .         . V Q     .
 (PEAK DAY 1, HOUR  27.000)
 123.083   1644.3812    683.26  .         .         .         .  VQ     .
 (PEAK DAY 1, HOUR  27.083)
 123.167   1649.0714    681.02  .         .         .         .  VQ     .
 (PEAK DAY 1, HOUR  27.167)
 123.250   1653.7462    678.78  .         .         .         .  Q      .
 (PEAK DAY 1, HOUR  27.250)
 123.333   1658.4056    676.55  .         .         .         .  Q      .
 (PEAK DAY 1, HOUR  27.333)
 123.417   1663.0498    674.32  .         .         .         .  Q      .
 (PEAK DAY 1, HOUR  27.417)
 123.500   1667.6786    672.11  .         .         .         .  Q      .
 (PEAK DAY 1, HOUR  27.500)
 123.583   1672.2922    669.90  .         .         .         .  Q      .
 (PEAK DAY 1, HOUR  27.583)
 123.667   1676.8906    667.69  .         .         .         .  Q      .
 (PEAK DAY 1, HOUR  27.667)
 123.750   1681.4739    665.48  .         .         .         .  Q      .
 (PEAK DAY 1, HOUR  27.750)
 123.833   1686.0413    663.18  .         .         .         .  Q      .
 (PEAK DAY 1, HOUR  27.833)
 123.917   1690.5922    660.80  .         .         .         .  Q      .
 (PEAK DAY 1, HOUR  27.917)
 124.000   1695.1267    658.42  .         .         .         . Q V     .
 (PEAK DAY 1, HOUR  28.000)
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
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  END OF FLOODSCx ROUTING ANALYSIS



********************************************************************************
  FLOW PROCESS FROM NODE    780.00 TO NODE   6311.00 IS CODE = 5.2
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  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
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          *** Note: This link/process output is based on its ***
          *** tributary area being adjusted, for depth-area  ***
          *** effects, using a specified area of  4741.3 Ac. ***

          THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
          TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
          INTERVALS(Reference: the National Engineering Handbook,
          Hydrology, Chapter 17, page 17-52, August,1972,
          U.S. Department of Commerce).


          ASSUMED REGULAR CHANNEL INFORMATION:
            BASEWIDTH(FT) =   20.00     CHANNEL Z =  1.00
            UPSTREAM ELEVATION(FT) =     408.00
            DOWNSTREAM ELEVATION(FT) =     382.00
            CHANNEL LENGTH(FT) =    2533.00     MANNING'S FACTOR = 0.040
            CONSTANT LOSS RATE(CFS) =    0.00


          CHANNEL ROUTING COEFFICIENT ESTIMATED:
            MAXIMUM INFLOW(CFS) =   799.45
            AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =   627.19
            CHANNEL NORMAL VELOCITY FOR Q =   627.19 CFS =   7.47 FPS
            ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.815

          MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
          UNIT INTERVALS IS CSTAR = 0.832


          CONVEX METHOD CHANNEL ROUTING RESULTS:
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PEAK DAY	TIME (HRS)	CLOCK TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
2	24.000	96.000	57.23	57.70	57.70
1	0.083	96.083	57.79	57.34	57.34
1	0.167	96.167	60.79	57.91	57.91
1	0.250	96.250	66.42	60.68	60.68
1	0.333	96.333	74.52	65.99	65.99
1	0.417	96.417	86.88	73.90	73.90
1	0.500	96.500	110.01	86.22	86.22
1	0.583	96.583	136.66	107.76	107.76
1	0.667	96.667	153.38	132.90	132.90
1	0.750	96.750	163.21	150.58	150.58
1	0.833	96.833	171.19	161.61	161.61
1	0.917	96.917	177.79	170.01	170.01
1	1.000	97.000	183.40	176.85	176.85
1	1.083	97.083	188.35	182.62	182.62
1	1.167	97.167	192.70	187.67	187.67
1	1.250	97.250	196.52	192.10	192.10
1	1.333	97.333	199.87	196.00	196.00
1	1.417	97.417	202.96	199.42	199.42
1	1.500	97.500	205.79	202.55	202.55
1	1.583	97.583	208.29	205.41	205.41
1	1.667	97.667	210.54	207.95	207.95
1	1.750	97.750	212.55	210.23	210.23
1	1.833	97.833	214.28	212.27	212.27
1	1.917	97.917	215.88	214.05	214.05
1	2.000	98.000	217.47	215.67	215.67
1	2.083	98.083	218.75	217.25	217.25
1	2.167	98.167	219.70	218.56	218.56
1	2.250	98.250	220.62	219.57	219.57
1	2.333	98.333	221.54	220.50	220.50
1	2.417	98.417	222.48	221.43	221.43
1	2.500	98.500	223.42	222.36	222.36
1	2.583	98.583	224.37	223.31	223.31
1	2.667	98.667	225.34	224.26	224.26

1	2.750	98.750	226.31	225.22	225.22
1	2.833	98.833	227.28	226.19	226.19
1	2.917	98.917	228.27	227.17	227.17
1	3.000	99.000	229.27	228.15	228.15
1	3.083	99.083	230.28	229.15	229.15
1	3.167	99.167	231.30	230.16	230.16
1	3.250	99.250	232.33	231.17	231.17
1	3.333	99.333	233.37	232.20	232.20
1	3.417	99.417	234.41	233.24	233.24
1	3.500	99.500	235.47	234.29	234.29
1	3.583	99.583	236.54	235.34	235.34
1	3.667	99.667	237.62	236.41	236.41
1	3.750	99.750	238.71	237.49	237.49
1	3.833	99.833	239.81	238.58	238.58
1	3.917	99.917	240.87	239.67	239.67
1	4.000	100.000	241.87	240.74	240.74
1	4.083	100.083	242.87	241.75	241.75
1	4.167	100.167	243.87	242.74	242.74
1	4.250	100.250	244.88	243.75	243.75
1	4.333	100.333	245.91	244.76	244.76
1	4.417	100.417	246.95	245.78	245.78
1	4.500	100.500	247.99	246.82	246.82
1	4.583	100.583	249.05	247.87	247.87
1	4.667	100.667	250.12	248.92	248.92
1	4.750	100.750	251.21	249.99	249.99
1	4.833	100.833	252.31	251.08	251.08
1	4.917	100.917	253.42	252.17	252.17
1	5.000	101.000	254.54	253.28	253.28
1	5.083	101.083	255.67	254.40	254.40
1	5.167	101.167	256.82	255.53	255.53
1	5.250	101.250	257.98	256.68	256.68
1	5.333	101.333	259.16	257.84	257.84
1	5.417	101.417	260.35	259.01	259.01
1	5.500	101.500	261.55	260.20	260.20
1	5.583	101.583	262.77	261.40	261.40
1	5.667	101.667	264.00	262.62	262.62
1	5.750	101.750	265.25	263.85	263.85
1	5.833	101.833	266.51	265.10	265.10
1	5.917	101.917	267.79	266.36	266.36
1	6.000	102.000	269.09	267.64	267.64
1	6.083	102.083	270.40	268.93	268.93
1	6.167	102.167	271.73	270.24	270.24
1	6.250	102.250	273.08	271.57	271.57
1	6.333	102.333	274.44	272.91	272.91
1	6.417	102.417	275.82	274.27	274.27
1	6.500	102.500	277.22	275.65	275.65
1	6.583	102.583	278.64	277.05	277.05
1	6.667	102.667	279.86	278.45	278.45
1	6.750	102.750	280.50	279.66	279.66
1	6.833	102.833	280.84	280.38	280.38
1	6.917	102.917	281.35	280.80	280.80
1	7.000	103.000	282.01	281.30	281.30
1	7.083	103.083	282.80	281.95	281.95
1	7.167	103.167	283.69	282.71	282.71
1	7.250	103.250	284.69	283.60	283.60
1	7.333	103.333	285.78	284.58	284.58
1	7.417	103.417	286.94	285.65	285.65
1	7.500	103.500	288.17	286.80	286.80
1	7.583	103.583	289.47	288.03	288.03
1	7.667	103.667	290.83	289.32	289.32
1	7.750	103.750	292.24	290.67	290.67
1	7.833	103.833	293.70	292.07	292.07
1	7.917	103.917	295.20	293.52	293.52
1	8.000	104.000	296.75	295.02	295.02
1	8.083	104.083	298.35	296.57	296.57
1	8.167	104.167	299.98	298.15	298.15
1	8.250	104.250	301.65	299.78	299.78
1	8.333	104.333	303.35	301.45	301.45
1	8.417	104.417	305.10	303.15	303.15
1	8.500	104.500	306.88	304.89	304.89
1	8.583	104.583	308.69	306.66	306.66
1	8.667	104.667	310.54	308.47	308.47
1	8.750	104.750	312.42	310.32	310.32
1	8.833	104.833	314.34	312.20	312.20
1	8.917	104.917	316.30	314.11	314.11
1	9.000	105.000	318.14	316.05	316.05
1	9.083	105.083	319.44	317.88	317.88
1	9.167	105.167	320.34	319.23	319.23
1	9.250	105.250	321.33	320.22	320.22
1	9.333	105.333	322.40	321.21	321.21
1	9.417	105.417	323.56	322.28	322.28
1	9.500	105.500	324.79	323.42	323.42
1	9.583	105.583	326.09	324.64	324.64
1	9.667	105.667	327.47	325.94	325.94
1	9.750	105.750	328.93	327.31	327.31
1	9.833	105.833	330.45	328.76	328.76
1	9.917	105.917	332.05	330.27	330.27
1	10.000	106.000	333.71	331.86	331.86
1	10.083	106.083	335.45	333.52	333.52
1	10.167	106.167	337.25	335.24	335.24
1	10.250	106.250	339.12	337.04	337.04
1	10.333	106.333	341.06	338.90	338.90
1	10.417	106.417	343.06	340.83	340.83
1	10.500	106.500	345.13	342.82	342.82
1	10.583	106.583	347.27	344.89	344.89
1	10.667	106.667	349.48	347.02	347.02
1	10.750	106.750	351.73	349.21	349.21
1	10.833	106.833	353.52	351.42	351.42
1	10.917	106.917	354.88	353.26	353.26
1	11.000	107.000	356.31	354.70	354.70
1	11.083	107.083	357.81	356.13	356.13
1	11.167	107.167	359.39	357.63	357.63
1	11.250	107.250	361.04	359.20	359.20
1	11.333	107.333	362.77	360.85	360.85
1	11.417	107.417	364.58	362.57	362.57
1	11.500	107.500	366.46	364.37	364.37
1	11.583	107.583	368.43	366.24	366.24
1	11.667	107.667	370.47	368.20	368.20
1	11.750	107.750	372.60	370.23	370.23
1	11.833	107.833	374.81	372.35	372.35
1	11.917	107.917	377.10	374.54	374.54
1	12.000	108.000	379.48	376.83	376.83
1	12.083	108.083	381.98	379.20	379.20
1	12.167	108.167	384.31	381.66	381.66
1	12.250	108.250	386.17	383.99	383.99
1	12.333	108.333	387.91	385.92	385.92
1	12.417	108.417	389.92	387.70	387.70
1	12.500	108.500	392.37	389.71	389.71
1	12.583	108.583	395.32	392.11	392.11
1	12.667	108.667	398.63	395.00	395.00
1	12.750	108.750	402.16	398.25	398.25
1	12.833	108.833	405.88	401.75	401.75
1	12.917	108.917	409.77	405.44	405.44
1	13.000	109.000	413.80	409.31	409.31
1	13.083	109.083	417.98	413.32	413.32
1	13.167	109.167	422.30	417.48	417.48
1	13.250	109.250	426.76	421.78	421.78
1	13.333	109.333	431.36	426.22	426.22
1	13.417	109.417	436.13	430.81	430.81
1	13.500	109.500	440.90	435.55	435.55
1	13.583	109.583	444.97	440.27	440.27
1	13.667	109.667	448.52	444.41	444.41
1	13.750	109.750	452.28	448.08	448.08
1	13.833	109.833	456.26	451.84	451.84

1	13.917	109.917	460.46	455.79	455.79
1	14.000	110.000	464.91	459.97	459.97
1	14.083	110.083	469.66	464.39	464.39
1	14.167	110.167	474.82	469.11	469.11
1	14.250	110.250	480.54	474.24	474.24
1	14.333	110.333	486.94	479.90	479.90
1	14.417	110.417	493.92	486.22	486.22
1	14.500	110.500	501.57	493.13	493.13
1	14.583	110.583	510.27	500.72	500.72
1	14.667	110.667	519.96	509.31	509.31
1	14.750	110.750	530.36	518.86	518.86
1	14.833	110.833	540.00	529.06	529.06
1	14.917	110.917	547.37	538.64	538.64
1	15.000	111.000	553.71	546.32	546.32
1	15.083	111.083	560.38	552.91	552.91
1	15.167	111.167	567.38	559.58	559.58
1	15.250	111.250	574.71	566.55	566.55
1	15.333	111.333	582.29	573.84	573.84
1	15.417	111.417	589.36	581.33	581.33
1	15.500	111.500	595.94	588.44	588.44
1	15.583	111.583	602.68	595.12	595.12
1	15.667	111.667	609.53	601.86	601.86
1	15.750	111.750	616.40	608.69	608.69
1	15.833	111.833	623.01	615.54	615.54
1	15.917	111.917	629.15	622.16	622.16
1	16.000	112.000	635.41	628.39	628.39
1	16.083	112.083	642.95	634.73	634.73
1	16.167	112.167	652.68	642.21	642.21
1	16.250	112.250	664.61	651.71	651.71
1	16.333	112.333	678.49	663.36	663.36
1	16.417	112.417	695.16	677.04	677.04
1	16.500	112.500	715.96	693.48	693.48
1	16.583	112.583	734.74	713.41	713.41
1	16.667	112.667	745.29	731.85	731.85
1	16.750	112.750	751.39	743.43	743.43
1	16.833	112.833	756.84	750.41	750.41
1	16.917	112.917	762.07	756.10	756.10
1	17.000	113.000	766.93	761.38	761.38
1	17.083	113.083	771.38	766.29	766.29
1	17.167	113.167	775.47	770.80	770.80
1	17.250	113.250	779.32	774.94	774.94
1	17.333	113.333	782.89	778.82	778.82
1	17.417	113.417	786.09	782.42	782.42
1	17.500	113.500	788.84	785.65	785.65
1	17.583	113.583	791.12	788.46	788.46
1	17.667	113.667	793.01	790.80	790.80
1	17.750	113.750	794.59	792.74	792.74
1	17.833	113.833	795.88	794.36	794.36
1	17.917	113.917	796.94	795.69	795.69
1	18.000	114.000	797.82	796.79	796.79
1	18.083	114.083	798.46	797.69	797.69
1	18.167	114.167	798.88	798.36	798.36
1	18.250	114.250	799.17	798.81	798.81
1	18.333	114.333	799.36	799.12	799.12
1	18.417	114.417	799.45	799.32	799.32
1	18.500	114.500	799.43	799.43	799.43
1	18.583	114.583	799.31	799.43	799.43
1	18.667	114.667	799.10	799.31	799.31
1	18.750	114.750	798.82	799.12	799.12
1	18.833	114.833	798.49	798.85	798.85
1	18.917	114.917	798.11	798.53	798.53
1	19.000	115.000	797.69	798.15	798.15
1	19.083	115.083	797.23	797.74	797.74
1	19.167	115.167	796.74	797.28	797.28
1	19.250	115.250	796.22	796.80	796.80
1	19.333	115.333	795.68	796.29	796.29
1	19.417	115.417	795.12	795.75	795.75
1	19.500	115.500	794.54	795.19	795.19
1	19.583	115.583	793.93	794.61	794.61
1	19.667	115.667	793.31	794.00	794.00
1	19.750	115.750	792.66	793.38	793.38
1	19.833	115.833	792.00	792.74	792.74
1	19.917	115.917	791.30	792.08	792.08
1	20.000	116.000	790.56	791.38	791.38
1	20.083	116.083	789.81	790.65	790.65
1	20.167	116.167	789.04	789.90	789.90
1	20.250	116.250	788.26	789.13	789.13
1	20.333	116.333	787.46	788.35	788.35
1	20.417	116.417	786.66	787.56	787.56
1	20.500	116.500	785.84	786.75	786.75
1	20.583	116.583	785.01	785.94	785.94
1	20.667	116.667	784.18	785.11	785.11
1	20.750	116.750	783.33	784.28	784.28
1	20.833	116.833	782.48	783.44	783.44
1	20.917	116.917	781.62	782.58	782.58
1	21.000	117.000	780.75	781.72	781.72
1	21.083	117.083	779.87	780.86	780.86
1	21.167	117.167	778.99	779.98	779.98
1	21.250	117.250	778.11	779.10	779.10
1	21.333	117.333	777.22	778.22	778.22
1	21.417	117.417	776.35	777.33	777.33
1	21.500	117.500	775.51	776.46	776.46
1	21.583	117.583	774.68	775.62	775.62
1	21.667	117.667	773.84	774.78	774.78
1	21.750	117.750	773.00	773.95	773.95
1	21.833	117.833	772.16	773.11	773.11
1	21.917	117.917	771.31	772.26	772.26
1	22.000	118.000	770.46	771.41	771.41
1	22.083	118.083	769.60	770.56	770.56
1	22.167	118.167	768.75	769.71	769.71
1	22.250	118.250	767.88	768.85	768.85
1	22.333	118.333	767.02	767.99	767.99
1	22.417	118.417	766.15	767.13	767.13
1	22.500	118.500	765.28	766.26	766.26
1	22.583	118.583	764.41	765.39	765.39
1	22.667	118.667	763.54	764.52	764.52
1	22.750	118.750	762.66	763.64	763.64
1	22.833	118.833	761.78	762.77	762.77
1	22.917	118.917	760.90	761.89	761.89
1	23.000	119.000	760.01	761.01	761.01
1	23.083	119.083	759.13	760.12	760.12
1	23.167	119.167	758.24	759.24	759.24
1	23.250	119.250	757.35	758.35	758.35
1	23.333	119.333	756.46	757.46	757.46
1	23.417	119.417	755.59	756.57	756.57
1	23.500	119.500	754.75	755.70	755.70
1	23.583	119.583	753.93	754.86	754.86
1	23.667	119.667	753.10	754.03	754.03
1	23.750	119.750	752.27	753.20	753.20
1	23.833	119.833	751.44	752.38	752.38
1	23.917	119.917	750.61	751.55	751.55
1	24.000	120.000	749.78	750.72	750.72
1	24.083	120.083	748.95	749.88	749.88
1	24.167	120.167	748.10	749.05	749.05
1	24.250	120.250	747.25	748.21	748.21
1	24.333	120.333	746.37	747.35	747.35
1	24.417	120.417	745.47	746.48	746.48
1	24.500	120.500	744.52	745.58	745.58
1	24.583	120.583	743.52	744.63	744.63
1	24.667	120.667	742.47	743.63	743.63
1	24.750	120.750	741.41	742.60	742.60
1	24.833	120.833	740.33	741.54	741.54
1	24.917	120.917	739.24	740.46	740.46
1	25.000	121.000	738.14	739.37	739.37

```
  1   25.083 121.083       736.73      738.26      738.26
  1   25.167 121.167       734.76      736.85      736.85
  1   25.250 121.250       732.54      734.96      734.96
  1   25.333 121.333       730.31      732.80      732.80
  1   25.417 121.417       728.08      730.58      730.58
  1   25.500 121.500       725.85      728.36      728.36
  1   25.583 121.583       723.62      726.13      726.13
  1   25.667 121.667       721.39      723.90      723.90
  1   25.750 121.750       719.16      721.66      721.66
  1   25.833 121.833       716.93      719.43      719.43
  1   25.917 121.917       714.70      717.20      717.20
  1   26.000 122.000       712.48      714.98      714.98
  1   26.083 122.083       710.26      712.76      712.76
  1   26.167 122.167       708.05      710.54      710.54
  1   26.250 122.250       705.85      708.32      708.32
  1   26.333 122.333       703.65      706.12      706.12
  1   26.417 122.417       701.43      703.92      703.92
  1   26.500 122.500       699.17      701.70      701.70
  1   26.583 122.583       696.88      699.44      699.44
  1   26.667 122.667       694.59      697.16      697.16
  1   26.750 122.750       692.31      694.87      694.87
  1   26.833 122.833       690.04      692.59      692.59
  1   26.917 122.917       687.77      690.32      690.32
  1   27.000 123.000       685.52      688.05      688.05
  1   27.083 123.083       683.26      685.79      685.79
  1   27.167 123.167       681.02      683.54      683.54
  1   27.250 123.250       678.78      681.30      681.30
  1   27.333 123.333       676.55      679.06      679.06
  1   27.417 123.417       674.32      676.82      676.82
  1   27.500 123.500       672.11      674.60      674.60
  1   27.583 123.583       669.90      672.38      672.38
  1   27.667 123.667       667.69      670.17      670.17
  1   27.750 123.750       665.48      667.96      667.96
  1   27.833 123.833       663.18      665.75      665.75
  1   27.917 123.917       660.80      663.46      663.46
  1   28.000 124.000       658.42      661.09      661.09
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
================================================================================
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   1991.115 AF
    OUTFLOW VOLUME =   1991.112 AF
    LOSS    VOLUME =      0.000 AF
================================================================================

  END OF FLOODSCx ROUTING ANALYSIS



********************************************************************************
  FLOW PROCESS FROM NODE   6300.00 TO NODE   6311.00 IS CODE =   1
--------------------------------------------------------------------------------

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of   299.3 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
================================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #2)

        WATERSHED AREA =     299.300 ACRES
        BASEFLOW =   0.000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    0.250 HOURS
         CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
         THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
         MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
        VALLEY(DEVELOPED):
             "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.250
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.750
        VALLEY(UNDEVELOPED)/DESERT:
             "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:
        +------------------+--------+--------+--------+--------+--------+
        | RAINFALL DEPTHS & |        |        |        |        |        |
        |    LOSS RATES     |  DAY 1 |  DAY 2 |  DAY 3 |  DAY 4 |  DAY 5 |
        |==================+========+========+========+========+========|
        | 5-MINUTE (INCHES) |    0.58|    0.27|    0.12|    0.06|    0.04|
        |30-MINUTE (INCHES) |    1.22|    0.56|    0.24|    0.13|    0.09|
        |   1-HOUR (INCHES) |    1.62|    0.75|    0.33|    0.17|    0.12|
        |   3-HOUR (INCHES) |    2.71|    1.25|    0.54|    0.28|    0.21|
        |   6-HOUR (INCHES) |    3.75|    1.73|    0.75|    0.39|    0.29|
        |  24-HOUR (INCHES) |    6.28|    2.89|    1.26|    0.66|    0.48|
        |==================+========+========+========+========+========|
        | LOSS RATE(IN/HR)  |   0.260|   0.260|   0.260|   0.260|   0.260|
        | LOW LOSS FRACTION |   0.500|   0.730|   0.930|   0.990|   0.990|
        +------------------+--------+--------+--------+--------+--------+
          5-MINUTE FACTOR = 0.987
         30-MINUTE FACTOR = 0.987
          1-HOUR FACTOR = 0.987
          3-HOUR FACTOR = 0.998
          6-HOUR FACTOR = 0.999
         24-HOUR FACTOR = 0.999

        UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
        UNIT INTERVAL PERCENTAGE OF LAG-TIME =  33.333


        RUNOFF HYDROGRAPH LISTING LIMITS:
        MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  96.00
        MODEL TIME(HOURS) FOR END OF RESULTS = 124.00


================================================================================
                      UNIT HYDROGRAPH DETERMINATION

--------------------------------------------------------------------------------
     INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
      NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------------
         1                3.852               139.411
         2               18.445               528.231
         3               39.624               766.604
         4               55.845               587.160
         5               64.124               299.680
         6               70.038               214.036
         7               74.639               166.538
         8               78.230               130.017
         9               81.158               105.957
        10               83.587                87.936
        11               85.638                74.235
        12               87.267                58.971
        13               88.619                48.932
        14               89.699                39.084
        15               90.702                36.306
        16               91.629                33.565
        17               92.506                31.749
        18               93.325                29.632
        19               94.080                27.335
        20               94.768                24.914
        21               95.424                23.727
        22               95.971                19.796
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23	96.509	19.477
24	97.020	18.507
25	97.406	13.985
26	97.766	13.021
27	98.126	13.018
28	98.458	12.019
29	98.594	4.931
30	98.692	3.557
31	98.791	3.557
32	98.889	3.550
33	98.987	3.557
34	99.085	3.551
35	99.183	3.557
36	99.281	3.550
37	99.380	3.550
38	99.478	3.550
39	99.576	3.550
40	99.674	3.550
41	99.772	3.550
42	99.870	3.550
43	99.968	3.550
44	100.000	1.157

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 162.2768
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 126.0595

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5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	175.0	350.0	525.0	700.0
96.000	32.8756	3.82	Q	V	.	.	.
(PEAK DAY 2, HOUR 24.000)							
96.083	32.9046	4.22	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.083)							
96.167	32.9446	5.81	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.167)							
96.250	33.0007	8.14	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.250)							
96.333	33.0691	9.93	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.333)							
96.417	33.1439	10.86	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.417)							
96.500	33.2233	11.53	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.500)							
96.583	33.3064	12.07	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.583)							
96.667	33.3925	12.50	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.667)							
96.750	33.4810	12.85	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.750)							
96.833	33.5716	13.16	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.833)							
96.917	33.6640	13.42	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.917)							
97.000	33.7579	13.64	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.000)							
97.083	33.8532	13.83	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.083)							
97.167	33.9496	13.99	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.167)							
97.250	34.0470	14.15	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.250)							
97.333	34.1455	14.30	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.333)							
97.417	34.2449	14.44	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.417)							
97.500	34.3453	14.58	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.500)							
97.583	34.4466	14.71	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.583)							
97.667	34.5487	14.83	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.667)							
97.750	34.6517	14.96	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.750)							
97.833	34.7555	15.07	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.833)							
97.917	34.8601	15.18	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.917)							
98.000	34.9654	15.29	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.000)							
98.083	35.0714	15.39	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.083)							
98.167	35.1780	15.48	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.167)							
98.250	35.2853	15.58	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.250)							
98.333	35.3933	15.67	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.333)							
98.417	35.5017	15.75	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.417)							
98.500	35.6106	15.81	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.500)							
98.583	35.7200	15.88	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.583)							
98.667	35.8299	15.95	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.667)							
98.750	35.9403	16.03	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.750)							
98.833	36.0511	16.10	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.833)							
98.917	36.1625	16.17	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.917)							
99.000	36.2744	16.24	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.000)							
99.083	36.3867	16.32	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.083)							
99.167	36.4996	16.39	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.167)							
99.250	36.6130	16.47	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.250)							
99.333	36.7270	16.54	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.333)							
99.417	36.8414	16.62	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.417)							
99.500	36.9564	16.70	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.500)							
99.583	37.0720	16.78	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.583)							
99.667	37.1880	16.85	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.667)							
99.750	37.3045	16.92	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.750)							
99.833	37.4215	16.99	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.833)							
99.917	37.5390	17.06	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.917)							
100.000	37.6569	17.13	Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.000)							
100.083	37.7754	17.20	Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.083)							
100.167	37.8943	17.27	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.167)							
100.250	38.0138	17.35	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.250)							
100.333	38.1338	17.42	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.333)							
100.417	38.2543	17.50	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.417)							
100.500	38.3753	17.57	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.500)							
100.583	38.4969	17.65	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.583)							
100.667	38.6190	17.73	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.667)							
100.750	38.7416	17.81	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.750)							
100.833	38.8648	17.89	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.833)							
100.917	38.9885	17.97	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.917)							
101.000	39.1128	18.05	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 5.000)							
101.083	39.2377	18.13	.Q	. V	.	.	.

(PEAK DAY 1, HOUR 5.083)
101.167 39.3632 18.22 .Q . V . . .
(PEAK DAY 1, HOUR 5.167)
101.250 39.4892 18.30 .Q . V . . .
(PEAK DAY 1, HOUR 5.250)
101.333 39.6158 18.39 .Q . V . . .
(PEAK DAY 1, HOUR 5.333)
101.417 39.7430 18.47 .Q . V . . .
(PEAK DAY 1, HOUR 5.417)
101.500 39.8709 18.56 .Q . V . . .
(PEAK DAY 1, HOUR 5.500)
101.583 39.9993 18.65 .Q . V . . .
(PEAK DAY 1, HOUR 5.583)
101.667 40.1283 18.74 .Q . V . . .
(PEAK DAY 1, HOUR 5.667)
101.750 40.2580 18.83 .Q . V . . .
(PEAK DAY 1, HOUR 5.750)
101.833 40.3883 18.92 .Q . V . . .
(PEAK DAY 1, HOUR 5.833)
101.917 40.5193 19.02 .Q . V . . .
(PEAK DAY 1, HOUR 5.917)
102.000 40.6509 19.11 .Q . V . . .
(PEAK DAY 1, HOUR 6.000)
102.083 40.7832 19.21 .Q . V . . .
(PEAK DAY 1, HOUR 6.083)
102.167 40.9161 19.30 .Q . V . . .
(PEAK DAY 1, HOUR 6.167)
102.250 41.0497 19.40 .Q . V . . .
(PEAK DAY 1, HOUR 6.250)
102.333 41.1841 19.50 .Q . V . . .
(PEAK DAY 1, HOUR 6.333)
102.417 41.3191 19.60 .Q . V . . .
(PEAK DAY 1, HOUR 6.417)
102.500 41.4548 19.71 .Q . V . . .
(PEAK DAY 1, HOUR 6.500)
102.583 41.5912 19.81 .Q . V . . .
(PEAK DAY 1, HOUR 6.583)
102.667 41.7283 19.91 .Q . V . . .
(PEAK DAY 1, HOUR 6.667)
102.750 41.8662 20.02 .Q . V . . .
(PEAK DAY 1, HOUR 6.750)
102.833 42.0048 20.13 .Q . V . . .
(PEAK DAY 1, HOUR 6.833)
102.917 42.1442 20.24 .Q . V . . .
(PEAK DAY 1, HOUR 6.917)
103.000 42.2844 20.35 .Q . V . . .
(PEAK DAY 1, HOUR 7.000)
103.083 42.4253 20.46 .Q . V . . .
(PEAK DAY 1, HOUR 7.083)
103.167 42.5670 20.58 .Q . V . . .
(PEAK DAY 1, HOUR 7.167)
103.250 42.7096 20.69 .Q . V . . .
(PEAK DAY 1, HOUR 7.250)
103.333 42.8529 20.81 .Q . V . . .
(PEAK DAY 1, HOUR 7.333)
103.417 42.9970 20.93 .Q . V . . .
(PEAK DAY 1, HOUR 7.417)
103.500 43.1420 21.05 .Q . V . . .
(PEAK DAY 1, HOUR 7.500)
103.583 43.2879 21.18 .Q . V . . .
(PEAK DAY 1, HOUR 7.583)
103.667 43.4346 21.30 .Q . V . . .
(PEAK DAY 1, HOUR 7.667)
103.750 43.5822 21.43 .Q . V . . .
(PEAK DAY 1, HOUR 7.750)
103.833 43.7307 21.56 .Q . V . . .
(PEAK DAY 1, HOUR 7.833)
103.917 43.8801 21.69 .Q . V . . .
(PEAK DAY 1, HOUR 7.917)
104.000 44.0304 21.82 .Q . V . . .
(PEAK DAY 1, HOUR 8.000)
104.083 44.1816 21.96 .Q . V . . .
(PEAK DAY 1, HOUR 8.083)
104.167 44.3338 22.10 .Q . V . . .
(PEAK DAY 1, HOUR 8.167)
104.250 44.4869 22.24 .Q . V . . .
(PEAK DAY 1, HOUR 8.250)
104.333 44.6411 22.38 .Q . V . . .
(PEAK DAY 1, HOUR 8.333)
104.417 44.7962 22.52 .Q . V . . .
(PEAK DAY 1, HOUR 8.417)
104.500 44.9523 22.67 .Q . V . . .
(PEAK DAY 1, HOUR 8.500)
104.583 45.1095 22.82 .Q . V . . .
(PEAK DAY 1, HOUR 8.583)
104.667 45.2677 22.97 .Q . V . . .
(PEAK DAY 1, HOUR 8.667)
104.750 45.4270 23.13 .Q . V . . .
(PEAK DAY 1, HOUR 8.750)
104.833 45.5874 23.29 .Q . V . . .
(PEAK DAY 1, HOUR 8.833)
104.917 45.7489 23.45 .Q . V . . .
(PEAK DAY 1, HOUR 8.917)
105.000 45.9115 23.61 .Q . V . . .
(PEAK DAY 1, HOUR 9.000)
105.083 46.0752 23.78 .Q . V . . .
(PEAK DAY 1, HOUR 9.083)
105.167 46.2402 23.95 .Q . V . . .
(PEAK DAY 1, HOUR 9.167)
105.250 46.4063 24.12 .Q . V . . .
(PEAK DAY 1, HOUR 9.250)
105.333 46.5736 24.30 .Q . V . . .
(PEAK DAY 1, HOUR 9.333)
105.417 46.7422 24.48 .Q . V . . .
(PEAK DAY 1, HOUR 9.417)
105.500 46.9120 24.66 .Q . V . . .
(PEAK DAY 1, HOUR 9.500)
105.583 47.0831 24.85 .Q . V . . .
(PEAK DAY 1, HOUR 9.583)
105.667 47.2556 25.04 .Q . V . . .
(PEAK DAY 1, HOUR 9.667)
105.750 47.4293 25.23 .Q . V . . .
(PEAK DAY 1, HOUR 9.750)
105.833 47.6045 25.43 .Q . V . . .
(PEAK DAY 1, HOUR 9.833)
105.917 47.7810 25.63 .Q . V . . .
(PEAK DAY 1, HOUR 9.917)
106.000 47.9590 25.84 .Q . V . . .
(PEAK DAY 1, HOUR 10.000)
106.083 48.1383 26.05 .Q . V . . .
(PEAK DAY 1, HOUR 10.083)
106.167 48.3192 26.26 .Q . V . . .
(PEAK DAY 1, HOUR 10.167)
106.250 48.5016 26.48 .Q . V . . .
(PEAK DAY 1, HOUR 10.250)
106.333 48.6856 26.71 .Q . V . . .
(PEAK DAY 1, HOUR 10.333)
106.417 48.8711 26.94 .Q . V . . .
(PEAK DAY 1, HOUR 10.417)
106.500 49.0583 27.18 .Q . V . . .
(PEAK DAY 1, HOUR 10.500)
106.583 49.2471 27.42 .Q . V . . .
(PEAK DAY 1, HOUR 10.583)
106.667 49.4376 27.66 .Q . V . . .

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 (PEAK DAY 1, HOUR  10.667)
106.750     49.6299     27.91  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.750)
106.833     49.8239     28.17  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.833)
106.917     50.0198     28.44  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.917)
107.000     50.2175     28.71  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.000)
107.083     50.4171     28.99  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.083)
107.167     50.6187     29.27  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.167)
107.250     50.8223     29.57  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.250)
107.333     51.0280     29.87  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.333)
107.417     51.2359     30.17  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.417)
107.500     51.4459     30.49  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.500)
107.583     51.6581     30.82  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.583)
107.667     51.8727     31.15  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.667)
107.750     52.0896     31.50  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.750)
107.833     52.3090     31.85  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.833)
107.917     52.5309     32.22  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.917)
108.000     52.7554     32.60  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  12.000)
108.083     52.9850     33.34  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  12.083)
108.167     53.2266     35.09  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.167)
108.250     53.4846     37.46  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.250)
108.333     53.7559     39.39  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.333)
108.417     54.0356     40.62  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.417)
108.500     54.3224     41.64  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.500)
108.583     54.6155     42.56  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.583)
108.667     54.9144     43.40  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.667)
108.750     55.2188     44.20  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.750)
108.833     55.5286     44.98  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.833)
108.917     55.8436     45.74  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.917)
109.000     56.1638     46.49  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.000)
109.083     56.4890     47.23  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.083)
109.167     56.8194     47.97  . Q       .       V .         .         .
 (PEAK DAY 1, HOUR  13.167)
109.250     57.1551     48.73  . Q       .       V .         .         .
 (PEAK DAY 1, HOUR  13.250)
109.333     57.4961     49.52  . Q       .       V .         .         .
 (PEAK DAY 1, HOUR  13.333)
109.417     57.8427     50.33  . Q       .       V .         .         .
 (PEAK DAY 1, HOUR  13.417)
109.500     58.1951     51.16  . Q       .       V .         .         .
 (PEAK DAY 1, HOUR  13.500)
109.583     58.5534     52.03  . Q       .       V .         .         .
 (PEAK DAY 1, HOUR  13.583)
109.667     58.9178     52.92  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.667)
109.750     59.2887     53.85  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.750)
109.833     59.6663     54.82  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.833)
109.917     60.0508     55.83  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  13.917)
110.000     60.4427     56.90  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  14.000)
110.083     60.8424     58.05  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  14.083)
110.167     61.2514     59.39  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  14.167)
110.250     61.6706     60.87  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  14.250)
110.333     62.1002     62.37  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  14.333)
110.417     62.5398     63.84  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  14.417)
110.500     62.9900     65.37  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  14.500)
110.583     63.4513     66.98  .  Q      .         V         .         .
 (PEAK DAY 1, HOUR  14.583)
110.667     63.9245     68.71  .  Q      .         V         .         .
 (PEAK DAY 1, HOUR  14.667)
110.750     64.4112     70.66  .   Q     .         V         .         .
 (PEAK DAY 1, HOUR  14.750)
110.833     64.9150     73.15  .   Q     .         V         .         .
 (PEAK DAY 1, HOUR  14.833)
110.917     65.4407     76.34  .   Q     .         V         .         .
 (PEAK DAY 1, HOUR  14.917)
111.000     65.9935     80.25  .   Q     .         V         .         .
 (PEAK DAY 1, HOUR  15.000)
111.083     66.5774     84.78  .   Q     .         .V        .         .
 (PEAK DAY 1, HOUR  15.083)
111.167     67.1973     90.01  .    Q    .         .V        .         .
 (PEAK DAY 1, HOUR  15.167)
111.250     67.8580     95.94  .    Q    .         .V        .         .
 (PEAK DAY 1, HOUR  15.250)
111.333     68.5659    102.79  .    Q    .         .V        .         .
 (PEAK DAY 1, HOUR  15.333)
111.417     69.3190    109.35  .     Q   .         .V        .         .
 (PEAK DAY 1, HOUR  15.417)
111.500     70.1017    113.65  .     Q   .         . V       .         .
 (PEAK DAY 1, HOUR  15.500)
111.583     70.9099    117.35  .     Q   .         . V       .         .
 (PEAK DAY 1, HOUR  15.583)
111.667     71.7709    125.02  .      Q  .         . V       .         .
 (PEAK DAY 1, HOUR  15.667)
111.750     72.7266    138.77  .      Q  .         .  V      .         .
 (PEAK DAY 1, HOUR  15.750)
111.833     73.8217    159.00  .        Q.         .  V      .         .
 (PEAK DAY 1, HOUR  15.833)
111.917     75.1262    189.42  .         Q         .  V      .         .
 (PEAK DAY 1, HOUR  15.917)
112.000     76.7812    240.31  .          . Q      .   V     .         .
 (PEAK DAY 1, HOUR  16.000)
112.083     79.3056    366.54  .          .        Q   V     .         .
 (PEAK DAY 1, HOUR  16.083)
112.167     83.2784    576.85  .          .         .    V   . Q       .
 (PEAK DAY 1, HOUR  16.167)
112.250     87.9056    671.87  .          .         .     V  .       Q .
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(PEAK DAY 1, HOUR 16.250)
112.333 91.7172 553.44 . . . V.Q .
(PEAK DAY 1, HOUR 16.333)
112.417 94.3714 385.40 . . . Q V. .
(PEAK DAY 1, HOUR 16.417)
112.500 96.5294 313.35 . . Q . V .
(PEAK DAY 1, HOUR 16.500)
112.583 98.3808 268.82 . . Q . .V .
(PEAK DAY 1, HOUR 16.583)
112.667 99.9869 233.20 . . Q . .V .
(PEAK DAY 1, HOUR 16.667)
112.750 101.3946 204.39 . .Q . . V .
(PEAK DAY 1, HOUR 16.750)
112.833 102.6383 180.59 . Q . . V .
(PEAK DAY 1, HOUR 16.833)
112.917 103.7472 161.01 . Q. . . V .
(PEAK DAY 1, HOUR 16.917)
113.000 104.7342 143.32 . Q . . . V .
(PEAK DAY 1, HOUR 17.000)
113.083 105.6298 130.03 . Q . . . V .
(PEAK DAY 1, HOUR 17.083)
113.167 106.4471 118.67 . Q . . . V .
(PEAK DAY 1, HOUR 17.167)
113.250 107.2151 111.51 . Q . . . V .
(PEAK DAY 1, HOUR 17.250)
113.333 107.9404 105.32 . Q . . . V .
(PEAK DAY 1, HOUR 17.333)
113.417 108.6304 100.18 . Q . . . V .
(PEAK DAY 1, HOUR 17.417)
113.500 109.2865 95.26 . Q . . . V .
(PEAK DAY 1, HOUR 17.500)
113.583 109.9104 90.59 . Q . . . V .
(PEAK DAY 1, HOUR 17.583)
113.667 110.5035 86.13 . Q . . . V .
(PEAK DAY 1, HOUR 17.667)
113.750 111.0709 82.38 . Q . . . V .
(PEAK DAY 1, HOUR 17.750)
113.833 111.6069 77.82 . Q . . . V .
(PEAK DAY 1, HOUR 17.833)
113.917 112.1224 74.86 . Q . . . V .
(PEAK DAY 1, HOUR 17.917)
114.000 112.6157 71.63 . Q . . . V .
(PEAK DAY 1, HOUR 18.000)
114.083 113.0756 66.78 . Q . . . V .
(PEAK DAY 1, HOUR 18.083)
114.167 113.5071 62.65 . Q . . . V .
(PEAK DAY 1, HOUR 18.167)
114.250 113.9085 58.29 . Q . . . V .
(PEAK DAY 1, HOUR 18.250)
114.333 114.2791 53.80 . Q . . . V .
(PEAK DAY 1, HOUR 18.333)
114.417 114.6084 47.83 . Q . . . V .
(PEAK DAY 1, HOUR 18.417)
114.500 114.9178 44.92 . Q . . . V .
(PEAK DAY 1, HOUR 18.500)
114.583 115.2148 43.12 . Q . . . V .
(PEAK DAY 1, HOUR 18.583)
114.667 115.5015 41.63 . Q . . . V .
(PEAK DAY 1, HOUR 18.667)
114.750 115.7791 40.30 . Q . . . V .
(PEAK DAY 1, HOUR 18.750)
114.833 116.0483 39.09 . Q . . . V .
(PEAK DAY 1, HOUR 18.833)
114.917 116.3100 38.00 . Q . . . V .
(PEAK DAY 1, HOUR 18.917)
115.000 116.5650 37.02 . Q . . . V .
(PEAK DAY 1, HOUR 19.000)
115.083 116.8138 36.13 . Q . . . V .
(PEAK DAY 1, HOUR 19.083)
115.167 117.0569 35.29 . Q . . . V .
(PEAK DAY 1, HOUR 19.167)
115.250 117.2943 34.47 .Q . . . V .
(PEAK DAY 1, HOUR 19.250)
115.333 117.5261 33.65 .Q . . . V .
(PEAK DAY 1, HOUR 19.333)
115.417 117.7521 32.82 .Q . . . V .
(PEAK DAY 1, HOUR 19.417)
115.500 117.9719 31.91 .Q . . . V .
(PEAK DAY 1, HOUR 19.500)
115.583 118.1844 30.86 .Q . . . V .
(PEAK DAY 1, HOUR 19.583)
115.667 118.3832 28.87 .Q . . . V .
(PEAK DAY 1, HOUR 19.667)
115.750 118.5730 27.55 .Q . . . V .
(PEAK DAY 1, HOUR 19.750)
115.833 118.7582 26.88 .Q . . . V .
(PEAK DAY 1, HOUR 19.833)
115.917 118.9394 26.31 .Q . . . V .
(PEAK DAY 1, HOUR 19.917)
116.000 119.1169 25.78 .Q . . . V .
(PEAK DAY 1, HOUR 20.000)
116.083 119.2911 25.29 .Q . . . V .
(PEAK DAY 1, HOUR 20.083)
116.167 119.4621 24.83 .Q . . . V .
(PEAK DAY 1, HOUR 20.167)
116.250 119.6301 24.40 .Q . . . V .
(PEAK DAY 1, HOUR 20.250)
116.333 119.7954 24.00 .Q . . . V .
(PEAK DAY 1, HOUR 20.333)
116.417 119.9582 23.64 .Q . . . V .
(PEAK DAY 1, HOUR 20.417)
116.500 120.1186 23.29 .Q . . . V .
(PEAK DAY 1, HOUR 20.500)
116.583 120.2767 22.96 .Q . . . V .
(PEAK DAY 1, HOUR 20.583)
116.667 120.4326 22.64 .Q . . . V .
(PEAK DAY 1, HOUR 20.667)
116.750 120.5864 22.33 .Q . . . V .
(PEAK DAY 1, HOUR 20.750)
116.833 120.7382 22.03 .Q . . . V .
(PEAK DAY 1, HOUR 20.833)
116.917 120.8879 21.75 .Q . . . V .
(PEAK DAY 1, HOUR 20.917)
117.000 121.0358 21.47 .Q . . . V .
(PEAK DAY 1, HOUR 21.000)
117.083 121.1818 21.20 .Q . . . V .
(PEAK DAY 1, HOUR 21.083)
117.167 121.3261 20.94 .Q . . . V .
(PEAK DAY 1, HOUR 21.167)
117.250 121.4686 20.69 .Q . . . V .
(PEAK DAY 1, HOUR 21.250)
117.333 121.6094 20.45 .Q . . . V .
(PEAK DAY 1, HOUR 21.333)
117.417 121.7486 20.21 .Q . . . V .
(PEAK DAY 1, HOUR 21.417)
117.500 121.8862 19.98 .Q . . . V .
(PEAK DAY 1, HOUR 21.500)
117.583 122.0223 19.76 .Q . . . V .
(PEAK DAY 1, HOUR 21.583)
117.667 122.1569 19.55 .Q . . . V .
(PEAK DAY 1, HOUR 21.667)
117.750 122.2902 19.34 .Q . . . V .
(PEAK DAY 1, HOUR 21.750)
117.833 122.4220 19.15 .Q . . . V .

(PEAK DAY 1, HOUR 21.833)
117.917 122.5526 18.96 .Q . . . V .
(PEAK DAY 1, HOUR 21.917)
118.000 122.6818 18.77 .Q . . . V .
(PEAK DAY 1, HOUR 22.000)
118.083 122.8099 18.59 .Q . . . V .
(PEAK DAY 1, HOUR 22.083)
118.167 122.9367 18.41 .Q . . . V.
(PEAK DAY 1, HOUR 22.167)
118.250 123.0623 18.24 .Q . . . V.
(PEAK DAY 1, HOUR 22.250)
118.333 123.1867 18.07 .Q . . . V.
(PEAK DAY 1, HOUR 22.333)
118.417 123.3100 17.90 .Q . . . V.
(PEAK DAY 1, HOUR 22.417)
118.500 123.4322 17.74 .Q . . . V.
(PEAK DAY 1, HOUR 22.500)
118.583 123.5533 17.59 .Q . . . V.
(PEAK DAY 1, HOUR 22.583)
118.667 123.6734 17.43 Q . . . V.
(PEAK DAY 1, HOUR 22.667)
118.750 123.7924 17.28 Q . . . V.
(PEAK DAY 1, HOUR 22.750)
118.833 123.9104 17.14 Q . . . V.
(PEAK DAY 1, HOUR 22.833)
118.917 124.0275 16.99 Q . . . V.
(PEAK DAY 1, HOUR 22.917)
119.000 124.1436 16.85 Q . . . V.
(PEAK DAY 1, HOUR 23.000)
119.083 124.2587 16.72 Q . . . V.
(PEAK DAY 1, HOUR 23.083)
119.167 124.3729 16.58 Q . . . V.
(PEAK DAY 1, HOUR 23.167)
119.250 124.4862 16.45 Q . . . V.
(PEAK DAY 1, HOUR 23.250)
119.333 124.5986 16.32 Q . . . V.
(PEAK DAY 1, HOUR 23.333)
119.417 124.7101 16.20 Q . . . V.
(PEAK DAY 1, HOUR 23.417)
119.500 124.8208 16.07 Q . . . V.
(PEAK DAY 1, HOUR 23.500)
119.583 124.9307 15.95 Q . . . V.
(PEAK DAY 1, HOUR 23.583)
119.667 125.0397 15.83 Q . . . V.
(PEAK DAY 1, HOUR 23.667)
119.750 125.1480 15.72 Q . . . V.
(PEAK DAY 1, HOUR 23.750)
119.833 125.2554 15.60 Q . . . V.
(PEAK DAY 1, HOUR 23.833)
119.917 125.3621 15.49 Q . . . V.
(PEAK DAY 1, HOUR 23.917)
120.000 125.4680 15.38 Q . . . V.
(PEAK DAY 1, HOUR 24.000)
120.083 125.5693 14.71 Q . . . V.
(PEAK DAY 1, HOUR 24.083)
120.167 125.6552 12.46 Q . . . V.
(PEAK DAY 1, HOUR 24.167)
120.250 125.7190 9.27 Q . . . V.
(PEAK DAY 1, HOUR 24.250)
120.333 125.7661 6.83 Q . . . V.
(PEAK DAY 1, HOUR 24.333)
120.417 125.8044 5.57 Q . . . V.
(PEAK DAY 1, HOUR 24.417)
120.500 125.8365 4.66 Q . . . V.
(PEAK DAY 1, HOUR 24.500)
120.583 125.8637 3.95 Q . . . V.
(PEAK DAY 1, HOUR 24.583)
120.667 125.8871 3.40 Q . . . V.
(PEAK DAY 1, HOUR 24.667)
120.750 125.9073 2.94 Q . . . V.
(PEAK DAY 1, HOUR 24.750)
120.833 125.9250 2.56 Q . . . V.
(PEAK DAY 1, HOUR 24.833)
120.917 125.9405 2.25 Q . . . V.
(PEAK DAY 1, HOUR 24.917)
121.000 125.9542 1.99 Q . . . V.
(PEAK DAY 1, HOUR 25.000)
121.083 125.9664 1.78 Q . . . V.
(PEAK DAY 1, HOUR 25.083)
121.167 125.9775 1.61 Q . . . V.
(PEAK DAY 1, HOUR 25.167)
121.250 125.9874 1.45 Q . . . V.
(PEAK DAY 1, HOUR 25.250)
121.333 125.9964 1.30 Q . . . V.
(PEAK DAY 1, HOUR 25.333)
121.417 126.0044 1.16 Q . . . V.
(PEAK DAY 1, HOUR 25.417)
121.500 126.0116 1.04 Q . . . V.
(PEAK DAY 1, HOUR 25.500)
121.583 126.0179 0.92 Q . . . V.
(PEAK DAY 1, HOUR 25.583)
121.667 126.0234 0.81 Q . . . V.
(PEAK DAY 1, HOUR 25.667)
121.750 126.0283 0.71 Q . . . V.
(PEAK DAY 1, HOUR 25.750)
121.833 126.0326 0.62 Q . . . V.
(PEAK DAY 1, HOUR 25.833)
121.917 126.0363 0.54 Q . . . V.
(PEAK DAY 1, HOUR 25.917)
122.000 126.0395 0.46 Q . . . V.
(PEAK DAY 1, HOUR 26.000)
122.083 126.0423 0.40 Q . . . V.
(PEAK DAY 1, HOUR 26.083)
122.167 126.0446 0.35 Q . . . V.
(PEAK DAY 1, HOUR 26.167)
122.250 126.0466 0.29 Q . . . V.
(PEAK DAY 1, HOUR 26.250)
122.333 126.0483 0.24 Q . . . V.
(PEAK DAY 1, HOUR 26.333)
122.417 126.0498 0.22 Q . . . V.
(PEAK DAY 1, HOUR 26.417)
122.500 126.0512 0.20 Q . . . V.
(PEAK DAY 1, HOUR 26.500)
122.583 126.0524 0.19 Q . . . V.
(PEAK DAY 1, HOUR 26.583)
122.667 126.0536 0.17 Q . . . V.
(PEAK DAY 1, HOUR 26.667)
122.750 126.0547 0.15 Q . . . V.
(PEAK DAY 1, HOUR 26.750)
122.833 126.0556 0.14 Q . . . V.
(PEAK DAY 1, HOUR 26.833)
122.917 126.0565 0.12 Q . . . V.
(PEAK DAY 1, HOUR 26.917)
123.000 126.0572 0.11 Q . . . V.
(PEAK DAY 1, HOUR 27.000)
123.083 126.0579 0.09 Q . . . V.
(PEAK DAY 1, HOUR 27.083)
123.167 126.0584 0.08 Q . . . V.
(PEAK DAY 1, HOUR 27.167)
123.250 126.0588 0.06 Q . . . V.
(PEAK DAY 1, HOUR 27.250)
123.333 126.0592 0.05 Q . . . V.
(PEAK DAY 1, HOUR 27.333)
123.417 126.0594 0.03 Q . . . V.

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 (PEAK DAY 1, HOUR  27.417)
 123.500    126.0595      0.02  Q         .         .         .         V
 (PEAK DAY 1, HOUR  27.500)
 123.583    126.0596      0.00  Q         .         .         .         V
 (PEAK DAY 1, HOUR  27.583)
================================================================================

  END OF FLOODSCx ROUTING ANALYSIS



********************************************************************************
  FLOW PROCESS FROM NODE   6311.00 TO NODE   6311.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  5040.6 Ac. ***
================================================================================

  END OF FLOODSCx ROUTING ANALYSIS



********************************************************************************
  FLOW PROCESS FROM NODE   6311.00 TO NODE   6311.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  5040.6 Ac. ***

           STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
         (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      350.0     700.0    1050.0    1400.0
--------------------------------------------------------------------------------
  96.000    556.6415     61.52  .Q        V         .         .         .
 (PEAK DAY 2, HOUR  24.000)
  96.083    557.0655     61.56  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.083)
  96.167    557.5043     63.72  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.167)
  96.250    557.9783     68.82  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.250)
  96.333    558.5012     75.92  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   0.333)
  96.417    559.0849     84.76  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   0.417)
  96.500    559.7581     97.75  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   0.500)
  96.583    560.5834    119.83  .  Q      V         .         .         .
 (PEAK DAY 1, HOUR   0.583)
  96.667    561.5848    145.39  .   Q     V         .         .         .
 (PEAK DAY 1, HOUR   0.667)
  96.750    562.7103    163.43  .   Q     V         .         .         .
 (PEAK DAY 1, HOUR   0.750)
  96.833    563.9139    174.77  .   Q     V         .         .         .
 (PEAK DAY 1, HOUR   0.833)
  96.917    565.1772    183.43  .    Q    V         .         .         .
 (PEAK DAY 1, HOUR   0.917)
  97.000    566.4892    190.49  .    Q    V         .         .         .
 (PEAK DAY 1, HOUR   1.000)
  97.083    567.8422    196.45  .    Q    V         .         .         .
 (PEAK DAY 1, HOUR   1.083)
  97.167    569.2310    201.66  .    Q    V         .         .         .
 (PEAK DAY 1, HOUR   1.167)
  97.250    570.6515    206.25  .    Q    V         .         .         .
 (PEAK DAY 1, HOUR   1.250)
  97.333    572.0998    210.29  .     Q   V         .         .         .
 (PEAK DAY 1, HOUR   1.333)
  97.417    573.5726    213.86  .     Q   V         .         .         .
 (PEAK DAY 1, HOUR   1.417)
  97.500    575.0680    217.13  .     Q   V         .         .         .
 (PEAK DAY 1, HOUR   1.500)
  97.583    576.5839    220.12  .     Q   V         .         .         .
 (PEAK DAY 1, HOUR   1.583)
  97.667    578.1183    222.79  .     Q   V         .         .         .
 (PEAK DAY 1, HOUR   1.667)
  97.750    579.6692    225.19  .     Q   V         .         .         .
 (PEAK DAY 1, HOUR   1.750)
  97.833    581.2349    227.34  .     Q   V         .         .         .
 (PEAK DAY 1, HOUR   1.833)
  97.917    582.8137    229.23  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   1.917)
  98.000    584.4044    230.97  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   2.000)
  98.083    586.0066    232.64  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   2.083)
  98.167    587.6185    234.04  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   2.167)
  98.250    589.2380    235.15  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   2.250)
  98.333    590.8645    236.17  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   2.333)
  98.417    592.4979    237.17  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   2.417)
  98.500    594.1382    238.18  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   2.500)
  98.583    595.7856    239.19  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   2.583)
  98.667    597.4399    240.21  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   2.667)
  98.750    599.1014    241.24  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   2.750)
  98.833    600.7700    242.28  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   2.833)
  98.917    602.4459    243.34  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   2.917)
  99.000    604.1290    244.40  .     Q   .V        .         .         .
 (PEAK DAY 1, HOUR   3.000)
  99.083    605.8196    245.47  .      Q  .V        .         .         .
 (PEAK DAY 1, HOUR   3.083)
  99.167    607.5176    246.55  .      Q  .V        .         .         .
 (PEAK DAY 1, HOUR   3.167)
  99.250    609.2231    247.64  .      Q  .V        .         .         .
 (PEAK DAY 1, HOUR   3.250)
  99.333    610.9362    248.75  .      Q  .V        .         .         .
 (PEAK DAY 1, HOUR   3.333)
  99.417    612.6570    249.86  .      Q  .V        .         .         .
 (PEAK DAY 1, HOUR   3.417)
  99.500    614.3855    250.98  .      Q  .V        .         .         .
 (PEAK DAY 1, HOUR   3.500)
  99.583    616.1218    252.12  .      Q  .V        .         .         .
 (PEAK DAY 1, HOUR   3.583)
  99.667    617.8660    253.26  .      Q  .V        .         .         .
 (PEAK DAY 1, HOUR   3.667)
  99.750    619.6181    254.40  .      Q  .V        .         .         .
 (PEAK DAY 1, HOUR   3.750)
  99.833    621.3782    255.56  .      Q  .V        .         .         .
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(PEAK DAY 1, HOUR 3.833)
99.917 623.1463 256.73 . Q .V . . .
(PEAK DAY 1, HOUR 3.917)
100.000 624.9222 257.87 . Q .V . . .
(PEAK DAY 1, HOUR 4.000)
100.083 626.7056 258.95 . Q .V . . .
(PEAK DAY 1, HOUR 4.083)
100.167 628.4964 260.02 . Q .V . . .
(PEAK DAY 1, HOUR 4.167)
100.250 630.2946 261.09 . Q .V . . .
(PEAK DAY 1, HOUR 4.250)
100.333 632.1002 262.18 . Q .V . . .
(PEAK DAY 1, HOUR 4.333)
100.417 633.9135 263.28 . Q .V . . .
(PEAK DAY 1, HOUR 4.417)
100.500 635.7343 264.39 . Q . V . . .
(PEAK DAY 1, HOUR 4.500)
100.583 637.5629 265.52 . Q . V . . .
(PEAK DAY 1, HOUR 4.583)
100.667 639.3994 266.65 . Q . V . . .
(PEAK DAY 1, HOUR 4.667)
100.750 641.2437 267.80 . Q . V . . .
(PEAK DAY 1, HOUR 4.750)
100.833 643.0961 268.96 . Q . V . . .
(PEAK DAY 1, HOUR 4.833)
100.917 644.9565 270.14 . Q . V . . .
(PEAK DAY 1, HOUR 4.917)
101.000 646.8252 271.33 . Q . V . . .
(PEAK DAY 1, HOUR 5.000)
101.083 648.7021 272.53 . Q . V . . .
(PEAK DAY 1, HOUR 5.083)
101.167 650.5875 273.75 . Q . V . . .
(PEAK DAY 1, HOUR 5.167)
101.250 652.4813 274.98 . Q . V . . .
(PEAK DAY 1, HOUR 5.250)
101.333 654.3837 276.23 . Q . V . . .
(PEAK DAY 1, HOUR 5.333)
101.417 656.2947 277.49 . Q . V . . .
(PEAK DAY 1, HOUR 5.417)
101.500 658.2146 278.76 . Q . V . . .
(PEAK DAY 1, HOUR 5.500)
101.583 660.1433 280.05 . Q . V . . .
(PEAK DAY 1, HOUR 5.583)
101.667 662.0811 281.36 . Q . V . . .
(PEAK DAY 1, HOUR 5.667)
101.750 664.0279 282.68 . Q . V . . .
(PEAK DAY 1, HOUR 5.750)
101.833 665.9839 284.02 . Q . V . . .
(PEAK DAY 1, HOUR 5.833)
101.917 667.9493 285.38 . Q . V . . .
(PEAK DAY 1, HOUR 5.917)
102.000 669.9242 286.75 . Q . V . . .
(PEAK DAY 1, HOUR 6.000)
102.083 671.9086 288.14 . Q . V . . .
(PEAK DAY 1, HOUR 6.083)
102.167 673.9028 289.55 . Q . V . . .
(PEAK DAY 1, HOUR 6.167)
102.250 675.9067 290.97 . Q . V . . .
(PEAK DAY 1, HOUR 6.250)
102.333 677.9205 292.41 . Q . V . . .
(PEAK DAY 1, HOUR 6.333)
102.417 679.9445 293.88 . Q . V . . .
(PEAK DAY 1, HOUR 6.417)
102.500 681.9786 295.36 . Q . V . . .
(PEAK DAY 1, HOUR 6.500)
102.583 684.0231 296.86 . Q . V . . .
(PEAK DAY 1, HOUR 6.583)
102.667 686.0780 298.37 . Q . V . . .
(PEAK DAY 1, HOUR 6.667)
102.750 688.1420 299.68 . Q . V . . .
(PEAK DAY 1, HOUR 6.750)
102.833 690.2116 300.51 . Q . V . . .
(PEAK DAY 1, HOUR 6.833)
102.917 692.2849 301.04 . Q . V . . .
(PEAK DAY 1, HOUR 6.917)
103.000 694.3624 301.65 . Q . V . . .
(PEAK DAY 1, HOUR 7.000)
103.083 696.4451 302.41 . Q . V . . .
(PEAK DAY 1, HOUR 7.083)
103.167 698.5339 303.29 . Q . V . . .
(PEAK DAY 1, HOUR 7.167)
103.250 700.6295 304.29 . Q . V . . .
(PEAK DAY 1, HOUR 7.250)
103.333 702.7328 305.39 . Q . V . . .
(PEAK DAY 1, HOUR 7.333)
103.417 704.8442 306.58 . Q . V . . .
(PEAK DAY 1, HOUR 7.417)
103.500 706.9645 307.86 . Q . V . . .
(PEAK DAY 1, HOUR 7.500)
103.583 709.0940 309.20 . Q . V . . .
(PEAK DAY 1, HOUR 7.583)
103.667 711.2333 310.62 . Q . V . . .
(PEAK DAY 1, HOUR 7.667)
103.750 713.3827 312.10 . Q . V . . .
(PEAK DAY 1, HOUR 7.750)
103.833 715.5427 313.63 . Q . V . . .
(PEAK DAY 1, HOUR 7.833)
103.917 717.7136 315.21 . Q. V . . .
(PEAK DAY 1, HOUR 7.917)
104.000 719.8957 316.85 . Q. V . . .
(PEAK DAY 1, HOUR 8.000)
104.083 722.0894 318.53 . Q. V . . .
(PEAK DAY 1, HOUR 8.083)
104.167 724.2950 320.25 . Q. V . . .
(PEAK DAY 1, HOUR 8.167)
104.250 726.5128 322.02 . Q. V . . .
(PEAK DAY 1, HOUR 8.250)
104.333 728.7430 323.83 . Q. V . . .
(PEAK DAY 1, HOUR 8.333)
104.417 730.9859 325.67 . Q. V . . .
(PEAK DAY 1, HOUR 8.417)
104.500 733.2418 327.56 . Q. V . . .
(PEAK DAY 1, HOUR 8.500)
104.583 735.5110 329.48 . Q. V . . .
(PEAK DAY 1, HOUR 8.583)
104.667 737.7936 331.45 . Q. V . . .
(PEAK DAY 1, HOUR 8.667)
104.750 740.0901 333.44 . Q. V . . .
(PEAK DAY 1, HOUR 8.750)
104.833 742.4006 335.48 . Q. V . . .
(PEAK DAY 1, HOUR 8.833)
104.917 744.7253 337.56 . Q. V . . .
(PEAK DAY 1, HOUR 8.917)
105.000 747.0646 339.66 . Q. V . . .
(PEAK DAY 1, HOUR 9.000)
105.083 749.4177 341.66 . Q. V . . .
(PEAK DAY 1, HOUR 9.083)
105.167 751.7812 343.18 . Q. V . . .
(PEAK DAY 1, HOUR 9.167)
105.250 754.1526 344.34 . Q. V . . .
(PEAK DAY 1, HOUR 9.250)
105.333 756.5322 345.51 . Q. V . . .
(PEAK DAY 1, HOUR 9.333)
105.417 758.9203 346.76 . Q. V . . .

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 (PEAK DAY 1, HOUR   9.417)
105.500    761.3176    348.08  .        Q.   V     .         .         .
 (PEAK DAY 1, HOUR   9.500)
105.583    763.7246    349.49  .        Q.   V     .         .         .
 (PEAK DAY 1, HOUR   9.583)
105.667    766.1418    350.98  .         Q   V     .         .         .
 (PEAK DAY 1, HOUR   9.667)
105.750    768.5698    352.54  .         Q   V     .         .         .
 (PEAK DAY 1, HOUR   9.750)
105.833    771.0090    354.19  .         Q   V     .         .         .
 (PEAK DAY 1, HOUR   9.833)
105.917    773.4601    355.90  .         Q   V     .         .         .
 (PEAK DAY 1, HOUR   9.917)
106.000    775.9236    357.70  .         Q   V     .         .         .
 (PEAK DAY 1, HOUR  10.000)
106.083    778.4000    359.57  .         Q   V     .         .         .
 (PEAK DAY 1, HOUR  10.083)
106.167    780.8897    361.51  .         Q   V     .         .         .
 (PEAK DAY 1, HOUR  10.167)
106.250    783.3933    363.52  .         Q   V     .         .         .
 (PEAK DAY 1, HOUR  10.250)
106.333    785.9113    365.61  .         Q   V     .         .         .
 (PEAK DAY 1, HOUR  10.333)
106.417    788.4441    367.77  .         Q   V     .         .         .
 (PEAK DAY 1, HOUR  10.417)
106.500    790.9923    370.00  .         Q   V     .         .         .
 (PEAK DAY 1, HOUR  10.500)
106.583    793.5564    372.30  .         Q   V     .         .         .
 (PEAK DAY 1, HOUR  10.583)
106.667    796.1368    374.68  .         Q    V    .         .         .
 (PEAK DAY 1, HOUR  10.667)
106.750    798.7341    377.13  .         Q    V    .         .         .
 (PEAK DAY 1, HOUR  10.750)
106.833    801.3484    379.60  .         Q    V    .         .         .
 (PEAK DAY 1, HOUR  10.833)
106.917    803.9772    381.69  .         Q    V    .         .         .
 (PEAK DAY 1, HOUR  10.917)
107.000    806.6177    383.41  .         Q    V    .         .         .
 (PEAK DAY 1, HOUR  11.000)
107.083    809.2701    385.12  .         .Q   V    .         .         .
 (PEAK DAY 1, HOUR  11.083)
107.167    811.9347    386.90  .         .Q   V    .         .         .
 (PEAK DAY 1, HOUR  11.167)
107.250    814.6122    388.77  .         .Q   V    .         .         .
 (PEAK DAY 1, HOUR  11.250)
107.333    817.3030    390.71  .         .Q   V    .         .         .
 (PEAK DAY 1, HOUR  11.333)
107.417    820.0079    392.74  .         .Q   V    .         .         .
 (PEAK DAY 1, HOUR  11.417)
107.500    822.7273    394.86  .         .Q   V    .         .         .
 (PEAK DAY 1, HOUR  11.500)
107.583    825.4619    397.06  .         .Q   V    .         .         .
 (PEAK DAY 1, HOUR  11.583)
107.667    828.2122    399.35  .         .Q   V    .         .         .
 (PEAK DAY 1, HOUR  11.667)
107.750    830.9789    401.73  .         .Q   V    .         .         .
 (PEAK DAY 1, HOUR  11.750)
107.833    833.7627    404.20  .         .Q   V    .         .         .
 (PEAK DAY 1, HOUR  11.833)
107.917    836.5641    406.76  .         .Q   V    .         .         .
 (PEAK DAY 1, HOUR  11.917)
108.000    839.3838    409.42  .         .Q   V    .         .         .
 (PEAK DAY 1, HOUR  12.000)
108.083    842.2250    412.54  .         .Q   V    .         .         .
 (PEAK DAY 1, HOUR  12.083)
108.167    845.0952    416.75  .         .Q   V    .         .         .
 (PEAK DAY 1, HOUR  12.167)
108.250    847.9977    421.45  .         . Q   V   .         .         .
 (PEAK DAY 1, HOUR  12.250)
108.333    850.9268    425.31  .         . Q   V   .         .         .
 (PEAK DAY 1, HOUR  12.333)
108.417    853.8767    428.32  .         . Q   V   .         .         .
 (PEAK DAY 1, HOUR  12.417)
108.500    856.8474    431.34  .         . Q   V   .         .         .
 (PEAK DAY 1, HOUR  12.500)
108.583    859.8410    434.67  .         . Q   V   .         .         .
 (PEAK DAY 1, HOUR  12.583)
108.667    862.8603    438.40  .         . Q   V   .         .         .
 (PEAK DAY 1, HOUR  12.667)
108.750    865.9075    442.45  .         . Q   V   .         .         .
 (PEAK DAY 1, HOUR  12.750)
108.833    868.9841    446.72  .         . Q   V   .         .         .
 (PEAK DAY 1, HOUR  12.833)
108.917    872.0914    451.18  .         . Q   V   .         .         .
 (PEAK DAY 1, HOUR  12.917)
109.000    875.2304    455.79  .         .  Q  V   .         .         .
 (PEAK DAY 1, HOUR  13.000)
109.083    878.4022    460.55  .         .  Q  V   .         .         .
 (PEAK DAY 1, HOUR  13.083)
109.167    881.6078    465.46  .         .  Q  V   .         .         .
 (PEAK DAY 1, HOUR  13.167)
109.250    884.8483    470.52  .         .  Q  V   .         .         .
 (PEAK DAY 1, HOUR  13.250)
109.333    888.1248    475.74  .         .  Q  V   .         .         .
 (PEAK DAY 1, HOUR  13.333)
109.417    891.4384    481.14  .         .  Q  V   .         .         .
 (PEAK DAY 1, HOUR  13.417)
109.500    894.7903    486.71  .         .  Q  V   .         .         .
 (PEAK DAY 1, HOUR  13.500)
109.583    898.1808    492.29  .         .   Q V   .         .         .
 (PEAK DAY 1, HOUR  13.583)
109.667    901.6060    497.33  .         .   Q  V  .         .         .
 (PEAK DAY 1, HOUR  13.667)
109.750    905.0628    501.93  .         .   Q  V  .         .         .
 (PEAK DAY 1, HOUR  13.750)
109.833    908.5522    506.66  .         .   Q  V  .         .         .
 (PEAK DAY 1, HOUR  13.833)
109.917    912.0757    511.62  .         .   Q  V  .         .         .
 (PEAK DAY 1, HOUR  13.917)
110.000    915.6354    516.87  .         .   Q  V  .         .         .
 (PEAK DAY 1, HOUR  14.000)
110.083    919.2335    522.44  .         .   Q  V  .         .         .
 (PEAK DAY 1, HOUR  14.083)
110.167    922.8734    528.50  .         .    Q V  .         .         .
 (PEAK DAY 1, HOUR  14.167)
110.250    926.5587    535.11  .         .    Q V  .         .         .
 (PEAK DAY 1, HOUR  14.250)
110.333    930.2933    542.27  .         .    Q V  .         .         .
 (PEAK DAY 1, HOUR  14.333)
110.417    934.0815    550.05  .         .    Q V  .         .         .
 (PEAK DAY 1, HOUR  14.417)
110.500    937.9280    558.50  .         .    Q V  .         .         .
 (PEAK DAY 1, HOUR  14.500)
110.583    941.8378    567.71  .         .     QV  .         .         .
 (PEAK DAY 1, HOUR  14.583)
110.667    945.8187    578.01  .         .     QV  .         .         .
 (PEAK DAY 1, HOUR  14.667)
110.750    949.8787    589.52  .         .     QV  .         .         .
 (PEAK DAY 1, HOUR  14.750)
110.833    954.0262    602.21  .         .      QV .         .         .
 (PEAK DAY 1, HOUR  14.833)
110.917    958.2616    614.99  .         .      QV .         .         .
 (PEAK DAY 1, HOUR  14.917)
111.000    962.5768    626.57  .         .      QV .         .         .
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(PEAK DAY 1, HOUR  15.000)
111.083    966.9687    637.69  .         .       Q .         .         .
(PEAK DAY 1, HOUR  15.083)
111.167    971.4424    649.59  .         .       Q .         .         .
(PEAK DAY 1, HOUR  15.167)
111.250    976.0051    662.49  .         .       Q .         .         .
(PEAK DAY 1, HOUR  15.250)
111.333    980.6650    676.63  .         .       VQ.         .         .
(PEAK DAY 1, HOUR  15.333)
111.417    985.4218    690.68  .         .       VQ.         .         .
(PEAK DAY 1, HOUR  15.417)
111.500    990.2571    702.09  .         .       V Q         .         .
(PEAK DAY 1, HOUR  15.500)
111.583    995.1640    712.47  .         .       V Q         .         .
(PEAK DAY 1, HOUR  15.583)
111.667   1000.1700    726.88  .         .       V Q         .         .
(PEAK DAY 1, HOUR  15.667)
111.750   1005.3178    747.46  .         .       V .Q        .         .
(PEAK DAY 1, HOUR  15.750)
111.833   1010.6521    774.54  .         .        V. Q       .         .
(PEAK DAY 1, HOUR  15.833)
111.917   1016.2415    811.58  .         .        V.  Q      .         .
(PEAK DAY 1, HOUR  15.917)
112.000   1022.2242    868.70  .         .        V.   Q     .         .
(PEAK DAY 1, HOUR  16.000)
112.083   1029.1200   1001.27  .         .        V.       Q .         .
(PEAK DAY 1, HOUR  16.083)
112.167   1037.5157   1219.06  .         .        V.         .   Q     .
(PEAK DAY 1, HOUR  16.167)
112.250   1046.6313   1323.58  .         .        V.         .     Q   .
(PEAK DAY 1, HOUR  16.250)
112.333   1055.0115   1216.80  .         .        V.         .   Q     .
(PEAK DAY 1, HOUR  16.333)
112.417   1062.3285   1062.44  .         .         V         Q         .
(PEAK DAY 1, HOUR  16.417)
112.500   1069.2626   1006.83  .         .         V       Q .         .
(PEAK DAY 1, HOUR  16.500)
112.583   1076.0273    982.24  .         .         V       Q .         .
(PEAK DAY 1, HOUR  16.583)
112.667   1082.6737    965.05  .         .         V      Q  .         .
(PEAK DAY 1, HOUR  16.667)
112.750   1089.2014    947.82  .         .         V      Q  .         .
(PEAK DAY 1, HOUR  16.750)
112.833   1095.6133    931.00  .         .         V     Q   .         .
(PEAK DAY 1, HOUR  16.833)
112.917   1101.9294    917.11  .         .         V     Q   .         .
(PEAK DAY 1, HOUR  16.917)
113.000   1108.1602    904.71  .         .         V    Q    .         .
(PEAK DAY 1, HOUR  17.000)
113.083   1114.3331    896.32  .         .         .V   Q    .         .
(PEAK DAY 1, HOUR  17.083)
113.167   1120.4589    889.46  .         .         .V   Q    .         .
(PEAK DAY 1, HOUR  17.167)
113.250   1126.5638    886.45  .         .         .V   Q    .         .
(PEAK DAY 1, HOUR  17.250)
113.333   1132.6530    884.14  .         .         .V   Q    .         .
(PEAK DAY 1, HOUR  17.333)
113.417   1138.7314    882.60  .         .         .V   Q    .         .
(PEAK DAY 1, HOUR  17.417)
113.500   1144.7983    880.92  .         .         .V   Q    .         .
(PEAK DAY 1, HOUR  17.500)
113.583   1150.8524    879.05  .         .         .V   Q    .         .
(PEAK DAY 1, HOUR  17.583)
113.667   1156.8918    876.93  .         .         .V   Q    .         .
(PEAK DAY 1, HOUR  17.667)
113.750   1162.9188    875.12  .         .         .V   Q    .         .
(PEAK DAY 1, HOUR  17.750)
113.833   1168.9257    872.19  .         .         . V Q     .         .
(PEAK DAY 1, HOUR  17.833)
113.917   1174.9213    870.55  .         .         . V Q     .         .
(PEAK DAY 1, HOUR  17.917)
114.000   1180.9021    868.42  .         .         . V Q     .         .
(PEAK DAY 1, HOUR  18.000)
114.083   1186.8557    864.47  .         .         . V Q     .         .
(PEAK DAY 1, HOUR  18.083)
114.167   1192.7855    861.01  .         .         . V Q     .         .
(PEAK DAY 1, HOUR  18.167)
114.250   1198.6885    857.10  .         .         . V Q     .         .
(PEAK DAY 1, HOUR  18.250)
114.333   1204.5626    852.92  .         .         . V Q     .         .
(PEAK DAY 1, HOUR  18.333)
114.417   1210.3970    847.15  .         .         . V Q     .         .
(PEAK DAY 1, HOUR  18.417)
114.500   1216.2120    844.35  .         .         . V Q     .         .
(PEAK DAY 1, HOUR  18.500)
114.583   1222.0146    842.55  .         .         .  VQ     .         .
(PEAK DAY 1, HOUR  18.583)
114.667   1227.8063    840.95  .         .         .  VQ     .         .
(PEAK DAY 1, HOUR  18.667)
114.750   1233.5874    839.41  .         .         .  Q      .         .
(PEAK DAY 1, HOUR  18.750)
114.833   1239.3583    837.94  .         .         .  Q      .         .
(PEAK DAY 1, HOUR  18.833)
114.917   1245.1195    836.53  .         .         .  Q      .         .
(PEAK DAY 1, HOUR  18.917)
115.000   1250.8715    835.18  .         .         .  Q      .         .
(PEAK DAY 1, HOUR  19.000)
115.083   1256.6144    833.87  .         .         .  Q      .         .
(PEAK DAY 1, HOUR  19.083)
115.167   1262.3484    832.58  .         .         .  Q      .         .
(PEAK DAY 1, HOUR  19.167)
115.250   1268.0734    831.27  .         .         .  Q      .         .
(PEAK DAY 1, HOUR  19.250)
115.333   1273.7892    829.94  .         .         .  QV     .         .
(PEAK DAY 1, HOUR  19.333)
115.417   1279.4956    828.57  .         .         .  QV     .         .
(PEAK DAY 1, HOUR  19.417)
115.500   1285.1919    827.10  .         .         .  QV     .         .
(PEAK DAY 1, HOUR  19.500)
115.583   1290.8770    825.47  .         .         .  QV     .         .
(PEAK DAY 1, HOUR  19.583)
115.667   1296.5441    822.87  .         .         .  QV     .         .
(PEAK DAY 1, HOUR  19.667)
115.750   1302.1979    820.94  .         .         .  QV     .         .
(PEAK DAY 1, HOUR  19.750)
115.833   1307.8427    819.63  .         .         .  QV     .         .
(PEAK DAY 1, HOUR  19.833)
115.917   1313.4790    818.39  .         .         .  QV     .         .
(PEAK DAY 1, HOUR  19.917)
116.000   1319.1068    817.16  .         .         .  QV     .         .
(PEAK DAY 1, HOUR  20.000)
116.083   1324.7262    815.94  .         .         .  Q V    .         .
(PEAK DAY 1, HOUR  20.083)
116.167   1330.3373    814.73  .         .         .  Q V    .         .
(PEAK DAY 1, HOUR  20.167)
116.250   1335.9401    813.53  .         .         .  Q V    .         .
(PEAK DAY 1, HOUR  20.250)
116.333   1341.5348    812.35  .         .         .  Q V    .         .
(PEAK DAY 1, HOUR  20.333)
116.417   1347.1215    811.19  .         .         .  Q V    .         .
(PEAK DAY 1, HOUR  20.417)
116.500   1352.7003    810.04  .         .         .  Q V    .         .
(PEAK DAY 1, HOUR  20.500)
116.583   1358.2712    808.90  .         .         .  Q V    .         .
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(PEAK DAY 1, HOUR 20.583)
116.667 1363.8342 807.75 . . . Q V . .
(PEAK DAY 1, HOUR 20.667)
116.750 1369.3894 806.61 . . . Q V . .
(PEAK DAY 1, HOUR 20.750)
116.833 1374.9368 805.47 . . . Q V . .
(PEAK DAY 1, HOUR 20.833)
116.917 1380.4762 804.33 . . . Q V . .
(PEAK DAY 1, HOUR 20.917)
117.000 1386.0078 803.19 . . . Q V . .
(PEAK DAY 1, HOUR 21.000)
117.083 1391.5316 802.06 . . . Q V . .
(PEAK DAY 1, HOUR 21.083)
117.167 1397.0476 800.93 . . . Q V . .
(PEAK DAY 1, HOUR 21.167)
117.250 1402.5558 799.79 . . . Q V . .
(PEAK DAY 1, HOUR 21.250)
117.333 1408.0563 798.66 . . . Q V . .
(PEAK DAY 1, HOUR 21.333)
117.417 1413.5490 797.54 . . . Q V . .
(PEAK DAY 1, HOUR 21.417)
117.500 1419.0341 796.44 . . . Q V . .
(PEAK DAY 1, HOUR 21.500)
117.583 1424.5118 795.38 . . . Q V . .
(PEAK DAY 1, HOUR 21.583)
117.667 1429.9824 794.33 . . . Q V . .
(PEAK DAY 1, HOUR 21.667)
117.750 1435.4459 793.29 . . . Q V . .
(PEAK DAY 1, HOUR 21.750)
117.833 1440.9022 792.25 . . . Q V . .
(PEAK DAY 1, HOUR 21.833)
117.917 1446.3514 791.22 . . . Q V . .
(PEAK DAY 1, HOUR 21.917)
118.000 1451.7935 790.18 . . . Q V . .
(PEAK DAY 1, HOUR 22.000)
118.083 1457.2284 789.15 . . . Q V . .
(PEAK DAY 1, HOUR 22.083)
118.167 1462.6562 788.12 . . . Q V . .
(PEAK DAY 1, HOUR 22.167)
118.250 1468.0769 787.09 . . . Q V . .
(PEAK DAY 1, HOUR 22.250)
118.333 1473.4905 786.06 . . . Q V . .
(PEAK DAY 1, HOUR 22.333)
118.417 1478.8970 785.03 . . . Q V . .
(PEAK DAY 1, HOUR 22.417)
118.500 1484.2964 784.00 . . . Q V . .
(PEAK DAY 1, HOUR 22.500)
118.583 1489.6888 782.98 . . . Q V . .
(PEAK DAY 1, HOUR 22.583)
118.667 1495.0742 781.95 . . . Q V . .
(PEAK DAY 1, HOUR 22.667)
118.750 1500.4525 780.93 . . . Q V . .
(PEAK DAY 1, HOUR 22.750)
118.833 1505.8237 779.90 . . . Q V . .
(PEAK DAY 1, HOUR 22.833)
118.917 1511.1880 778.88 . . . Q V . .
(PEAK DAY 1, HOUR 22.917)
119.000 1516.5452 777.86 . . . Q V . .
(PEAK DAY 1, HOUR 23.000)
119.083 1521.8953 776.84 . . . Q V . .
(PEAK DAY 1, HOUR 23.083)
119.167 1527.2384 775.82 . . . Q V . .
(PEAK DAY 1, HOUR 23.167)
119.250 1532.5745 774.80 . . . Q V . .
(PEAK DAY 1, HOUR 23.250)
119.333 1537.9036 773.78 . . . Q V. .
(PEAK DAY 1, HOUR 23.333)
119.417 1543.2257 772.77 . . . Q V. .
(PEAK DAY 1, HOUR 23.417)
119.500 1548.5409 771.77 . . . Q V. .
(PEAK DAY 1, HOUR 23.500)
119.583 1553.8495 770.81 . . . Q V. .
(PEAK DAY 1, HOUR 23.583)
119.667 1559.1516 769.86 . . .Q V. .
(PEAK DAY 1, HOUR 23.667)
119.750 1564.4473 768.92 . . .Q V. .
(PEAK DAY 1, HOUR 23.750)
119.833 1569.7363 767.98 . . .Q V. .
(PEAK DAY 1, HOUR 23.833)
119.917 1575.0189 767.04 . . .Q V. .
(PEAK DAY 1, HOUR 23.917)
120.000 1580.2950 766.10 . . .Q V. .
(PEAK DAY 1, HOUR 24.000)
120.083 1585.5608 764.59 . . .Q V. .
(PEAK DAY 1, HOUR 24.083)
120.167 1590.8054 761.51 . . .Q V .
(PEAK DAY 1, HOUR 24.167)
120.250 1596.0222 757.48 . . .Q V .
(PEAK DAY 1, HOUR 24.250)
120.333 1601.2163 754.18 . . .Q V .
(PEAK DAY 1, HOUR 24.333)
120.417 1606.3956 752.04 . . .Q V .
(PEAK DAY 1, HOUR 24.417)
120.500 1611.5625 750.24 . . .Q V .
(PEAK DAY 1, HOUR 24.500)
120.583 1616.7180 748.58 . . .Q V .
(PEAK DAY 1, HOUR 24.583)
120.667 1621.8628 747.03 . . .Q V .
(PEAK DAY 1, HOUR 24.667)
120.750 1626.9973 745.54 . . .Q V .
(PEAK DAY 1, HOUR 24.750)
120.833 1632.1219 744.10 . . .Q V .
(PEAK DAY 1, HOUR 24.833)
120.917 1637.2371 742.71 . . .Q V .
(PEAK DAY 1, HOUR 24.917)
121.000 1642.3429 741.37 . . .Q .V .
(PEAK DAY 1, HOUR 25.000)
121.083 1647.4396 740.03 . . .Q .V .
(PEAK DAY 1, HOUR 25.083)
121.167 1652.5254 738.46 . . .Q .V .
(PEAK DAY 1, HOUR 25.167)
121.250 1657.5970 736.41 . . .Q .V .
(PEAK DAY 1, HOUR 25.250)
121.333 1662.6528 734.10 . . Q .V .
(PEAK DAY 1, HOUR 25.333)
121.417 1667.6924 731.75 . . Q .V .
(PEAK DAY 1, HOUR 25.417)
121.500 1672.7157 729.39 . . Q .V .
(PEAK DAY 1, HOUR 25.500)
121.583 1677.7229 727.04 . . Q .V .
(PEAK DAY 1, HOUR 25.583)
121.667 1682.7140 724.71 . . Q .V .
(PEAK DAY 1, HOUR 25.667)
121.750 1687.6890 722.37 . . Q .V .
(PEAK DAY 1, HOUR 25.750)
121.833 1692.6481 720.06 . . Q .V .
(PEAK DAY 1, HOUR 25.833)
121.917 1697.5912 717.74 . . Q . V .
(PEAK DAY 1, HOUR 25.917)
122.000 1702.5184 715.44 . . Q . V .
(PEAK DAY 1, HOUR 26.000)
122.083 1707.4299 713.16 . . Q . V .
(PEAK DAY 1, HOUR 26.083)
122.167 1712.3258 710.88 . . Q . V .

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 (PEAK DAY 1, HOUR  26.167)
 122.250   1717.2061    708.61  .         .         Q         . V       .
 (PEAK DAY 1, HOUR  26.250)
 122.333   1722.0708    706.36  .         .         Q         . V       .
 (PEAK DAY 1, HOUR  26.333)
 122.417   1726.9202    704.13  .         .         Q         . V       .
 (PEAK DAY 1, HOUR  26.417)
 122.500   1731.7542    701.90  .         .         Q         . V       .
 (PEAK DAY 1, HOUR  26.500)
 122.583   1736.5725    699.63  .         .        Q.         . V       .
 (PEAK DAY 1, HOUR  26.583)
 122.667   1741.3750    697.33  .         .        Q.         . V       .
 (PEAK DAY 1, HOUR  26.667)
 122.750   1746.1616    695.03  .         .        Q.         . V       .
 (PEAK DAY 1, HOUR  26.750)
 122.833   1750.9325    692.73  .         .        Q.         .  V      .
 (PEAK DAY 1, HOUR  26.833)
 122.917   1755.6876    690.44  .         .        Q.         .  V      .
 (PEAK DAY 1, HOUR  26.917)
 123.000   1760.4270    688.16  .         .        Q.         .  V      .
 (PEAK DAY 1, HOUR  27.000)
 123.083   1765.1508    685.89  .         .        Q.         .  V      .
 (PEAK DAY 1, HOUR  27.083)
 123.167   1769.8589    683.62  .         .        Q.         .  V      .
 (PEAK DAY 1, HOUR  27.167)
 123.250   1774.5514    681.36  .         .        Q.         .  V      .
 (PEAK DAY 1, HOUR  27.250)
 123.333   1779.2284    679.11  .         .        Q.         .  V      .
 (PEAK DAY 1, HOUR  27.333)
 123.417   1783.8899    676.86  .         .        Q.         .  V      .
 (PEAK DAY 1, HOUR  27.417)
 123.500   1788.5360    674.62  .         .        Q.         .  V      .
 (PEAK DAY 1, HOUR  27.500)
 123.583   1793.1667    672.38  .         .        Q.         .  V      .
 (PEAK DAY 1, HOUR  27.583)
 123.667   1797.7822    670.17  .         .        Q.         .  V      .
 (PEAK DAY 1, HOUR  27.667)
 123.750   1802.3826    667.96  .         .        Q.         .   V     .
 (PEAK DAY 1, HOUR  27.750)
 123.833   1806.9677    665.75  .         .        Q.         .   V     .
 (PEAK DAY 1, HOUR  27.833)
 123.917   1811.5369    663.46  .         .       Q .         .   V     .
 (PEAK DAY 1, HOUR  27.917)
 124.000   1816.0898    661.09  .         .       Q .         .   V     .
 (PEAK DAY 1, HOUR  28.000)
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
================================================================================

  END OF FLOODSCx ROUTING ANALYSIS



********************************************************************************
  FLOW PROCESS FROM NODE   6311.00 TO NODE   6330.00 IS CODE = 5.2
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  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
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         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  5040.6 Ac. ***

         THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
         TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
         INTERVALS(Reference: the National Engineering Handbook,
         Hydrology, Chapter 17, page 17-52, August,1972,
         U.S. Department of Commerce).


         ASSUMED REGULAR CHANNEL INFORMATION:
           BASEWIDTH(FT) =   20.00     CHANNEL Z =  1.00
           UPSTREAM ELEVATION(FT) =     382.00
           DOWNSTREAM ELEVATION(FT) =     375.00
           CHANNEL LENGTH(FT) =    1141.00     MANNING'S FACTOR = 0.040
           CONSTANT LOSS RATE(CFS) =    0.00


         CHANNEL ROUTING COEFFICIENT ESTIMATED:
           MAXIMUM INFLOW(CFS) =  1323.58
           AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =   796.54
           CHANNEL NORMAL VELOCITY FOR Q =   796.54 CFS =   6.74 FPS
           ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.799

         MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
         UNIT INTERVALS IS CSTAR = 0.945


         CONVEX METHOD CHANNEL ROUTING RESULTS:
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PEAK DAY	TIME (HRS)	CLOCK TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
2	24.000	96.000	61.52	61.75	61.75
1	0.083	96.083	61.56	61.56	61.56
1	0.167	96.167	63.72	62.68	62.68
1	0.250	96.250	68.82	66.31	66.31
1	0.333	96.333	75.92	72.37	72.37
1	0.417	96.417	84.76	80.32	80.32
1	0.500	96.500	97.75	91.27	91.27
1	0.583	96.583	119.83	108.87	108.87
1	0.667	96.667	145.39	132.51	132.51
1	0.750	96.750	163.43	154.06	154.06
1	0.833	96.833	174.77	168.81	168.81
1	0.917	96.917	183.43	178.95	178.95
1	1.000	97.000	190.49	186.86	186.86
1	1.083	97.083	196.45	193.39	193.39
1	1.167	97.167	201.66	198.99	198.99
1	1.250	97.250	206.25	203.90	203.90
1	1.333	97.333	210.29	208.22	208.22
1	1.417	97.417	213.86	212.03	212.03
1	1.500	97.500	217.13	215.46	215.46
1	1.583	97.583	220.12	218.59	218.59
1	1.667	97.667	222.79	221.42	221.42
1	1.750	97.750	225.19	223.96	223.96
1	1.833	97.833	227.34	226.24	226.24
1	1.917	97.917	229.23	228.26	228.26
1	2.000	98.000	230.97	230.08	230.08
1	2.083	98.083	232.64	231.79	231.79
1	2.167	98.167	234.04	233.32	233.32
1	2.250	98.250	235.15	234.58	234.58
1	2.333	98.333	236.17	235.65	235.65
1	2.417	98.417	237.17	236.66	236.66
1	2.500	98.500	238.18	237.67	237.67
1	2.583	98.583	239.19	238.68	238.68
1	2.667	98.667	240.21	239.69	239.69
1	2.750	98.750	241.24	240.72	240.72
1	2.833	98.833	242.28	241.76	241.76
1	2.917	98.917	243.34	242.80	242.80
1	3.000	99.000	244.40	243.86	243.86
1	3.083	99.083	245.47	244.92	244.92
1	3.167	99.167	246.55	246.00	246.00
1	3.250	99.250	247.64	247.09	247.09
1	3.333	99.333	248.75	248.18	248.18

1	3.417	99.417	249.86	249.29	249.29
1	3.500	99.500	250.98	250.41	250.41
1	3.583	99.583	252.12	251.54	251.54
1	3.667	99.667	253.26	252.68	252.68
1	3.750	99.750	254.40	253.82	253.82
1	3.833	99.833	255.56	254.97	254.97
1	3.917	99.917	256.73	256.14	256.14
1	4.000	100.000	257.87	257.29	257.29
1	4.083	100.083	258.95	258.40	258.40
1	4.167	100.167	260.02	259.47	259.47
1	4.250	100.250	261.09	260.55	260.55
1	4.333	100.333	262.18	261.63	261.63
1	4.417	100.417	263.28	262.72	262.72
1	4.500	100.500	264.39	263.83	263.83
1	4.583	100.583	265.52	264.95	264.95
1	4.667	100.667	266.65	266.07	266.07
1	4.750	100.750	267.80	267.22	267.22
1	4.833	100.833	268.96	268.37	268.37
1	4.917	100.917	270.14	269.54	269.54
1	5.000	101.000	271.33	270.73	270.73
1	5.083	101.083	272.53	271.92	271.92
1	5.167	101.167	273.75	273.13	273.13
1	5.250	101.250	274.98	274.35	274.35
1	5.333	101.333	276.23	275.59	275.59
1	5.417	101.417	277.49	276.85	276.85
1	5.500	101.500	278.76	278.11	278.11
1	5.583	101.583	280.05	279.40	279.40
1	5.667	101.667	281.36	280.70	280.70
1	5.750	101.750	282.68	282.01	282.01
1	5.833	101.833	284.02	283.34	283.34
1	5.917	101.917	285.38	284.69	284.69
1	6.000	102.000	286.75	286.05	286.05
1	6.083	102.083	288.14	287.43	287.43
1	6.167	102.167	289.55	288.83	288.83
1	6.250	102.250	290.97	290.25	290.25
1	6.333	102.333	292.41	291.68	291.68
1	6.417	102.417	293.88	293.13	293.13
1	6.500	102.500	295.36	294.61	294.61
1	6.583	102.583	296.86	296.10	296.10
1	6.667	102.667	298.37	297.60	297.60
1	6.750	102.750	299.68	299.01	299.01
1	6.833	102.833	300.51	300.08	300.08
1	6.917	102.917	301.04	300.76	300.76
1	7.000	103.000	301.65	301.34	301.34
1	7.083	103.083	302.41	302.03	302.03
1	7.167	103.167	303.29	302.85	302.85
1	7.250	103.250	304.29	303.79	303.79
1	7.333	103.333	305.39	304.83	304.83
1	7.417	103.417	306.58	305.98	305.98
1	7.500	103.500	307.86	307.21	307.21
1	7.583	103.583	309.20	308.52	308.52
1	7.667	103.667	310.62	309.90	309.90
1	7.750	103.750	312.10	311.35	311.35
1	7.833	103.833	313.63	312.85	312.85
1	7.917	103.917	315.21	314.41	314.41
1	8.000	104.000	316.85	316.02	316.02
1	8.083	104.083	318.53	317.67	317.67
1	8.167	104.167	320.25	319.38	319.38
1	8.250	104.250	322.02	321.12	321.12
1	8.333	104.333	323.83	322.91	322.91
1	8.417	104.417	325.67	324.73	324.73
1	8.500	104.500	327.56	326.60	326.60
1	8.583	104.583	329.48	328.51	328.51
1	8.667	104.667	331.45	330.45	330.45
1	8.750	104.750	333.44	332.43	332.43
1	8.833	104.833	335.48	334.45	334.45
1	8.917	104.917	337.56	336.51	336.51
1	9.000	105.000	339.66	338.60	338.60
1	9.083	105.083	341.66	340.64	340.64
1	9.167	105.167	343.18	342.39	342.39
1	9.250	105.250	344.34	343.74	343.74
1	9.333	105.333	345.51	344.92	344.92
1	9.417	105.417	346.76	346.13	346.13
1	9.500	105.500	348.08	347.41	347.41
1	9.583	105.583	349.49	348.78	348.78
1	9.667	105.667	350.98	350.22	350.22
1	9.750	105.750	352.54	351.75	351.75
1	9.833	105.833	354.19	353.35	353.35
1	9.917	105.917	355.90	355.03	355.03
1	10.000	106.000	357.70	356.79	356.79
1	10.083	106.083	359.57	358.62	358.62
1	10.167	106.167	361.51	360.52	360.52
1	10.250	106.250	363.52	362.50	362.50
1	10.333	106.333	365.61	364.55	364.55
1	10.417	106.417	367.77	366.67	366.67
1	10.500	106.500	370.00	368.87	368.87
1	10.583	106.583	372.30	371.13	371.13
1	10.667	106.667	374.68	373.47	373.47
1	10.750	106.750	377.13	375.89	375.89
1	10.833	106.833	379.60	378.34	378.34
1	10.917	106.917	381.69	380.62	380.62
1	11.000	107.000	383.41	382.53	382.53
1	11.083	107.083	385.12	384.25	384.25
1	11.167	107.167	386.90	386.00	386.00
1	11.250	107.250	388.77	387.82	387.82
1	11.333	107.333	390.71	389.73	389.73
1	11.417	107.417	392.74	391.71	391.71
1	11.500	107.500	394.86	393.79	393.79
1	11.583	107.583	397.06	395.94	395.94
1	11.667	107.667	399.35	398.19	398.19
1	11.750	107.750	401.73	400.52	400.52
1	11.833	107.833	404.20	402.95	402.95
1	11.917	107.917	406.76	405.46	405.46
1	12.000	108.000	409.42	408.07	408.07
1	12.083	108.083	412.54	410.97	410.97
1	12.167	108.167	416.75	414.64	414.64
1	12.250	108.250	421.45	419.07	419.07
1	12.333	108.333	425.31	423.32	423.32
1	12.417	108.417	428.32	426.77	426.77
1	12.500	108.500	431.34	429.81	429.81
1	12.583	108.583	434.67	432.99	432.99
1	12.667	108.667	438.40	436.52	436.52
1	12.750	108.750	442.45	440.40	440.40
1	12.833	108.833	446.72	444.56	444.56
1	12.917	108.917	451.18	448.92	448.92
1	13.000	109.000	455.79	453.45	453.45
1	13.083	109.083	460.55	458.14	458.14
1	13.167	109.167	465.46	462.97	462.97
1	13.250	109.250	470.52	467.95	467.95
1	13.333	109.333	475.74	473.09	473.09
1	13.417	109.417	481.14	478.40	478.40
1	13.500	109.500	486.71	483.88	483.88
1	13.583	109.583	492.29	489.46	489.46
1	13.667	109.667	497.33	494.76	494.76
1	13.750	109.750	501.93	499.58	499.58
1	13.833	109.833	506.66	504.26	504.26
1	13.917	109.917	511.62	509.11	509.11
1	14.000	110.000	516.87	514.21	514.21
1	14.083	110.083	522.44	519.62	519.62
1	14.167	110.167	528.50	525.43	525.43
1	14.250	110.250	535.11	531.77	531.77
1	14.333	110.333	542.27	538.65	538.65
1	14.417	110.417	550.05	546.12	546.12
1	14.500	110.500	558.50	554.23	554.23

1	14.583	110.583	567.71	563.05	563.05
1	14.667	110.667	578.01	572.81	572.81
1	14.750	110.750	589.52	583.71	583.71
1	14.833	110.833	602.21	595.79	595.79
1	14.917	110.917	614.99	608.50	608.50
1	15.000	111.000	626.57	620.65	620.65
1	15.083	111.083	637.69	632.03	632.03
1	15.167	111.167	649.59	643.56	643.56
1	15.250	111.250	662.49	655.96	655.96
1	15.333	111.333	676.63	669.48	669.48
1	15.417	111.417	690.68	683.54	683.54
1	15.500	111.500	702.09	696.22	696.22
1	15.583	111.583	712.47	707.16	707.16
1	15.667	111.667	726.88	719.67	719.67
1	15.750	111.750	747.46	737.17	737.17
1	15.833	111.833	774.54	760.97	760.97
1	15.917	111.917	811.58	793.04	793.04
1	16.000	112.000	868.70	840.24	840.24
1	16.083	112.083	1001.27	936.02	936.02
1	16.167	112.167	1219.06	1110.86	1110.86
1	16.250	112.250	1323.58	1267.45	1267.45
1	16.333	112.333	1216.80	1265.03	1265.03
1	16.417	112.417	1062.44	1139.23	1139.23
1	16.500	112.500	1006.83	1037.74	1037.74
1	16.583	112.583	982.24	995.74	995.74
1	16.667	112.667	965.05	974.04	974.04
1	16.750	112.750	947.82	956.59	956.59
1	16.833	112.833	931.00	939.56	939.56
1	16.917	112.917	917.11	924.25	924.25
1	17.000	113.000	904.71	911.06	911.06
1	17.083	113.083	896.32	900.70	900.70
1	17.167	113.167	889.46	893.00	893.00
1	17.250	113.250	886.45	888.09	888.09
1	17.333	113.333	884.14	885.34	885.34
1	17.417	113.417	882.60	883.41	883.41
1	17.500	113.500	880.92	881.77	881.77
1	17.583	113.583	879.05	879.99	879.99
1	17.667	113.667	876.93	878.00	878.00
1	17.750	113.750	875.12	876.05	876.05
1	17.833	113.833	872.19	873.65	873.65
1	17.917	113.917	870.55	871.42	871.42
1	18.000	114.000	868.42	869.49	869.49
1	18.083	114.083	864.47	866.42	866.42
1	18.167	114.167	861.01	862.78	862.78
1	18.250	114.250	857.10	859.08	859.08
1	18.333	114.333	852.92	855.04	855.04
1	18.417	114.417	847.15	850.04	850.04
1	18.500	114.500	844.35	845.85	845.85
1	18.583	114.583	842.55	843.49	843.49
1	18.667	114.667	840.95	841.77	841.77
1	18.750	114.750	839.41	840.20	840.20
1	18.833	114.833	837.94	838.69	838.69
1	18.917	114.917	836.53	837.25	837.25
1	19.000	115.000	835.18	835.86	835.86
1	19.083	115.083	833.87	834.54	834.54
1	19.167	115.167	832.58	833.24	833.24
1	19.250	115.250	831.27	831.94	831.94
1	19.333	115.333	829.94	830.62	830.62
1	19.417	115.417	828.57	829.26	829.26
1	19.500	115.500	827.10	827.84	827.84
1	19.583	115.583	825.47	826.29	826.29
1	19.667	115.667	822.87	824.16	824.16
1	19.750	115.750	820.94	821.94	821.94
1	19.833	115.833	819.63	820.31	820.31
1	19.917	115.917	818.39	819.02	819.02
1	20.000	116.000	817.16	817.79	817.79
1	20.083	116.083	815.94	816.56	816.56
1	20.167	116.167	814.73	815.34	815.34
1	20.250	116.250	813.53	814.14	814.14
1	20.333	116.333	812.35	812.95	812.95
1	20.417	116.417	811.19	811.78	811.78
1	20.500	116.500	810.04	810.63	810.63
1	20.583	116.583	808.90	809.48	809.48
1	20.667	116.667	807.75	808.33	808.33
1	20.750	116.750	806.61	807.19	807.19
1	20.833	116.833	805.47	806.05	806.05
1	20.917	116.917	804.33	804.91	804.91
1	21.000	117.000	803.19	803.77	803.77
1	21.083	117.083	802.06	802.64	802.64
1	21.167	117.167	800.93	801.50	801.50
1	21.250	117.250	799.79	800.37	800.37
1	21.333	117.333	798.66	799.24	799.24
1	21.417	117.417	797.54	798.11	798.11
1	21.500	117.500	796.44	797.00	797.00
1	21.583	117.583	795.38	795.92	795.92
1	21.667	117.667	794.33	794.86	794.86
1	21.750	117.750	793.29	793.82	793.82
1	21.833	117.833	792.25	792.78	792.78
1	21.917	117.917	791.22	791.74	791.74
1	22.000	118.000	790.18	790.71	790.71
1	22.083	118.083	789.15	789.68	789.68
1	22.167	118.167	788.12	788.64	788.64
1	22.250	118.250	787.09	787.61	787.61
1	22.333	118.333	786.06	786.58	786.58
1	22.417	118.417	785.03	785.55	785.55
1	22.500	118.500	784.00	784.52	784.52
1	22.583	118.583	782.98	783.50	783.50
1	22.667	118.667	781.95	782.47	782.47
1	22.750	118.750	780.93	781.45	781.45
1	22.833	118.833	779.90	780.42	780.42
1	22.917	118.917	778.88	779.40	779.40
1	23.000	119.000	777.86	778.38	778.38
1	23.083	119.083	776.84	777.36	777.36
1	23.167	119.167	775.82	776.34	776.34
1	23.250	119.250	774.80	775.32	775.32
1	23.333	119.333	773.78	774.30	774.30
1	23.417	119.417	772.77	773.28	773.28
1	23.500	119.500	771.77	772.28	772.28
1	23.583	119.583	770.81	771.30	771.30
1	23.667	119.667	769.86	770.35	770.35
1	23.750	119.750	768.92	769.40	769.40
1	23.833	119.833	767.98	768.46	768.46
1	23.917	119.917	767.04	767.52	767.52
1	24.000	120.000	766.10	766.57	766.57
1	24.083	120.083	764.59	765.34	765.34
1	24.167	120.167	761.51	763.03	763.03
1	24.250	120.250	757.48	759.50	759.50
1	24.333	120.333	754.18	755.87	755.87
1	24.417	120.417	752.04	753.16	753.16
1	24.500	120.500	750.24	751.16	751.16
1	24.583	120.583	748.58	749.43	749.43
1	24.667	120.667	747.03	747.82	747.82
1	24.750	120.750	745.54	746.30	746.30
1	24.833	120.833	744.10	744.84	744.84
1	24.917	120.917	742.71	743.42	743.42
1	25.000	121.000	741.37	742.05	742.05
1	25.083	121.083	740.03	740.71	740.71
1	25.167	121.167	738.46	739.25	739.25
1	25.250	121.250	736.41	737.44	737.44
1	25.333	121.333	734.10	735.27	735.27
1	25.417	121.417	731.75	732.94	732.94
1	25.500	121.500	729.39	730.59	730.59
1	25.583	121.583	727.04	728.24	728.24
1	25.667	121.667	724.71	725.89	725.89

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  1   25.750 121.750       722.37      723.56      723.56
  1   25.833 121.833       720.06      721.23      721.23
  1   25.917 121.917       717.74      718.92      718.92
  1   26.000 122.000       715.44      716.61      716.61
  1   26.083 122.083       713.16      714.32      714.32
  1   26.167 122.167       710.88      712.04      712.04
  1   26.250 122.250       708.61      709.77      709.77
  1   26.333 122.333       706.36      707.50      707.50
  1   26.417 122.417       704.13      705.27      705.27
  1   26.500 122.500       701.90      703.04      703.04
  1   26.583 122.583       699.63      700.78      700.78
  1   26.667 122.667       697.33      698.50      698.50
  1   26.750 122.750       695.03      696.20      696.20
  1   26.833 122.833       692.73      693.90      693.90
  1   26.917 122.917       690.44      691.61      691.61
  1   27.000 123.000       688.16      689.32      689.32
  1   27.083 123.083       685.89      687.04      687.04
  1   27.167 123.167       683.62      684.77      684.77
  1   27.250 123.250       681.36      682.51      682.51
  1   27.333 123.333       679.11      680.25      680.25
  1   27.417 123.417       676.86      678.00      678.00
  1   27.500 123.500       674.62      675.76      675.76
  1   27.583 123.583       672.38      673.52      673.52
  1   27.667 123.667       670.17      671.29      671.29
  1   27.750 123.750       667.96      669.08      669.08
  1   27.833 123.833       665.75      666.87      666.87
  1   27.917 123.917       663.46      664.62      664.62
  1   28.000 124.000       661.09      662.29      662.29
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
================================================================================
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   2117.171 AF
    OUTFLOW VOLUME =   2117.172 AF
    LOSS    VOLUME =      0.000 AF
================================================================================

  END OF FLOODSCx ROUTING ANALYSIS



********************************************************************************
  FLOW PROCESS FROM NODE   6320.00 TO NODE   6330.00 IS CODE =   1
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        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of   300.7 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
================================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #2)

        WATERSHED AREA =     300.700 ACRES
        BASEFLOW =   0.000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    0.290 HOURS
         CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
         THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
         MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
        VALLEY(DEVELOPED):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.250
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.750
        VALLEY(UNDEVELOPED)/DESERT:
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:
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RAINFALL DEPTHS & LOSS RATES	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
5-MINUTE (INCHES)	0.58	0.27	0.12	0.06	0.04
30-MINUTE (INCHES)	1.22	0.56	0.24	0.13	0.09
1-HOUR (INCHES)	1.62	0.75	0.33	0.17	0.12
3-HOUR (INCHES)	2.71	1.25	0.54	0.28	0.21
6-HOUR (INCHES)	3.75	1.73	0.75	0.39	0.29
24-HOUR (INCHES)	6.28	2.89	1.26	0.66	0.48
LOSS RATE(IN/HR)	0.240	0.240	0.240	0.240	0.240
LOW LOSS FRACTION	0.430	0.670	0.900	0.990	0.990

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    5-MINUTE FACTOR = 0.987
   30-MINUTE FACTOR = 0.987
    1-HOUR FACTOR = 0.987
    3-HOUR FACTOR = 0.998
    6-HOUR FACTOR = 0.999
   24-HOUR FACTOR = 0.999

  UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
  UNIT INTERVAL PERCENTAGE OF LAG-TIME =  28.736


  RUNOFF HYDROGRAPH LISTING LIMITS:
  MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  96.00
  MODEL TIME(HOURS) FOR END OF RESULTS = 124.00


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                    UNIT HYDROGRAPH DETERMINATION
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INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	3.181	115.682
2	14.148	398.807
3	32.649	672.813
4	49.391	608.859
5	59.445	365.623
6	65.754	229.414
7	70.572	175.227
8	74.508	143.109
9	77.679	115.331
10	80.307	95.584
11	82.561	81.961
12	84.486	69.998
13	86.124	59.571
14	87.475	49.137
15	88.623	41.748
16	89.558	33.981
17	90.435	31.907
18	91.248	29.581
19	92.036	28.658
20	92.761	26.336
21	93.465	25.630
22	94.104	23.223
23	94.697	21.573
24	95.280	21.195
25	95.767	17.699
26	96.231	16.876
27	96.695	16.868
28	97.112	15.192
29	97.431	11.595
30	97.741	11.275

31	98.051	11.279
32	98.361	11.271
33	98.547	6.740
34	98.632	3.085
35	98.716	3.070
36	98.801	3.077
37	98.885	3.077
38	98.970	3.077
39	99.054	3.077
40	99.139	3.077
41	99.224	3.085
42	99.308	3.070
43	99.393	3.070
44	99.477	3.070
45	99.562	3.070
46	99.646	3.070
47	99.730	3.070
48	99.815	3.070
49	99.899	3.070
50	99.984	3.070
51	100.000	0.594

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 150.1466

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 139.5311

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5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	175.0	350.0	525.0	700.0
96.000	37.7332	4.73	Q	V	.	.	.
(PEAK DAY 2, HOUR 24.000)							
96.083	37.7682	5.09	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.083)							
96.167	37.8124	6.41	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.167)							
96.250	37.8721	8.68	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.250)							
96.333	37.9461	10.74	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.333)							
96.417	38.0287	11.99	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.417)							
96.500	38.1168	12.79	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.500)							
96.583	38.2091	13.41	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.583)							
96.667	38.3050	13.93	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.667)							
96.750	38.4039	14.35	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.750)							
96.833	38.5052	14.71	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.833)							
96.917	38.6087	15.03	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.917)							
97.000	38.7141	15.31	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.000)							
97.083	38.8213	15.56	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.083)							
97.167	38.9299	15.77	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.167)							
97.250	39.0398	15.96	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.250)							
97.333	39.1508	16.12	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.333)							
97.417	39.2630	16.28	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.417)							
97.500	39.3762	16.44	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.500)							
97.583	39.4904	16.59	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.583)							
97.667	39.6056	16.73	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.667)							
97.750	39.7218	16.87	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.750)							
97.833	39.8390	17.01	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.833)							
97.917	39.9570	17.14	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.917)							
98.000	40.0760	17.27	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.000)							
98.083	40.1957	17.39	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.083)							
98.167	40.3163	17.51	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.167)							
98.250	40.4377	17.63	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.250)							
98.333	40.5599	17.74	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.333)							
98.417	40.6829	17.85	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.417)							
98.500	40.8065	17.95	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.500)							
98.583	40.9308	18.06	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.583)							
98.667	41.0559	18.16	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.667)							
98.750	41.1816	18.25	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.750)							
98.833	41.3079	18.33	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.833)							
98.917	41.4347	18.41	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.917)							
99.000	41.5620	18.49	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.000)							
99.083	41.6899	18.57	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.083)							
99.167	41.8184	18.66	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.167)							
99.250	41.9475	18.74	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.250)							
99.333	42.0771	18.82	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.333)							
99.417	42.2074	18.91	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.417)							
99.500	42.3382	18.99	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.500)							
99.583	42.4696	19.08	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.583)							
99.667	42.6016	19.17	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.667)							
99.750	42.7342	19.26	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.750)							
99.833	42.8675	19.35	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.833)							
99.917	43.0013	19.44	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.917)							
100.000	43.1358	19.53	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.000)							
100.083	43.2709	19.62	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.083)							
100.167	43.4067	19.71	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.167)							
100.250	43.5431	19.80	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.250)							
100.333	43.6800	19.88	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.333)							
100.417	43.8175	19.97	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.417)							
100.500	43.9556	20.06	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.500)							
100.583	44.0944	20.14	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.583)							
100.667	44.2337	20.23	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.667)							
100.750	44.3737	20.32	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.750)							
100.833	44.5142	20.41	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.833)							
100.917	44.6554	20.50	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.917)							
101.000	44.7973	20.60	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 5.000)							
101.083	44.9398	20.69	.Q	. V	.	.	.

(PEAK DAY 1, HOUR 5.083)
101.167 45.0829 20.78 .Q . V . . .
(PEAK DAY 1, HOUR 5.167)
101.250 45.2267 20.88 .Q . V . . .
(PEAK DAY 1, HOUR 5.250)
101.333 45.3712 20.98 .Q . V . . .
(PEAK DAY 1, HOUR 5.333)
101.417 45.5163 21.08 .Q . V . . .
(PEAK DAY 1, HOUR 5.417)
101.500 45.6622 21.18 .Q . V . . .
(PEAK DAY 1, HOUR 5.500)
101.583 45.8087 21.28 .Q . V . . .
(PEAK DAY 1, HOUR 5.583)
101.667 45.9559 21.38 .Q . V . . .
(PEAK DAY 1, HOUR 5.667)
101.750 46.1039 21.48 .Q . V . . .
(PEAK DAY 1, HOUR 5.750)
101.833 46.2525 21.59 .Q . V . . .
(PEAK DAY 1, HOUR 5.833)
101.917 46.4019 21.69 .Q . V . . .
(PEAK DAY 1, HOUR 5.917)
102.000 46.5520 21.80 .Q . V . . .
(PEAK DAY 1, HOUR 6.000)
102.083 46.7029 21.91 .Q . V . . .
(PEAK DAY 1, HOUR 6.083)
102.167 46.8546 22.02 .Q . V . . .
(PEAK DAY 1, HOUR 6.167)
102.250 47.0070 22.13 .Q . V . . .
(PEAK DAY 1, HOUR 6.250)
102.333 47.1602 22.24 .Q . V . . .
(PEAK DAY 1, HOUR 6.333)
102.417 47.3141 22.36 .Q . V . . .
(PEAK DAY 1, HOUR 6.417)
102.500 47.4689 22.47 .Q . V . . .
(PEAK DAY 1, HOUR 6.500)
102.583 47.6245 22.59 .Q . V . . .
(PEAK DAY 1, HOUR 6.583)
102.667 47.7809 22.71 .Q . V . . .
(PEAK DAY 1, HOUR 6.667)
102.750 47.9381 22.83 .Q . V . . .
(PEAK DAY 1, HOUR 6.750)
102.833 48.0962 22.95 .Q . V . . .
(PEAK DAY 1, HOUR 6.833)
102.917 48.2552 23.08 .Q . V . . .
(PEAK DAY 1, HOUR 6.917)
103.000 48.4150 23.20 .Q . V . . .
(PEAK DAY 1, HOUR 7.000)
103.083 48.5757 23.33 .Q . V . . .
(PEAK DAY 1, HOUR 7.083)
103.167 48.7373 23.46 .Q . V . . .
(PEAK DAY 1, HOUR 7.167)
103.250 48.8998 23.59 .Q . V . . .
(PEAK DAY 1, HOUR 7.250)
103.333 49.0632 23.73 .Q . V . . .
(PEAK DAY 1, HOUR 7.333)
103.417 49.2275 23.86 .Q . V . . .
(PEAK DAY 1, HOUR 7.417)
103.500 49.3928 24.00 .Q . V . . .
(PEAK DAY 1, HOUR 7.500)
103.583 49.5591 24.14 .Q . V . . .
(PEAK DAY 1, HOUR 7.583)
103.667 49.7263 24.28 .Q . V . . .
(PEAK DAY 1, HOUR 7.667)
103.750 49.8946 24.43 .Q . V . . .
(PEAK DAY 1, HOUR 7.750)
103.833 50.0638 24.57 .Q . V . . .
(PEAK DAY 1, HOUR 7.833)
103.917 50.2341 24.72 .Q . V . . .
(PEAK DAY 1, HOUR 7.917)
104.000 50.4054 24.87 .Q . V . . .
(PEAK DAY 1, HOUR 8.000)
104.083 50.5777 25.03 .Q . V . . .
(PEAK DAY 1, HOUR 8.083)
104.167 50.7512 25.18 .Q . V . . .
(PEAK DAY 1, HOUR 8.167)
104.250 50.9257 25.34 .Q . V . . .
(PEAK DAY 1, HOUR 8.250)
104.333 51.1013 25.50 .Q . V . . .
(PEAK DAY 1, HOUR 8.333)
104.417 51.2781 25.67 .Q . V . . .
(PEAK DAY 1, HOUR 8.417)
104.500 51.4560 25.83 .Q . V . . .
(PEAK DAY 1, HOUR 8.500)
104.583 51.6351 26.00 .Q . V . . .
(PEAK DAY 1, HOUR 8.583)
104.667 51.8154 26.17 .Q . V . . .
(PEAK DAY 1, HOUR 8.667)
104.750 51.9968 26.35 .Q . V . . .
(PEAK DAY 1, HOUR 8.750)
104.833 52.1795 26.53 .Q . V . . .
(PEAK DAY 1, HOUR 8.833)
104.917 52.3635 26.71 .Q . V . . .
(PEAK DAY 1, HOUR 8.917)
105.000 52.5487 26.90 .Q . V . . .
(PEAK DAY 1, HOUR 9.000)
105.083 52.7353 27.08 .Q . V . . .
(PEAK DAY 1, HOUR 9.083)
105.167 52.9231 27.28 .Q . V . . .
(PEAK DAY 1, HOUR 9.167)
105.250 53.1123 27.47 .Q . V . . .
(PEAK DAY 1, HOUR 9.250)
105.333 53.3029 27.67 .Q . V . . .
(PEAK DAY 1, HOUR 9.333)
105.417 53.4948 27.87 .Q . V . . .
(PEAK DAY 1, HOUR 9.417)
105.500 53.6882 28.08 .Q . V . . .
(PEAK DAY 1, HOUR 9.500)
105.583 53.8830 28.29 .Q . V . . .
(PEAK DAY 1, HOUR 9.583)
105.667 54.0794 28.51 .Q . V . . .
(PEAK DAY 1, HOUR 9.667)
105.750 54.2772 28.72 .Q . V . . .
(PEAK DAY 1, HOUR 9.750)
105.833 54.4766 28.95 .Q . V . . .
(PEAK DAY 1, HOUR 9.833)
105.917 54.6775 29.18 .Q . V . . .
(PEAK DAY 1, HOUR 9.917)
106.000 54.8800 29.41 .Q . V . . .
(PEAK DAY 1, HOUR 10.000)
106.083 55.0842 29.65 .Q . V . . .
(PEAK DAY 1, HOUR 10.083)
106.167 55.2901 29.89 .Q . V . . .
(PEAK DAY 1, HOUR 10.167)
106.250 55.4977 30.14 .Q . V . . .
(PEAK DAY 1, HOUR 10.250)
106.333 55.7070 30.39 .Q . V . . .
(PEAK DAY 1, HOUR 10.333)
106.417 55.9181 30.65 .Q . V . . .
(PEAK DAY 1, HOUR 10.417)
106.500 56.1310 30.92 .Q . V . . .
(PEAK DAY 1, HOUR 10.500)
106.583 56.3458 31.19 .Q . V . . .
(PEAK DAY 1, HOUR 10.583)
106.667 56.5625 31.47 .Q . V . . .

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(PEAK DAY 1, HOUR  10.667)
106.750     56.7812     31.75  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.750)
106.833     57.0019     32.04  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.833)
106.917     57.2246     32.34  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.917)
107.000     57.4494     32.65  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.000)
107.083     57.6764     32.96  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.083)
107.167     57.9056     33.28  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.167)
107.250     58.1371     33.61  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.250)
107.333     58.3709     33.95  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.333)
107.417     58.6071     34.29  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.417)
107.500     58.8457     34.65  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.500)
107.583     59.0869     35.02  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  11.583)
107.667     59.3307     35.39  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.667)
107.750     59.5771     35.78  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.750)
107.833     59.8263     36.18  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.833)
107.917     60.0783     36.59  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.917)
108.000     60.3332     37.01  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.000)
108.083     60.5935     37.79  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.083)
108.167     60.8648     39.40  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.167)
108.250     61.1528     41.82  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.250)
108.333     61.4563     44.08  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.333)
108.417     61.7707     45.65  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.417)
108.500     62.0934     46.85  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.500)
108.583     62.4233     47.91  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.583)
108.667     62.7601     48.90  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.667)
108.750     63.1033     49.83  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  12.750)
108.833     63.4526     50.72  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  12.833)
108.917     63.8080     51.60  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  12.917)
109.000     64.1694     52.47  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  13.000)
109.083     64.5367     53.33  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.083)
109.167     64.9099     54.19  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.167)
109.250     65.2892     55.06  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.250)
109.333     65.6744     55.94  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.333)
109.417     66.0659     56.85  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.417)
109.500     66.4638     57.78  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.500)
109.583     66.8684     58.75  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.583)
109.667     67.2799     59.75  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.667)
109.750     67.6986     60.80  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.750)
109.833     68.1248     61.88  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.833)
109.917     68.5588     63.01  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.917)
110.000     69.0009     64.20  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  14.000)
110.083     69.4519     65.49  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  14.083)
110.167     69.9129     66.94  .  Q      .        V          .         .
(PEAK DAY 1, HOUR  14.167)
110.250     70.3852     68.57  .  Q      .        V          .         .
(PEAK DAY 1, HOUR  14.250)
110.333     70.8690     70.25  .   Q     .        V          .         .
(PEAK DAY 1, HOUR  14.333)
110.417     71.3644     71.93  .   Q     .        V          .         .
(PEAK DAY 1, HOUR  14.417)
110.500     71.8716     73.65  .   Q     .        V          .         .
(PEAK DAY 1, HOUR  14.500)
110.583     72.3913     75.46  .   Q     .        V          .         .
(PEAK DAY 1, HOUR  14.583)
110.667     72.9242     77.39  .   Q     .        V          .         .
(PEAK DAY 1, HOUR  14.667)
110.750     73.4713     79.44  .   Q     .        .V         .         .
(PEAK DAY 1, HOUR  14.750)
110.833     74.0334     81.62  .   Q     .        .V         .         .
(PEAK DAY 1, HOUR  14.833)
110.917     74.6125     84.08  .   Q     .        .V         .         .
(PEAK DAY 1, HOUR  14.917)
111.000     75.2118     87.01  .   Q     .        .V         .         .
(PEAK DAY 1, HOUR  15.000)
111.083     75.8365     90.71  .    Q    .        .V         .         .
(PEAK DAY 1, HOUR  15.083)
111.167     76.4923     95.22  .    Q    .        .V         .         .
(PEAK DAY 1, HOUR  15.167)
111.250     77.1851    100.60  .    Q    .        . V        .         .
(PEAK DAY 1, HOUR  15.250)
111.333     77.9209    106.84  .     Q   .        . V        .         .
(PEAK DAY 1, HOUR  15.333)
111.417     78.6996    113.06  .     Q   .        . V        .         .
(PEAK DAY 1, HOUR  15.417)
111.500     79.5111    117.83  .     Q   .        . V        .         .
(PEAK DAY 1, HOUR  15.500)
111.583     80.3491    121.68  .     Q   .        .  V       .         .
(PEAK DAY 1, HOUR  15.583)
111.667     81.2314    128.10  .      Q  .        .  V       .         .
(PEAK DAY 1, HOUR  15.667)
111.750     82.1957    140.01  .       Q .        .  V       .         .
(PEAK DAY 1, HOUR  15.750)
111.833     83.2834    157.93  .        Q.        .  V       .         .
(PEAK DAY 1, HOUR  15.833)
111.917     84.5593    185.26  .         Q        .   V      .         .
(PEAK DAY 1, HOUR  15.917)
112.000     86.1399    229.51  .          . Q     .   V      .         .
(PEAK DAY 1, HOUR  16.000)
112.083     88.4661    337.76  .          .       Q.   V     .         .
(PEAK DAY 1, HOUR  16.083)
112.167     91.9571    506.90  .          .        .    V Q  .         .
(PEAK DAY 1, HOUR  16.167)
112.250     96.3002    630.61  .          .        .     V   .     Q   .
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(PEAK DAY 1, HOUR  16.250)
112.333    100.2459    572.92  .         .         .       V . Q       .
(PEAK DAY 1, HOUR  16.333)
112.417    103.1874    427.11  .         .         .   Q    V.         .
(PEAK DAY 1, HOUR  16.417)
112.500    105.4805    332.96  .         .        Q.         V         .
(PEAK DAY 1, HOUR  16.500)
112.583    107.4393    284.42  .         .     Q   .         V         .
(PEAK DAY 1, HOUR  16.583)
112.667    109.1666    250.80  .         .   Q     .         .V        .
(PEAK DAY 1, HOUR  16.667)
112.750    110.6897    221.16  .         . Q       .         .V        .
(PEAK DAY 1, HOUR  16.750)
112.833    112.0484    197.28  .         .Q        .         . V       .
(PEAK DAY 1, HOUR  16.833)
112.917    113.2786    178.63  .         Q         .         . V       .
(PEAK DAY 1, HOUR  16.917)
113.000    114.3999    162.81  .        Q.         .         . V       .
(PEAK DAY 1, HOUR  17.000)
113.083    115.4265    149.07  .       Q .         .         .  V      .
(PEAK DAY 1, HOUR  17.083)
113.167    116.3665    136.48  .      Q  .         .         .  V      .
(PEAK DAY 1, HOUR  17.167)
113.250    117.2360    126.24  .      Q  .         .         .  V      .
(PEAK DAY 1, HOUR  17.250)
113.333    118.0425    117.11  .     Q   .         .         .  V      .
(PEAK DAY 1, HOUR  17.333)
113.417    118.8097    111.40  .     Q   .         .         .   V     .
(PEAK DAY 1, HOUR  17.417)
113.500    119.5417    106.29  .     Q   .         .         .   V     .
(PEAK DAY 1, HOUR  17.500)
113.583    120.2453    102.15  .    Q    .         .         .   V     .
(PEAK DAY 1, HOUR  17.583)
113.667    120.9185     97.75  .    Q    .         .         .   V     .
(PEAK DAY 1, HOUR  17.667)
113.750    121.5674     94.22  .    Q    .         .         .   V     .
(PEAK DAY 1, HOUR  17.750)
113.833    122.1886     90.20  .    Q    .         .         .    V    .
(PEAK DAY 1, HOUR  17.833)
113.917    122.7854     86.66  .   Q     .         .         .    V    .
(PEAK DAY 1, HOUR  17.917)
114.000    123.3617     83.68  .   Q     .         .         .    V    .
(PEAK DAY 1, HOUR  18.000)
114.083    123.9081     79.33  .   Q     .         .         .    V    .
(PEAK DAY 1, HOUR  18.083)
114.167    124.4278     75.48  .   Q     .         .         .    V    .
(PEAK DAY 1, HOUR  18.167)
114.250    124.9180     71.17  .   Q     .         .         .    V    .
(PEAK DAY 1, HOUR  18.250)
114.333    125.3749     66.35  .  Q      .         .         .    V    .
(PEAK DAY 1, HOUR  18.333)
114.417    125.7995     61.64  .  Q      .         .         .     V   .
(PEAK DAY 1, HOUR  18.417)
114.500    126.2051     58.90  .  Q      .         .         .     V   .
(PEAK DAY 1, HOUR  18.500)
114.583    126.5940     56.47  .  Q      .         .         .     V   .
(PEAK DAY 1, HOUR  18.583)
114.667    126.9651     53.89  .  Q      .         .         .     V   .
(PEAK DAY 1, HOUR  18.667)
114.750    127.3064     49.55  . Q       .         .         .     V   .
(PEAK DAY 1, HOUR  18.750)
114.833    127.6234     46.02  . Q       .         .         .     V   .
(PEAK DAY 1, HOUR  18.833)
114.917    127.9294     44.44  . Q       .         .         .     V   .
(PEAK DAY 1, HOUR  18.917)
115.000    128.2266     43.15  . Q       .         .         .     V   .
(PEAK DAY 1, HOUR  19.000)
115.083    128.5158     41.99  . Q       .         .         .     V   .
(PEAK DAY 1, HOUR  19.083)
115.167    128.7977     40.93  . Q       .         .         .     V   .
(PEAK DAY 1, HOUR  19.167)
115.250    129.0729     39.96  . Q       .         .         .      V  .
(PEAK DAY 1, HOUR  19.250)
115.333    129.3420     39.07  . Q       .         .         .      V  .
(PEAK DAY 1, HOUR  19.333)
115.417    129.6053     38.24  . Q       .         .         .      V  .
(PEAK DAY 1, HOUR  19.417)
115.500    129.8631     37.43  . Q       .         .         .      V  .
(PEAK DAY 1, HOUR  19.500)
115.583    130.1157     36.68  . Q       .         .         .      V  .
(PEAK DAY 1, HOUR  19.583)
115.667    130.3634     35.96  . Q       .         .         .      V  .
(PEAK DAY 1, HOUR  19.667)
115.750    130.6062     35.25  . Q       .         .         .      V  .
(PEAK DAY 1, HOUR  19.750)
115.833    130.8441     34.56  .Q        .         .         .      V  .
(PEAK DAY 1, HOUR  19.833)
115.917    131.0773     33.85  .Q        .         .         .      V  .
(PEAK DAY 1, HOUR  19.917)
116.000    131.3054     33.13  .Q        .         .         .      V  .
(PEAK DAY 1, HOUR  20.000)
116.083    131.5281     32.33  .Q        .         .         .      V  .
(PEAK DAY 1, HOUR  20.083)
116.167    131.7443     31.40  .Q        .         .         .      V  .
(PEAK DAY 1, HOUR  20.167)
116.250    131.9476     29.51  .Q        .         .         .      V  .
(PEAK DAY 1, HOUR  20.250)
116.333    132.1442     28.55  .Q        .         .         .      V  .
(PEAK DAY 1, HOUR  20.333)
116.417    132.3369     27.98  .Q        .         .         .      V  .
(PEAK DAY 1, HOUR  20.417)
116.500    132.5261     27.48  .Q        .         .         .      V  .
(PEAK DAY 1, HOUR  20.500)
116.583    132.7121     27.00  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  20.583)
116.667    132.8950     26.56  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  20.667)
116.750    133.0751     26.15  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  20.750)
116.833    133.2526     25.78  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  20.833)
116.917    133.4277     25.42  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  20.917)
117.000    133.6004     25.08  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  21.000)
117.083    133.7708     24.75  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  21.083)
117.167    133.9391     24.43  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  21.167)
117.250    134.1053     24.13  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  21.250)
117.333    134.2694     23.83  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  21.333)
117.417    134.4316     23.55  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  21.417)
117.500    134.5918     23.27  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  21.500)
117.583    134.7503     23.00  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  21.583)
117.667    134.9069     22.74  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  21.667)
117.750    135.0618     22.49  .Q        .         .         .       V .
(PEAK DAY 1, HOUR  21.750)
117.833    135.2150     22.25  .Q        .         .         .       V .
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(PEAK DAY 1, HOUR 21.833)
117.917 135.3666 22.01 .Q . . . V .
(PEAK DAY 1, HOUR 21.917)
118.000 135.5165 21.77 .Q . . . V .
(PEAK DAY 1, HOUR 22.000)
118.083 135.6649 21.55 .Q . . . V .
(PEAK DAY 1, HOUR 22.083)
118.167 135.8118 21.33 .Q . . . V .
(PEAK DAY 1, HOUR 22.167)
118.250 135.9573 21.12 .Q . . . V .
(PEAK DAY 1, HOUR 22.250)
118.333 136.1014 20.92 .Q . . . V.
(PEAK DAY 1, HOUR 22.333)
118.417 136.2441 20.73 .Q . . . V.
(PEAK DAY 1, HOUR 22.417)
118.500 136.3856 20.54 .Q . . . V.
(PEAK DAY 1, HOUR 22.500)
118.583 136.5257 20.35 .Q . . . V.
(PEAK DAY 1, HOUR 22.583)
118.667 136.6646 20.17 .Q . . . V.
(PEAK DAY 1, HOUR 22.667)
118.750 136.8023 19.99 .Q . . . V.
(PEAK DAY 1, HOUR 22.750)
118.833 136.9388 19.82 .Q . . . V.
(PEAK DAY 1, HOUR 22.833)
118.917 137.0741 19.65 .Q . . . V.
(PEAK DAY 1, HOUR 22.917)
119.000 137.2083 19.48 .Q . . . V.
(PEAK DAY 1, HOUR 23.000)
119.083 137.3414 19.32 .Q . . . V.
(PEAK DAY 1, HOUR 23.083)
119.167 137.4734 19.16 .Q . . . V.
(PEAK DAY 1, HOUR 23.167)
119.250 137.6043 19.01 .Q . . . V.
(PEAK DAY 1, HOUR 23.250)
119.333 137.7341 18.86 .Q . . . V.
(PEAK DAY 1, HOUR 23.333)
119.417 137.8630 18.71 .Q . . . V.
(PEAK DAY 1, HOUR 23.417)
119.500 137.9908 18.56 .Q . . . V.
(PEAK DAY 1, HOUR 23.500)
119.583 138.1177 18.42 .Q . . . V.
(PEAK DAY 1, HOUR 23.583)
119.667 138.2436 18.28 .Q . . . V.
(PEAK DAY 1, HOUR 23.667)
119.750 138.3686 18.15 .Q . . . V.
(PEAK DAY 1, HOUR 23.750)
119.833 138.4927 18.01 .Q . . . V.
(PEAK DAY 1, HOUR 23.833)
119.917 138.6158 17.88 .Q . . . V.
(PEAK DAY 1, HOUR 23.917)
120.000 138.7381 17.75 .Q . . . V.
(PEAK DAY 1, HOUR 24.000)
120.083 138.8558 17.09 Q . . . V.
(PEAK DAY 1, HOUR 24.083)
120.167 138.9599 15.13 Q . . . V.
(PEAK DAY 1, HOUR 24.167)
120.250 139.0420 11.91 Q . . . V.
(PEAK DAY 1, HOUR 24.250)
120.333 139.1041 9.02 Q . . . V.
(PEAK DAY 1, HOUR 24.333)
120.417 139.1541 7.26 Q . . . V.
(PEAK DAY 1, HOUR 24.417)
120.500 139.1965 6.15 Q . . . V.
(PEAK DAY 1, HOUR 24.500)
120.583 139.2330 5.30 Q . . . V.
(PEAK DAY 1, HOUR 24.583)
120.667 139.2646 4.60 Q . . . V.
(PEAK DAY 1, HOUR 24.667)
120.750 139.2924 4.03 Q . . . V.
(PEAK DAY 1, HOUR 24.750)
120.833 139.3169 3.56 Q . . . V.
(PEAK DAY 1, HOUR 24.833)
120.917 139.3386 3.15 Q . . . V.
(PEAK DAY 1, HOUR 24.917)
121.000 139.3580 2.81 Q . . . V.
(PEAK DAY 1, HOUR 25.000)
121.083 139.3753 2.51 Q . . . V.
(PEAK DAY 1, HOUR 25.083)
121.167 139.3909 2.27 Q . . . V.
(PEAK DAY 1, HOUR 25.167)
121.250 139.4051 2.06 Q . . . V.
(PEAK DAY 1, HOUR 25.250)
121.333 139.4180 1.89 Q . . . V.
(PEAK DAY 1, HOUR 25.333)
121.417 139.4299 1.72 Q . . . V.
(PEAK DAY 1, HOUR 25.417)
121.500 139.4408 1.58 Q . . . V.
(PEAK DAY 1, HOUR 25.500)
121.583 139.4506 1.43 Q . . . V.
(PEAK DAY 1, HOUR 25.583)
121.667 139.4596 1.30 Q . . . V.
(PEAK DAY 1, HOUR 25.667)
121.750 139.4676 1.17 Q . . . V.
(PEAK DAY 1, HOUR 25.750)
121.833 139.4749 1.06 Q . . . V.
(PEAK DAY 1, HOUR 25.833)
121.917 139.4814 0.95 Q . . . V.
(PEAK DAY 1, HOUR 25.917)
122.000 139.4873 0.84 Q . . . V.
(PEAK DAY 1, HOUR 26.000)
122.083 139.4925 0.76 Q . . . V.
(PEAK DAY 1, HOUR 26.083)
122.167 139.4971 0.67 Q . . . V.
(PEAK DAY 1, HOUR 26.167)
122.250 139.5012 0.59 Q . . . V.
(PEAK DAY 1, HOUR 26.250)
122.333 139.5047 0.52 Q . . . V.
(PEAK DAY 1, HOUR 26.333)
122.417 139.5079 0.46 Q . . . V.
(PEAK DAY 1, HOUR 26.417)
122.500 139.5107 0.40 Q . . . V.
(PEAK DAY 1, HOUR 26.500)
122.583 139.5130 0.35 Q . . . V.
(PEAK DAY 1, HOUR 26.583)
122.667 139.5151 0.29 Q . . . V.
(PEAK DAY 1, HOUR 26.667)
122.750 139.5168 0.26 Q . . . V.
(PEAK DAY 1, HOUR 26.750)
122.833 139.5185 0.24 Q . . . V.
(PEAK DAY 1, HOUR 26.833)
122.917 139.5201 0.23 Q . . . V.
(PEAK DAY 1, HOUR 26.917)
123.000 139.5216 0.21 Q . . . V.
(PEAK DAY 1, HOUR 27.000)
123.083 139.5229 0.20 Q . . . V.
(PEAK DAY 1, HOUR 27.083)
123.167 139.5242 0.18 Q . . . V.
(PEAK DAY 1, HOUR 27.167)
123.250 139.5253 0.17 Q . . . V.
(PEAK DAY 1, HOUR 27.250)
123.333 139.5264 0.15 Q . . . V.
(PEAK DAY 1, HOUR 27.333)
123.417 139.5273 0.13 Q . . . V.

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 (PEAK DAY 1, HOUR  27.417)
 123.500    139.5281      0.12  Q          .          .          .        V.
 (PEAK DAY 1, HOUR  27.500)
 123.583    139.5288      0.10  Q          .          .          .        V.
 (PEAK DAY 1, HOUR  27.583)
 123.667    139.5294      0.09  Q          .          .          .        V.
 (PEAK DAY 1, HOUR  27.667)
 123.750    139.5300      0.08  Q          .          .          .        V.
 (PEAK DAY 1, HOUR  27.750)
 123.833    139.5304      0.06  Q          .          .          .        V.
 (PEAK DAY 1, HOUR  27.833)
 123.917    139.5307      0.05  Q          .          .          .        V.
 (PEAK DAY 1, HOUR  27.917)
 124.000    139.5309      0.03  Q          .          .          .        V.
 (PEAK DAY 1, HOUR  28.000)
================================================================================

  END OF FLOODSCx ROUTING ANALYSIS



********************************************************************************
  FLOW PROCESS FROM NODE   6330.00 TO NODE   6330.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  5341.3 Ac. ***
================================================================================

  END OF FLOODSCx ROUTING ANALYSIS



********************************************************************************
  FLOW PROCESS FROM NODE   6330.00 TO NODE   6330.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  5341.3 Ac. ***

           STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
        (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      475.0     950.0    1425.0    1900.0
--------------------------------------------------------------------------------
  96.000    594.1589     66.48  .Q        V          .          .          .
 (PEAK DAY 2, HOUR  24.000)
  96.083    594.6179     66.64  .Q        V          .          .          .
 (PEAK DAY 1, HOUR   0.083)
  96.167    595.0938     69.10  .Q        V          .          .          .
 (PEAK DAY 1, HOUR   0.167)
  96.250    595.6103     74.99  .Q        V          .          .          .
 (PEAK DAY 1, HOUR   0.250)
  96.333    596.1827     83.11  .Q        V          .          .          .
 (PEAK DAY 1, HOUR   0.333)
  96.417    596.8184     92.31  .Q        V          .          .          .
 (PEAK DAY 1, HOUR   0.417)
  96.500    597.5350    104.06  . Q       V          .          .          .
 (PEAK DAY 1, HOUR   0.500)
  96.583    598.3772    122.28  . Q       V          .          .          .
 (PEAK DAY 1, HOUR   0.583)
  96.667    599.3857    146.44  . Q       V          .          .          .
 (PEAK DAY 1, HOUR   0.667)
  96.750    600.5456    168.41  . Q       V          .          .          .
 (PEAK DAY 1, HOUR   0.750)
  96.833    601.8095    183.52  . Q       V          .          .          .
 (PEAK DAY 1, HOUR   0.833)
  96.917    603.1454    193.98  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   0.917)
  97.000    604.5378    202.17  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.000)
  97.083    605.9768    208.95  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.083)
  97.167    607.4559    214.76  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.167)
  97.250    608.9700    219.86  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.250)
  97.333    610.5151    224.35  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.333)
  97.417    612.0876    228.32  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.417)
  97.500    613.6846    231.89  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.500)
  97.583    615.3043    235.18  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.583)
  97.667    616.9445    238.15  .   Q     V          .          .          .
 (PEAK DAY 1, HOUR   1.667)
  97.750    618.6031    240.84  .   Q     V          .          .          .
 (PEAK DAY 1, HOUR   1.750)
  97.833    620.2784    243.25  .   Q     V          .          .          .
 (PEAK DAY 1, HOUR   1.833)
  97.917    621.9685    245.40  .   Q     .V         .          .          .
 (PEAK DAY 1, HOUR   1.917)
  98.000    623.6720    247.35  .   Q     .V         .          .          .
 (PEAK DAY 1, HOUR   2.000)
  98.083    625.3881    249.18  .   Q     .V         .          .          .
 (PEAK DAY 1, HOUR   2.083)
  98.167    627.1156    250.83  .   Q     .V         .          .          .
 (PEAK DAY 1, HOUR   2.167)
  98.250    628.8526    252.21  .   Q     .V         .          .          .
 (PEAK DAY 1, HOUR   2.250)
  98.333    630.5977    253.39  .   Q     .V         .          .          .
 (PEAK DAY 1, HOUR   2.333)
  98.417    632.3506    254.51  .   Q     .V         .          .          .
 (PEAK DAY 1, HOUR   2.417)
  98.500    634.1110    255.62  .   Q     .V         .          .          .
 (PEAK DAY 1, HOUR   2.500)
  98.583    635.8792    256.73  .   Q     .V         .          .          .
 (PEAK DAY 1, HOUR   2.583)
  98.667    637.6550    257.85  .   Q     .V         .          .          .
 (PEAK DAY 1, HOUR   2.667)
  98.750    639.4386    258.97  .   Q     .V         .          .          .
 (PEAK DAY 1, HOUR   2.750)
  98.833    641.2299    260.09  .   Q     .V         .          .          .
 (PEAK DAY 1, HOUR   2.833)
  98.917    643.0289    261.21  .   Q     .V         .          .          .
 (PEAK DAY 1, HOUR   2.917)
  99.000    644.8357    262.35  .   Q     .V         .          .          .
 (PEAK DAY 1, HOUR   3.000)
  99.083    646.6504    263.50  .   Q     .V         .          .          .
 (PEAK DAY 1, HOUR   3.083)
  99.167    648.4731    264.66  .   Q     .V         .          .          .
 (PEAK DAY 1, HOUR   3.167)
  99.250    650.3038    265.83  .   Q     .V         .          .          .
 (PEAK DAY 1, HOUR   3.250)
  99.333    652.1428    267.01  .   Q     .V         .          .          .
 (PEAK DAY 1, HOUR   3.333)
  99.417    653.9899    268.20  .   Q     .V         .          .          .
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(PEAK DAY 1, HOUR 3.417)
99.500 655.8453 269.41 . Q .V . . .
(PEAK DAY 1, HOUR 3.500)
99.583 657.7090 270.62 . Q .V . . .
(PEAK DAY 1, HOUR 3.583)
99.667 659.5812 271.85 . Q .V . . .
(PEAK DAY 1, HOUR 3.667)
99.750 661.4619 273.08 . Q .V . . .
(PEAK DAY 1, HOUR 3.750)
99.833 663.3512 274.32 . Q .V . . .
(PEAK DAY 1, HOUR 3.833)
99.917 665.2491 275.57 . Q .V . . .
(PEAK DAY 1, HOUR 3.917)
100.000 667.1555 276.82 . Q .V . . .
(PEAK DAY 1, HOUR 4.000)
100.083 669.0703 278.02 . Q .V . . .
(PEAK DAY 1, HOUR 4.083)
100.167 670.9930 279.19 . Q .V . . .
(PEAK DAY 1, HOUR 4.167)
100.250 672.9238 280.35 . Q .V . . .
(PEAK DAY 1, HOUR 4.250)
100.333 674.8625 281.51 . Q .V . . .
(PEAK DAY 1, HOUR 4.333)
100.417 676.8094 282.69 . Q .V . . .
(PEAK DAY 1, HOUR 4.417)
100.500 678.7646 283.88 . Q . V . . .
(PEAK DAY 1, HOUR 4.500)
100.583 680.7280 285.09 . Q . V . . .
(PEAK DAY 1, HOUR 4.583)
100.667 682.6998 286.31 . Q . V . . .
(PEAK DAY 1, HOUR 4.667)
100.750 684.6801 287.54 . Q . V . . .
(PEAK DAY 1, HOUR 4.750)
100.833 686.6690 288.78 . Q . V . . .
(PEAK DAY 1, HOUR 4.833)
100.917 688.6666 290.05 . Q . V . . .
(PEAK DAY 1, HOUR 4.917)
101.000 690.6729 291.32 . Q . V . . .
(PEAK DAY 1, HOUR 5.000)
101.083 692.6881 292.61 . Q . V . . .
(PEAK DAY 1, HOUR 5.083)
101.167 694.7123 293.91 . Q . V . . .
(PEAK DAY 1, HOUR 5.167)
101.250 696.7456 295.23 . Q . V . . .
(PEAK DAY 1, HOUR 5.250)
101.333 698.7881 296.57 . Q . V . . .
(PEAK DAY 1, HOUR 5.333)
101.417 700.8399 297.92 . Q . V . . .
(PEAK DAY 1, HOUR 5.417)
101.500 702.9011 299.29 . Q . V . . .
(PEAK DAY 1, HOUR 5.500)
101.583 704.9719 300.67 . Q . V . . .
(PEAK DAY 1, HOUR 5.583)
101.667 707.0522 302.07 . Q . V . . .
(PEAK DAY 1, HOUR 5.667)
101.750 709.1424 303.49 . Q . V . . .
(PEAK DAY 1, HOUR 5.750)
101.833 711.2424 304.93 . Q . V . . .
(PEAK DAY 1, HOUR 5.833)
101.917 713.3525 306.38 . Q . V . . .
(PEAK DAY 1, HOUR 5.917)
102.000 715.4727 307.85 . Q . V . . .
(PEAK DAY 1, HOUR 6.000)
102.083 717.6031 309.34 . Q . V . . .
(PEAK DAY 1, HOUR 6.083)
102.167 719.7439 310.85 . Q . V . . .
(PEAK DAY 1, HOUR 6.167)
102.250 721.8953 312.38 . Q . V . . .
(PEAK DAY 1, HOUR 6.250)
102.333 724.0573 313.92 . Q . V . . .
(PEAK DAY 1, HOUR 6.333)
102.417 726.2300 315.49 . Q . V . . .
(PEAK DAY 1, HOUR 6.417)
102.500 728.4138 317.08 . Q . V . . .
(PEAK DAY 1, HOUR 6.500)
102.583 730.6086 318.69 . Q . V . . .
(PEAK DAY 1, HOUR 6.583)
102.667 732.8146 320.31 . Q . V . . .
(PEAK DAY 1, HOUR 6.667)
102.750 735.0311 321.84 . Q . V . . .
(PEAK DAY 1, HOUR 6.750)
102.833 737.2559 323.03 . Q . V . . .
(PEAK DAY 1, HOUR 6.833)
102.917 739.4861 323.84 . Q . V . . .
(PEAK DAY 1, HOUR 6.917)
103.000 741.7213 324.55 . Q . V . . .
(PEAK DAY 1, HOUR 7.000)
103.083 743.9621 325.36 . Q . V . . .
(PEAK DAY 1, HOUR 7.083)
103.167 746.2094 326.31 . Q . V . . .
(PEAK DAY 1, HOUR 7.167)
103.250 748.4641 327.38 . Q . V . . .
(PEAK DAY 1, HOUR 7.250)
103.333 750.7269 328.56 . Q . V . . .
(PEAK DAY 1, HOUR 7.333)
103.417 752.9986 329.84 . Q . V . . .
(PEAK DAY 1, HOUR 7.417)
103.500 755.2797 331.21 . Q . V . . .
(PEAK DAY 1, HOUR 7.500)
103.583 757.5707 332.66 . Q . V . . .
(PEAK DAY 1, HOUR 7.583)
103.667 759.8723 334.19 . Q . V . . .
(PEAK DAY 1, HOUR 7.667)
103.750 762.1848 335.78 . Q . V . . .
(PEAK DAY 1, HOUR 7.750)
103.833 764.5087 337.42 . Q . V . . .
(PEAK DAY 1, HOUR 7.833)
103.917 766.8443 339.13 . Q . V . . .
(PEAK DAY 1, HOUR 7.917)
104.000 769.1920 340.89 . Q . V . . .
(PEAK DAY 1, HOUR 8.000)
104.083 771.5522 342.70 . Q . V . . .
(PEAK DAY 1, HOUR 8.083)
104.167 773.9252 344.56 . Q . V . . .
(PEAK DAY 1, HOUR 8.167)
104.250 776.3113 346.46 . Q . V . . .
(PEAK DAY 1, HOUR 8.250)
104.333 778.7109 348.41 . Q . V . . .
(PEAK DAY 1, HOUR 8.333)
104.417 781.1241 350.40 . Q . V . . .
(PEAK DAY 1, HOUR 8.417)
104.500 783.5513 352.43 . Q . V . . .
(PEAK DAY 1, HOUR 8.500)
104.583 785.9929 354.51 . Q . V . . .
(PEAK DAY 1, HOUR 8.583)
104.667 788.4489 356.62 . Q . V . . .
(PEAK DAY 1, HOUR 8.667)
104.750 790.9199 358.78 . Q . V . . .
(PEAK DAY 1, HOUR 8.750)
104.833 793.4059 360.98 . Q . V . . .
(PEAK DAY 1, HOUR 8.833)
104.917 795.9074 363.22 . Q . V . . .
(PEAK DAY 1, HOUR 8.917)
105.000 798.4246 365.49 . Q . V . . .

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 (PEAK DAY 1, HOUR   9.000)
105.083    800.9571    367.72  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR   9.083)
105.167    803.5030    369.67  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR   9.167)
105.250    806.0596    371.21  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR   9.250)
105.333    808.6256    372.59  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR   9.333)
105.417    811.2014    374.00  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR   9.417)
105.500    813.7874    375.49  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR   9.500)
105.583    816.3842    377.07  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR   9.583)
105.667    818.9926    378.73  .      Q  .   V     .         .         .
 (PEAK DAY 1, HOUR   9.667)
105.750    821.6129    380.47  .       Q .   V     .         .         .
 (PEAK DAY 1, HOUR   9.750)
105.833    824.2458    382.30  .       Q .   V     .         .         .
 (PEAK DAY 1, HOUR   9.833)
105.917    826.8919    384.21  .       Q .   V     .         .         .
 (PEAK DAY 1, HOUR   9.917)
106.000    829.5517    386.20  .       Q .   V     .         .         .
 (PEAK DAY 1, HOUR  10.000)
106.083    832.2257    388.27  .       Q .   V     .         .         .
 (PEAK DAY 1, HOUR  10.083)
106.167    834.9145    390.41  .       Q .   V     .         .         .
 (PEAK DAY 1, HOUR  10.167)
106.250    837.6186    392.64  .       Q .   V     .         .         .
 (PEAK DAY 1, HOUR  10.250)
106.333    840.3386    394.94  .       Q .   V     .         .         .
 (PEAK DAY 1, HOUR  10.333)
106.417    843.0750    397.32  .       Q .   V     .         .         .
 (PEAK DAY 1, HOUR  10.417)
106.500    845.8283    399.78  .       Q .   V     .         .         .
 (PEAK DAY 1, HOUR  10.500)
106.583    848.5991    402.32  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  10.583)
106.667    851.3879    404.94  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  10.667)
106.750    854.1954    407.64  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  10.750)
106.833    857.0217    410.39  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  10.833)
106.917    859.8658    412.96  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  10.917)
107.000    862.7251    415.17  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.000)
107.083    865.5984    417.21  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.083)
107.167    868.4861    419.28  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.167)
107.250    871.3885    421.43  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.250)
107.333    874.3063    423.67  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.333)
107.417    877.2403    426.01  .       Q .    V    .         .         .
 (PEAK DAY 1, HOUR  11.417)
107.500    880.1910    428.44  .        Q.    V    .         .         .
 (PEAK DAY 1, HOUR  11.500)
107.583    883.1591    430.96  .        Q.    V    .         .         .
 (PEAK DAY 1, HOUR  11.583)
107.667    886.1451    433.58  .        Q.    V    .         .         .
 (PEAK DAY 1, HOUR  11.667)
107.750    889.1500    436.30  .        Q.    V    .         .         .
 (PEAK DAY 1, HOUR  11.750)
107.833    892.1743    439.13  .        Q.    V    .         .         .
 (PEAK DAY 1, HOUR  11.833)
107.917    895.2187    442.05  .        Q.    V    .         .         .
 (PEAK DAY 1, HOUR  11.917)
108.000    898.2841    445.09  .        Q.    V    .         .         .
 (PEAK DAY 1, HOUR  12.000)
108.083    901.3746    448.75  .        Q.    V    .         .         .
 (PEAK DAY 1, HOUR  12.083)
108.167    904.5016    454.04  .        Q.     V   .         .         .
 (PEAK DAY 1, HOUR  12.167)
108.250    907.6758    460.89  .        Q.     V   .         .         .
 (PEAK DAY 1, HOUR  12.250)
108.333    910.8948    467.40  .        Q.     V   .         .         .
 (PEAK DAY 1, HOUR  12.333)
108.417    914.1483    472.42  .        Q.     V   .         .         .
 (PEAK DAY 1, HOUR  12.417)
108.500    917.4311    476.65  .         Q     V   .         .         .
 (PEAK DAY 1, HOUR  12.500)
108.583    920.7430    480.90  .         Q     V   .         .         .
 (PEAK DAY 1, HOUR  12.583)
108.667    924.0861    485.42  .         Q     V   .         .         .
 (PEAK DAY 1, HOUR  12.667)
108.750    927.4623    490.23  .         Q     V   .         .         .
 (PEAK DAY 1, HOUR  12.750)
108.833    930.8734    495.28  .         Q     V   .         .         .
 (PEAK DAY 1, HOUR  12.833)
108.917    934.3205    500.52  .         Q     V   .         .         .
 (PEAK DAY 1, HOUR  12.917)
109.000    937.8048    505.92  .         Q     V   .         .         .
 (PEAK DAY 1, HOUR  13.000)
109.083    941.3273    511.47  .         Q     V   .         .         .
 (PEAK DAY 1, HOUR  13.083)
109.167    944.8890    517.16  .         Q     V   .         .         .
 (PEAK DAY 1, HOUR  13.167)
109.250    948.4911    523.01  .         .Q    V   .         .         .
 (PEAK DAY 1, HOUR  13.250)
109.333    952.1345    529.03  .         .Q    V   .         .         .
 (PEAK DAY 1, HOUR  13.333)
109.417    955.8208    535.25  .         .Q    V   .         .         .
 (PEAK DAY 1, HOUR  13.417)
109.500    959.5513    541.66  .         .Q     V  .         .         .
 (PEAK DAY 1, HOUR  13.500)
109.583    963.3268    548.21  .         .Q     V  .         .         .
 (PEAK DAY 1, HOUR  13.583)
109.667    967.1457    554.51  .         .Q     V  .         .         .
 (PEAK DAY 1, HOUR  13.667)
109.750    971.0051    560.38  .         .Q     V  .         .         .
 (PEAK DAY 1, HOUR  13.750)
109.833    974.9041    566.14  .         .Q     V  .         .         .
 (PEAK DAY 1, HOUR  13.833)
109.917    978.8444    572.12  .         . Q    V  .         .         .
 (PEAK DAY 1, HOUR  13.917)
110.000    982.8279    578.41  .         . Q    V  .         .         .
 (PEAK DAY 1, HOUR  14.000)
110.083    986.8575    585.10  .         . Q    V  .         .         .
 (PEAK DAY 1, HOUR  14.083)
110.167    990.9372    592.37  .         . Q    V  .         .         .
 (PEAK DAY 1, HOUR  14.167)
110.250    995.0717    600.34  .         . Q    V  .         .         .
 (PEAK DAY 1, HOUR  14.250)
110.333    999.2653    608.90  .         . Q    V  .         .         .
 (PEAK DAY 1, HOUR  14.333)
110.417   1003.5218    618.04  .         .  Q   V  .         .         .
 (PEAK DAY 1, HOUR  14.417)
110.500   1007.8459    627.87  .         .  Q   V  .         .         .
 (PEAK DAY 1, HOUR  14.500)
110.583   1012.2434    638.51  .         .  Q   V  .         .         .
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 (PEAK DAY 1, HOUR  14.583)
110.667   1016.7213    650.19  .         .  Q    V .         .         .
 (PEAK DAY 1, HOUR  14.667)
110.750   1021.2884    663.14  .         .  Q    V .         .         .
 (PEAK DAY 1, HOUR  14.750)
110.833   1025.9537    677.41  .         .   Q   V .         .         .
 (PEAK DAY 1, HOUR  14.833)
110.917   1030.7235    692.58  .         .   Q   V .         .         .
 (PEAK DAY 1, HOUR  14.917)
111.000   1035.5973    707.67  .         .   Q   V .         .         .
 (PEAK DAY 1, HOUR  15.000)
111.083   1040.5748    722.74  .         .    Q  V .         .         .
 (PEAK DAY 1, HOUR  15.083)
111.167   1045.6628    738.78  .         .    Q  V .         .         .
 (PEAK DAY 1, HOUR  15.167)
111.250   1050.8733    756.56  .         .    Q  V .         .         .
 (PEAK DAY 1, HOUR  15.250)
111.333   1056.2198    776.32  .         .     Q V .         .         .
 (PEAK DAY 1, HOUR  15.333)
111.417   1061.7061    796.60  .         .     Q V .         .         .
 (PEAK DAY 1, HOUR  15.417)
111.500   1067.3125    814.05  .         .      QV .         .         .
 (PEAK DAY 1, HOUR  15.500)
111.583   1073.0208    828.84  .         .      Q V.         .         .
 (PEAK DAY 1, HOUR  15.583)
111.667   1078.8594    847.77  .         .      Q V.         .         .
 (PEAK DAY 1, HOUR  15.667)
111.750   1084.9006    877.19  .         .       QV.         .         .
 (PEAK DAY 1, HOUR  15.750)
111.833   1091.2291    918.90  .         .        Q.         .         .
 (PEAK DAY 1, HOUR  15.833)
111.917   1097.9668    978.30  .         .        VQ         .         .
 (PEAK DAY 1, HOUR  15.917)
112.000   1105.3342   1069.76  .         .        V. Q       .         .
 (PEAK DAY 1, HOUR  16.000)
112.083   1114.1068   1273.79  .         .        V.     Q   .         .
 (PEAK DAY 1, HOUR  16.083)
112.167   1125.2484   1617.75  .         .        V.         .   Q     .
 (PEAK DAY 1, HOUR  16.167)
112.250   1138.3204   1898.06  .         .         V         .        Q.
 (PEAK DAY 1, HOUR  16.250)
112.333   1150.9785   1837.95  .         .         V         .       Q .
 (PEAK DAY 1, HOUR  16.333)
112.417   1161.7660   1566.34  .         .         V         . Q       .
 (PEAK DAY 1, HOUR  16.417)
112.500   1171.2061   1370.70  .         .         V       Q .         .
 (PEAK DAY 1, HOUR  16.500)
112.583   1180.0226   1280.16  .         .         V     Q   .         .
 (PEAK DAY 1, HOUR  16.583)
112.667   1188.4581   1224.84  .         .         .V   Q    .         .
 (PEAK DAY 1, HOUR  16.667)
112.750   1196.5693   1177.75  .         .         .V  Q     .         .
 (PEAK DAY 1, HOUR  16.750)
112.833   1204.3988   1136.84  .         .         .V Q      .         .
 (PEAK DAY 1, HOUR  16.833)
112.917   1211.9944   1102.88  .         .         .V Q      .         .
 (PEAK DAY 1, HOUR  16.917)
113.000   1219.3901   1073.86  .         .         .VQ       .         .
 (PEAK DAY 1, HOUR  17.000)
113.083   1226.6200   1049.77  .         .         .VQ       .         .
 (PEAK DAY 1, HOUR  17.083)
113.167   1233.7101   1029.48  .         .         .Q        .         .
 (PEAK DAY 1, HOUR  17.167)
113.250   1240.6959   1014.34  .         .         .Q        .         .
 (PEAK DAY 1, HOUR  17.250)
113.333   1247.5999   1002.45  .         .         .QV       .         .
 (PEAK DAY 1, HOUR  17.333)
113.417   1254.4512    994.80  .         .         Q V       .         .
 (PEAK DAY 1, HOUR  17.417)
113.500   1261.2560    988.06  .         .         Q V       .         .
 (PEAK DAY 1, HOUR  17.500)
113.583   1268.0201    982.15  .         .         Q V       .         .
 (PEAK DAY 1, HOUR  17.583)
113.667   1274.7402    975.75  .         .         Q V       .         .
 (PEAK DAY 1, HOUR  17.667)
113.750   1281.4225    970.26  .         .         Q V       .         .
 (PEAK DAY 1, HOUR  17.750)
113.833   1288.0605    963.85  .         .         Q V       .         .
 (PEAK DAY 1, HOUR  17.833)
113.917   1294.6588    958.08  .         .         Q V       .         .
 (PEAK DAY 1, HOUR  17.917)
114.000   1301.2234    953.17  .         .         Q  V      .         .
 (PEAK DAY 1, HOUR  18.000)
114.083   1307.7368    945.75  .         .        Q.  V      .         .
 (PEAK DAY 1, HOUR  18.083)
114.167   1314.1986    938.25  .         .        Q.  V      .         .
 (PEAK DAY 1, HOUR  18.167)
114.250   1320.6052    930.24  .         .        Q.  V      .         .
 (PEAK DAY 1, HOUR  18.250)
114.333   1326.9509    921.39  .         .        Q.  V      .         .
 (PEAK DAY 1, HOUR  18.333)
114.417   1333.2297    911.68  .         .        Q.  V      .         .
 (PEAK DAY 1, HOUR  18.417)
114.500   1339.4608    904.75  .         .        Q.  V      .         .
 (PEAK DAY 1, HOUR  18.500)
114.583   1345.6589    899.97  .         .       Q .  V      .         .
 (PEAK DAY 1, HOUR  18.583)
114.667   1351.8274    895.66  .         .       Q .  V      .         .
 (PEAK DAY 1, HOUR  18.667)
114.750   1357.9551    889.74  .         .       Q .   V     .         .
 (PEAK DAY 1, HOUR  18.750)
114.833   1364.0481    884.71  .         .       Q .   V     .         .
 (PEAK DAY 1, HOUR  18.833)
114.917   1370.1202    881.68  .         .       Q .   V     .         .
 (PEAK DAY 1, HOUR  18.917)
115.000   1376.1741    879.02  .         .       Q .   V     .         .
 (PEAK DAY 1, HOUR  19.000)
115.083   1382.2108    876.53  .         .       Q .   V     .         .
 (PEAK DAY 1, HOUR  19.083)
115.167   1388.2312    874.16  .         .       Q .   V     .         .
 (PEAK DAY 1, HOUR  19.167)
115.250   1394.2360    871.90  .         .       Q .   V     .         .
 (PEAK DAY 1, HOUR  19.250)
115.333   1400.2256    869.69  .         .       Q .   V     .         .
 (PEAK DAY 1, HOUR  19.333)
115.417   1406.2001    867.50  .         .       Q .   V     .         .
 (PEAK DAY 1, HOUR  19.417)
115.500   1412.1593    865.27  .         .       Q .    V    .         .
 (PEAK DAY 1, HOUR  19.500)
115.583   1418.1027    862.97  .         .       Q .    V    .         .
 (PEAK DAY 1, HOUR  19.583)
115.667   1424.0264    860.12  .         .       Q .    V    .         .
 (PEAK DAY 1, HOUR  19.667)
115.750   1429.9298    857.19  .         .       Q .    V    .         .
 (PEAK DAY 1, HOUR  19.750)
115.833   1435.8173    854.87  .         .     Q  .    V    .         .
 (PEAK DAY 1, HOUR  19.833)
115.917   1441.6910    852.87  .         .     Q  .    V    .         .
 (PEAK DAY 1, HOUR  19.917)
116.000   1447.5513    850.91  .         .     Q  .    V    .         .
 (PEAK DAY 1, HOUR  20.000)
116.083   1453.3976    848.89  .         .     Q  .    V    .         .
 (PEAK DAY 1, HOUR  20.083)
116.167   1459.2291    846.74  .         .     Q  .    V    .         .
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(PEAK DAY 1, HOUR 20.167)
116.250 1465.0394 843.65 . . Q . V . .
(PEAK DAY 1, HOUR 20.250)
116.333 1470.8348 841.50 . . Q . V . .
(PEAK DAY 1, HOUR 20.333)
116.417 1476.6183 839.76 . . Q . V . .
(PEAK DAY 1, HOUR 20.417)
116.500 1482.3904 838.11 . . Q . V . .
(PEAK DAY 1, HOUR 20.500)
116.583 1488.1512 836.48 . . Q . V . .
(PEAK DAY 1, HOUR 20.583)
116.667 1493.9011 834.89 . . Q . V . .
(PEAK DAY 1, HOUR 20.667)
116.750 1499.6404 833.34 . . Q . V . .
(PEAK DAY 1, HOUR 20.750)
116.833 1505.3693 831.83 . . Q . V . .
(PEAK DAY 1, HOUR 20.833)
116.917 1511.0878 830.33 . . Q . V . .
(PEAK DAY 1, HOUR 20.917)
117.000 1516.7961 828.85 . . Q . V . .
(PEAK DAY 1, HOUR 21.000)
117.083 1522.4944 827.39 . . Q . V . .
(PEAK DAY 1, HOUR 21.083)
117.167 1528.1826 825.93 . . Q . V . .
(PEAK DAY 1, HOUR 21.167)
117.250 1533.8610 824.50 . . Q . V . .
(PEAK DAY 1, HOUR 21.250)
117.333 1539.5295 823.07 . . Q . V . .
(PEAK DAY 1, HOUR 21.333)
117.417 1545.1884 821.66 . . Q . V . .
(PEAK DAY 1, HOUR 21.417)
117.500 1550.8376 820.27 . . Q . V . .
(PEAK DAY 1, HOUR 21.500)
117.583 1556.4775 818.92 . . Q . V . .
(PEAK DAY 1, HOUR 21.583)
117.667 1562.1084 817.61 . . Q . V . .
(PEAK DAY 1, HOUR 21.667)
117.750 1567.7303 816.31 . . Q . V . .
(PEAK DAY 1, HOUR 21.750)
117.833 1573.3435 815.03 . . Q . V . .
(PEAK DAY 1, HOUR 21.833)
117.917 1578.9479 813.75 . . Q . V . .
(PEAK DAY 1, HOUR 21.917)
118.000 1584.5435 812.48 . . Q . V . .
(PEAK DAY 1, HOUR 22.000)
118.083 1590.1304 811.22 . . Q . V . .
(PEAK DAY 1, HOUR 22.083)
118.167 1595.7087 809.97 . . Q . V . .
(PEAK DAY 1, HOUR 22.167)
118.250 1601.2786 808.73 . . Q . V . .
(PEAK DAY 1, HOUR 22.250)
118.333 1606.8398 807.50 . . Q . V . .
(PEAK DAY 1, HOUR 22.333)
118.417 1612.3927 806.28 . . Q . V . .
(PEAK DAY 1, HOUR 22.417)
118.500 1617.9371 805.06 . . Q . V . .
(PEAK DAY 1, HOUR 22.500)
118.583 1623.4733 803.85 . . Q . V . .
(PEAK DAY 1, HOUR 22.583)
118.667 1629.0011 802.64 . . Q . V . .
(PEAK DAY 1, HOUR 22.667)
118.750 1634.5206 801.44 . . Q . V . .
(PEAK DAY 1, HOUR 22.750)
118.833 1640.0320 800.24 . . Q . V. .
(PEAK DAY 1, HOUR 22.833)
118.917 1645.5350 799.05 . . Q . V. .
(PEAK DAY 1, HOUR 22.917)
119.000 1651.0299 797.86 . . Q . V. .
(PEAK DAY 1, HOUR 23.000)
119.083 1656.5167 796.68 . . Q . V. .
(PEAK DAY 1, HOUR 23.083)
119.167 1661.9954 795.50 . . Q . V. .
(PEAK DAY 1, HOUR 23.167)
119.250 1667.4659 794.33 . . Q . V. .
(PEAK DAY 1, HOUR 23.250)
119.333 1672.9285 793.16 . . Q . V. .
(PEAK DAY 1, HOUR 23.333)
119.417 1678.3829 791.99 . . Q . V. .
(PEAK DAY 1, HOUR 23.417)
119.500 1683.8295 790.84 . . Q . V. .
(PEAK DAY 1, HOUR 23.500)
119.583 1689.2683 789.72 . . Q . V. .
(PEAK DAY 1, HOUR 23.583)
119.667 1694.6996 788.63 . . Q . V .
(PEAK DAY 1, HOUR 23.667)
119.750 1700.1234 787.55 . . Q . V .
(PEAK DAY 1, HOUR 23.750)
119.833 1705.5399 786.47 . . Q . V .
(PEAK DAY 1, HOUR 23.833)
119.917 1710.9490 785.40 . . Q . V .
(PEAK DAY 1, HOUR 23.917)
120.000 1716.3507 784.33 . . Q . V .
(PEAK DAY 1, HOUR 24.000)
120.083 1721.7394 782.43 . . Q . V .
(PEAK DAY 1, HOUR 24.083)
120.167 1727.0986 778.16 . . Q . V .
(PEAK DAY 1, HOUR 24.167)
120.250 1732.4114 771.41 . . Q . V .
(PEAK DAY 1, HOUR 24.250)
120.333 1737.6792 764.89 . . Q . V .
(PEAK DAY 1, HOUR 24.333)
120.417 1742.9163 760.42 . . Q . V .
(PEAK DAY 1, HOUR 24.417)
120.500 1748.1320 757.32 . . Q . V .
(PEAK DAY 1, HOUR 24.500)
120.583 1753.3298 754.72 . . Q . .V .
(PEAK DAY 1, HOUR 24.583)
120.667 1758.5118 752.42 . . Q . .V .
(PEAK DAY 1, HOUR 24.667)
120.750 1763.6794 750.33 . . Q . .V .
(PEAK DAY 1, HOUR 24.750)
120.833 1768.8337 748.40 . . Q . .V .
(PEAK DAY 1, HOUR 24.833)
120.917 1773.9755 746.57 . . Q . .V .
(PEAK DAY 1, HOUR 24.917)
121.000 1779.1053 744.86 . . Q . .V .
(PEAK DAY 1, HOUR 25.000)
121.083 1784.2240 743.22 . . Q . .V .
(PEAK DAY 1, HOUR 25.083)
121.167 1789.3309 741.52 . . Q . .V .
(PEAK DAY 1, HOUR 25.167)
121.250 1794.4238 739.50 . . Q . .V .
(PEAK DAY 1, HOUR 25.250)
121.333 1799.5006 737.15 . . Q . .V .
(PEAK DAY 1, HOUR 25.333)
121.417 1804.5603 734.67 . . Q . .V .
(PEAK DAY 1, HOUR 25.417)
121.500 1809.6028 732.16 . . Q . . V .
(PEAK DAY 1, HOUR 25.500)
121.583 1814.6281 729.67 . . Q . . V .
(PEAK DAY 1, HOUR 25.583)
121.667 1819.6362 727.19 . . Q . . V .
(PEAK DAY 1, HOUR 25.667)
121.750 1824.6274 724.73 . . Q . . V .

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 (PEAK DAY 1, HOUR  25.750)
 121.833   1829.6019    722.29  .         .    Q    .         . V       .
 (PEAK DAY 1, HOUR  25.833)
 121.917   1834.5597    719.87  .         .    Q    .         . V       .
 (PEAK DAY 1, HOUR  25.917)
 122.000   1839.5009    717.45  .         .    Q    .         . V       .
 (PEAK DAY 1, HOUR  26.000)
 122.083   1844.4255    715.07  .         .    Q    .         . V       .
 (PEAK DAY 1, HOUR  26.083)
 122.167   1849.3340    712.71  .         .    Q    .         . V       .
 (PEAK DAY 1, HOUR  26.167)
 122.250   1854.2262    710.36  .         .   Q     .         . V       .
 (PEAK DAY 1, HOUR  26.250)
 122.333   1859.1024    708.02  .         .   Q     .         . V       .
 (PEAK DAY 1, HOUR  26.333)
 122.417   1863.9628    705.72  .         .   Q     .         .  V      .
 (PEAK DAY 1, HOUR  26.417)
 122.500   1868.8074    703.44  .         .   Q     .         .  V      .
 (PEAK DAY 1, HOUR  26.500)
 122.583   1873.6361    701.13  .         .   Q     .         .  V      .
 (PEAK DAY 1, HOUR  26.583)
 122.667   1878.4487    698.79  .         .   Q     .         .  V      .
 (PEAK DAY 1, HOUR  26.667)
 122.750   1883.2452    696.46  .         .   Q     .         .  V      .
 (PEAK DAY 1, HOUR  26.750)
 122.833   1888.0259    694.14  .         .   Q     .         .  V      .
 (PEAK DAY 1, HOUR  26.833)
 122.917   1892.7905    691.83  .         .   Q     .         .  V      .
 (PEAK DAY 1, HOUR  26.917)
 123.000   1897.5394    689.53  .         .   Q     .         .  V      .
 (PEAK DAY 1, HOUR  27.000)
 123.083   1902.2725    687.24  .         .   Q     .         .  V      .
 (PEAK DAY 1, HOUR  27.083)
 123.167   1906.9897    684.95  .         .   Q     .         .  V      .
 (PEAK DAY 1, HOUR  27.167)
 123.250   1911.6914    682.67  .         .   Q     .         .  V      .
 (PEAK DAY 1, HOUR  27.250)
 123.333   1916.3773    680.40  .         .   Q     .         .  V      .
 (PEAK DAY 1, HOUR  27.333)
 123.417   1921.0477    678.14  .         .   Q     .         .   V     .
 (PEAK DAY 1, HOUR  27.417)
 123.500   1925.7025    675.88  .         .   Q     .         .   V     .
 (PEAK DAY 1, HOUR  27.500)
 123.583   1930.3418    673.62  .         .   Q     .         .   V     .
 (PEAK DAY 1, HOUR  27.583)
 123.667   1934.9657    671.38  .         .   Q     .         .   V     .
 (PEAK DAY 1, HOUR  27.667)
 123.750   1939.5742    669.16  .         .   Q     .         .   V     .
 (PEAK DAY 1, HOUR  27.750)
 123.833   1944.1675    666.93  .         .   Q     .         .   V     .
 (PEAK DAY 1, HOUR  27.833)
 123.917   1948.7451    664.66  .         .  Q      .         .   V     .
 (PEAK DAY 1, HOUR  27.917)
 124.000   1953.3065    662.32  .         .  Q      .         .   V     .
 (PEAK DAY 1, HOUR  28.000)
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
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  END OF FLOODSCx ROUTING ANALYSIS



*******************************************************************************
  FLOW PROCESS FROM NODE   6330.00 TO NODE   6355.00 IS CODE = 5.2
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  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
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         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  5341.3 Ac. ***

         THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
         TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
         INTERVALS(Reference: the National Engineering Handbook,
         Hydrology, Chapter 17, page 17-52, August,1972,
         U.S. Department of Commerce).


         ASSUMED REGULAR CHANNEL INFORMATION:
           BASEWIDTH(FT) =   30.00     CHANNEL Z =  1.00
           UPSTREAM ELEVATION(FT) =     375.00
           DOWNSTREAM ELEVATION(FT) =     314.00
           CHANNEL LENGTH(FT) =    6086.00     MANNING'S FACTOR = 0.040
           CONSTANT LOSS RATE(CFS) =    0.00



         CHANNEL ROUTING COEFFICIENT ESTIMATED:
           MAXIMUM INFLOW(CFS) =  1898.06
           AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  1172.74
           CHANNEL NORMAL VELOCITY FOR Q =  1172.74 CFS =   8.36 FPS
           ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.831

         MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
         UNIT INTERVALS IS CSTAR = 0.693


         CONVEX METHOD CHANNEL ROUTING RESULTS:
                                                              OUTFLOW LESS
                    CLOCK        INFLOW      ROUTED          LOSS
PEAK     TIME       TIME       (STREAM 1)    FLOW         (STREAM 1)
 DAY    (HRS)      (HRS)         (CFS)       (CFS)          (CFS)
  2    24.000     96.000         66.48       67.72          67.72
  1     0.083     96.083         66.64       67.21          67.21
  1     0.167     96.167         69.10       66.71          66.71
  1     0.250     96.250         74.99       66.66          66.66
  1     0.333     96.333         83.11       68.32          68.32
  1     0.417     96.417         92.31       72.87          72.87
  1     0.500     96.500        104.06       79.87          79.87
  1     0.583     96.583        122.28       88.38          88.38
  1     0.667     96.667        146.44       99.11          99.11
  1     0.750     96.750        168.41      114.95         114.95
  1     0.833     96.833        183.52      136.49         136.49
  1     0.917     96.917        193.98      158.36         158.36
  1     1.000     97.000        202.17      175.62         175.62
  1     1.083     97.083        208.95      188.22         188.22
  1     1.167     97.167        214.76      197.79         197.79
  1     1.250     97.250        219.86      205.44         205.44
  1     1.333     97.333        224.35      211.83         211.83
  1     1.417     97.417        228.32      217.34         217.34
  1     1.500     97.500        231.89      222.14         222.14
  1     1.583     97.583        235.18      226.37         226.37
  1     1.667     97.667        238.15      230.16         230.16
  1     1.750     97.750        240.84      233.60         233.60
  1     1.833     97.833        243.25      236.72         236.72
  1     1.917     97.917        245.40      239.54         239.54
  1     2.000     98.000        247.35      242.08         242.08
  1     2.083     98.083        249.18      244.36         244.36
  1     2.167     98.167        250.83      246.41         246.41
  1     2.250     98.250        252.21      248.31         248.31
  1     2.333     98.333        253.39      250.04         250.04
  1     2.417     98.417        254.51      251.53         251.53
  1     2.500     98.500        255.62      252.81         252.81
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1	2.583	98.583	256.73	253.98	253.98
1	2.667	98.667	257.85	255.10	255.10
1	2.750	98.750	258.97	256.22	256.22
1	2.833	98.833	260.09	257.34	257.34
1	2.917	98.917	261.21	258.46	258.46
1	3.000	99.000	262.35	259.57	259.57
1	3.083	99.083	263.50	260.70	260.70
1	3.167	99.167	264.66	261.83	261.83
1	3.250	99.250	265.83	262.97	262.97
1	3.333	99.333	267.01	264.13	264.13
1	3.417	99.417	268.20	265.29	265.29
1	3.500	99.500	269.41	266.47	266.47
1	3.583	99.583	270.62	267.66	267.66
1	3.667	99.667	271.85	268.86	268.86
1	3.750	99.750	273.08	270.07	270.07
1	3.833	99.833	274.32	271.29	271.29
1	3.917	99.917	275.57	272.51	272.51
1	4.000	100.000	276.82	273.75	273.75
1	4.083	100.083	278.02	275.00	275.00
1	4.167	100.167	279.19	276.24	276.24
1	4.250	100.250	280.35	277.46	277.46
1	4.333	100.333	281.51	278.64	278.64
1	4.417	100.417	282.69	279.81	279.81
1	4.500	100.500	283.88	280.98	280.98
1	4.583	100.583	285.09	282.15	282.15
1	4.667	100.667	286.31	283.34	283.34
1	4.750	100.750	287.54	284.54	284.54
1	4.833	100.833	288.78	285.75	285.75
1	4.917	100.917	290.05	286.97	286.97
1	5.000	101.000	291.32	288.21	288.21
1	5.083	101.083	292.61	289.47	289.47
1	5.167	101.167	293.91	290.74	290.74
1	5.250	101.250	295.23	292.02	292.02
1	5.333	101.333	296.57	293.32	293.32
1	5.417	101.417	297.92	294.63	294.63
1	5.500	101.500	299.29	295.96	295.96
1	5.583	101.583	300.67	297.30	297.30
1	5.667	101.667	302.07	298.66	298.66
1	5.750	101.750	303.49	300.04	300.04
1	5.833	101.833	304.93	301.43	301.43
1	5.917	101.917	306.38	302.84	302.84
1	6.000	102.000	307.85	304.27	304.27
1	6.083	102.083	309.34	305.72	305.72
1	6.167	102.167	310.85	307.18	307.18
1	6.250	102.250	312.38	308.66	308.66
1	6.333	102.333	313.92	310.16	310.16
1	6.417	102.417	315.49	311.68	311.68
1	6.500	102.500	317.08	313.22	313.22
1	6.583	102.583	318.69	314.77	314.77
1	6.667	102.667	320.31	316.35	316.35
1	6.750	102.750	321.84	317.95	317.95
1	6.833	102.833	323.03	319.57	319.57
1	6.917	102.917	323.84	321.13	321.13
1	7.000	103.000	324.55	322.43	322.43
1	7.083	103.083	325.36	323.40	323.40
1	7.167	103.167	326.31	324.19	324.19
1	7.250	103.250	327.38	324.99	324.99
1	7.333	103.333	328.56	325.89	325.89
1	7.417	103.417	329.84	326.91	326.91
1	7.500	103.500	331.21	328.04	328.04
1	7.583	103.583	332.66	329.28	329.28
1	7.667	103.667	334.19	330.60	330.60
1	7.750	103.750	335.78	332.01	332.01
1	7.833	103.833	337.42	333.50	333.50
1	7.917	103.917	339.13	335.06	335.06
1	8.000	104.000	340.89	336.68	336.68
1	8.083	104.083	342.70	338.36	338.36
1	8.167	104.167	344.56	340.09	340.09
1	8.250	104.250	346.46	341.88	341.88
1	8.333	104.333	348.41	343.72	343.72
1	8.417	104.417	350.40	345.60	345.60
1	8.500	104.500	352.43	347.52	347.52
1	8.583	104.583	354.51	349.49	349.49
1	8.667	104.667	356.62	351.51	351.51
1	8.750	104.750	358.78	353.56	353.56
1	8.833	104.833	360.98	355.66	355.66
1	8.917	104.917	363.22	357.80	357.80
1	9.000	105.000	365.49	359.98	359.98
1	9.083	105.083	367.72	362.19	362.19
1	9.167	105.167	369.67	364.45	364.45
1	9.250	105.250	371.21	366.69	366.69
1	9.333	105.333	372.59	368.73	368.73
1	9.417	105.417	374.00	370.43	370.43
1	9.500	105.500	375.49	371.91	371.91
1	9.583	105.583	377.07	373.34	373.34
1	9.667	105.667	378.73	374.81	374.81
1	9.750	105.750	380.47	376.36	376.36
1	9.833	105.833	382.30	377.98	377.98
1	9.917	105.917	384.21	379.69	379.69
1	10.000	106.000	386.20	381.48	381.48
1	10.083	106.083	388.27	383.35	383.35
1	10.167	106.167	390.41	385.30	385.30
1	10.250	106.250	392.64	387.33	387.33
1	10.333	106.333	394.94	389.44	389.44
1	10.417	106.417	397.32	391.63	391.63
1	10.500	106.500	399.78	393.90	393.90
1	10.583	106.583	402.32	396.24	396.24
1	10.667	106.667	404.94	398.67	398.67
1	10.750	106.750	407.64	401.17	401.17
1	10.833	106.833	410.39	403.75	403.75
1	10.917	106.917	412.96	406.41	406.41
1	11.000	107.000	415.17	409.13	409.13
1	11.083	107.083	417.21	411.75	411.75
1	11.167	107.167	419.28	414.10	414.10
1	11.250	107.250	421.43	416.23	416.23
1	11.333	107.333	423.67	418.32	418.32
1	11.417	107.417	426.01	420.45	420.45
1	11.500	107.500	428.44	422.66	422.66
1	11.583	107.583	430.96	424.95	424.95
1	11.667	107.667	433.58	427.34	427.34
1	11.750	107.750	436.30	429.82	429.82
1	11.833	107.833	439.13	432.40	432.40
1	11.917	107.917	442.05	435.07	435.07
1	12.000	108.000	445.09	437.85	437.85
1	12.083	108.083	448.75	440.73	440.73
1	12.167	108.167	454.04	443.71	443.71
1	12.250	108.250	460.89	447.16	447.16
1	12.333	108.333	467.40	451.87	451.87
1	12.417	108.417	472.42	458.04	458.04
1	12.500	108.500	476.65	464.45	464.45
1	12.583	108.583	480.90	469.91	469.91
1	12.667	108.667	485.42	474.54	474.54
1	12.750	108.750	490.23	478.90	478.90
1	12.833	108.833	495.28	483.36	483.36
1	12.917	108.917	500.52	488.07	488.07
1	13.000	109.000	505.92	493.01	493.01
1	13.083	109.083	511.47	498.16	498.16
1	13.167	109.167	517.16	503.48	503.48
1	13.250	109.250	523.01	508.95	508.95
1	13.333	109.333	529.03	514.58	514.58
1	13.417	109.417	535.25	520.35	520.35
1	13.500	109.500	541.66	526.30	526.30
1	13.583	109.583	548.21	532.43	532.43
1	13.667	109.667	554.51	538.75	538.75

1	13.750	109.750	560.38	545.23	545.23
1	13.833	109.833	566.14	551.58	551.58
1	13.917	109.917	572.12	557.61	557.61
1	14.000	110.000	578.41	563.45	563.45
1	14.083	110.083	585.10	569.39	569.39
1	14.167	110.167	592.37	575.57	575.57
1	14.250	110.250	600.34	582.10	582.10
1	14.333	110.333	608.90	589.13	589.13
1	14.417	110.417	618.04	596.80	596.80
1	14.500	110.500	627.87	605.09	605.09
1	14.583	110.583	638.51	613.96	613.96
1	14.667	110.667	650.19	623.49	623.49
1	14.750	110.750	663.14	633.77	633.77
1	14.833	110.833	677.41	645.02	645.02
1	14.917	110.917	692.58	657.43	657.43
1	15.000	111.000	707.67	671.11	671.11
1	15.083	111.083	722.74	685.81	685.81
1	15.167	111.167	738.78	700.78	700.78
1	15.250	111.250	756.56	715.82	715.82
1	15.333	111.333	776.32	731.54	731.54
1	15.417	111.417	796.60	748.68	748.68
1	15.500	111.500	814.05	767.60	767.60
1	15.583	111.583	828.84	787.46	787.46
1	15.667	111.667	847.77	805.68	805.68
1	15.750	111.750	877.19	821.56	821.56
1	15.833	111.833	918.90	839.50	839.50
1	15.917	111.917	978.30	865.28	865.28
1	16.000	112.000	1069.76	901.95	901.95
1	16.083	112.083	1273.79	954.17	954.17
1	16.167	112.167	1617.75	1033.21	1033.21
1	16.250	112.250	1898.06	1197.55	1197.55
1	16.333	112.333	1837.95	1484.75	1484.75
1	16.417	112.417	1566.34	1767.90	1767.90
1	16.500	112.500	1370.70	1817.12	1817.12
1	16.583	112.583	1280.16	1646.48	1646.48
1	16.667	112.667	1224.84	1457.65	1457.65
1	16.750	112.750	1177.75	1335.71	1335.71
1	16.833	112.833	1136.84	1259.53	1259.53
1	16.917	112.917	1102.88	1203.41	1203.41
1	17.000	113.000	1073.86	1157.75	1157.75
1	17.083	113.083	1049.77	1120.12	1120.12
1	17.167	113.167	1029.48	1088.40	1088.40
1	17.250	113.250	1014.34	1061.91	1061.91
1	17.333	113.333	1002.45	1039.68	1039.68
1	17.417	113.417	994.80	1022.29	1022.29
1	17.500	113.500	988.06	1008.68	1008.68
1	17.583	113.583	982.15	999.15	999.15
1	17.667	113.667	975.75	991.55	991.55
1	17.750	113.750	970.26	985.10	985.10
1	17.833	113.833	963.85	978.70	978.70
1	17.917	113.917	958.08	972.92	972.92
1	18.000	114.000	953.17	966.71	966.71
1	18.083	114.083	945.75	960.79	960.79
1	18.167	114.167	938.25	955.57	955.57
1	18.250	114.250	930.24	948.85	948.85
1	18.333	114.333	921.39	941.59	941.59
1	18.417	114.417	911.68	933.82	933.82
1	18.500	114.500	904.75	925.31	925.31
1	18.583	114.583	899.97	915.98	915.98
1	18.667	114.667	895.66	908.28	908.28
1	18.750	114.750	889.74	902.57	902.57
1	18.833	114.833	884.71	897.83	897.83
1	18.917	114.917	881.68	892.30	892.30
1	19.000	115.000	879.02	887.10	887.10
1	19.083	115.083	876.53	883.38	883.38
1	19.167	115.167	874.16	880.39	880.39
1	19.250	115.250	871.90	877.74	877.74
1	19.333	115.333	869.69	875.29	875.29
1	19.417	115.417	867.50	872.96	872.96
1	19.500	115.500	865.27	870.72	870.72
1	19.583	115.583	862.97	868.51	868.51
1	19.667	115.667	860.12	866.30	866.30
1	19.750	115.750	857.19	864.02	864.02
1	19.833	115.833	854.87	861.35	861.35
1	19.917	115.917	852.87	858.50	858.50
1	20.000	116.000	850.91	856.01	856.01
1	20.083	116.083	848.89	853.86	853.86
1	20.167	116.167	846.74	851.84	851.84
1	20.250	116.250	843.65	849.82	849.82
1	20.333	116.333	841.50	847.71	847.71
1	20.417	116.417	839.76	844.93	844.93
1	20.500	116.500	838.11	842.58	842.58
1	20.583	116.583	836.48	840.65	840.65
1	20.667	116.667	834.89	838.91	838.91
1	20.750	116.750	833.34	837.24	837.24
1	20.833	116.833	831.83	835.63	835.63
1	20.917	116.917	830.33	834.06	834.06
1	21.000	117.000	828.85	832.53	832.53
1	21.083	117.083	827.39	831.02	831.02
1	21.167	117.167	825.93	829.53	829.53
1	21.250	117.250	824.50	828.06	828.06
1	21.333	117.333	823.07	826.60	826.60
1	21.417	117.417	821.66	825.16	825.16
1	21.500	117.500	820.27	823.73	823.73
1	21.583	117.583	818.92	822.31	822.31
1	21.667	117.667	817.61	820.91	820.91
1	21.750	117.750	816.31	819.55	819.55
1	21.833	117.833	815.03	818.22	818.22
1	21.917	117.917	813.75	816.91	816.91
1	22.000	118.000	812.48	815.62	815.62
1	22.083	118.083	811.22	814.34	814.34
1	22.167	118.167	809.97	813.07	813.07
1	22.250	118.250	808.73	811.81	811.81
1	22.333	118.333	807.50	810.55	810.55
1	22.417	118.417	806.28	809.31	809.31
1	22.500	118.500	805.06	808.07	808.07
1	22.583	118.583	803.85	806.84	806.84
1	22.667	118.667	802.64	805.62	805.62
1	22.750	118.750	801.44	804.41	804.41
1	22.833	118.833	800.24	803.20	803.20
1	22.917	118.917	799.05	801.99	801.99
1	23.000	119.000	797.86	800.79	800.79
1	23.083	119.083	796.68	799.60	799.60
1	23.167	119.167	795.50	798.41	798.41
1	23.250	119.250	794.33	797.22	797.22
1	23.333	119.333	793.16	796.04	796.04
1	23.417	119.417	791.99	794.87	794.87
1	23.500	119.500	790.84	793.70	793.70
1	23.583	119.583	789.72	792.53	792.53
1	23.667	119.667	788.63	791.37	791.37
1	23.750	119.750	787.55	790.24	790.24
1	23.833	119.833	786.47	789.14	789.14
1	23.917	119.917	785.40	788.05	788.05
1	24.000	120.000	784.33	786.97	786.97
1	24.083	120.083	782.43	785.89	785.89
1	24.167	120.167	778.16	784.82	784.82
1	24.250	120.250	771.41	783.19	783.19
1	24.333	120.333	764.89	779.75	779.75
1	24.417	120.417	760.42	774.05	774.05
1	24.500	120.500	757.32	767.78	767.78
1	24.583	120.583	754.72	762.73	762.73
1	24.667	120.667	752.42	759.02	759.02
1	24.750	120.750	750.33	756.07	756.07
1	24.833	120.833	748.40	753.57	753.57

```
  1   24.917 120.917       746.57      751.35      751.35
  1   25.000 121.000       744.86      749.32      749.32
  1   25.083 121.083       743.22      747.44      747.44
  1   25.167 121.167       741.52      745.67      745.67
  1   25.250 121.250       739.50      743.99      743.99
  1   25.333 121.333       737.15      742.30      742.30
  1   25.417 121.417       734.67      740.38      740.38
  1   25.500 121.500       732.16      738.17      738.17
  1   25.583 121.583       729.67      735.77      735.77
  1   25.667 121.667       727.19      733.30      733.30
  1   25.750 121.750       724.73      730.81      730.81
  1   25.833 121.833       722.29      728.33      728.33
  1   25.917 121.917       719.87      725.86      725.86
  1   26.000 122.000       717.45      723.41      723.41
  1   26.083 122.083       715.07      720.98      720.98
  1   26.167 122.167       712.71      718.57      718.57
  1   26.250 122.250       710.36      716.17      716.17
  1   26.333 122.333       708.02      713.80      713.80
  1   26.417 122.417       705.72      711.44      711.44
  1   26.500 122.500       703.44      709.10      709.10
  1   26.583 122.583       701.13      706.79      706.79
  1   26.667 122.667       698.79      704.49      704.49
  1   26.750 122.750       696.46      702.19      702.19
  1   26.833 122.833       694.14      699.86      699.86
  1   26.917 122.917       691.83      697.53      697.53
  1   27.000 123.000       689.53      695.21      695.21
  1   27.083 123.083       687.24      692.90      692.90
  1   27.167 123.167       684.95      690.59      690.59
  1   27.250 123.250       682.67      688.30      688.30
  1   27.333 123.333       680.40      686.01      686.01
  1   27.417 123.417       678.14      683.72      683.72
  1   27.500 123.500       675.88      681.45      681.45
  1   27.583 123.583       673.62      679.18      679.18
  1   27.667 123.667       671.38      676.92      676.92
  1   27.750 123.750       669.16      674.66      674.66
  1   27.833 123.833       666.93      672.42      672.42
  1   27.917 123.917       664.66      670.18      670.18
  1   28.000 124.000       662.32      667.96      667.96
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
================================================================================
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   2256.703 AF
    OUTFLOW VOLUME =   2256.703 AF
    LOSS    VOLUME =      0.000 AF
================================================================================

  END OF FLOODSCx ROUTING ANALYSIS



********************************************************************************
  FLOW PROCESS FROM NODE   6340.00 TO NODE   6355.00 IS CODE =   1
--------------------------------------------------------------------------------

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of   697.9 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
================================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #2)

        WATERSHED AREA =     697.900 ACRES
        BASEFLOW =   0.000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    0.340 HOURS
         CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
         THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
         MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
        VALLEY(DEVELOPED):
              "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.900
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
        VALLEY(UNDEVELOPED)/DESERT:
              "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:
        +------------------+--------+--------+--------+--------+--------+
        | RAINFALL DEPTHS & |        |        |        |        |        |
        |    LOSS RATES     | DAY 1  | DAY 2  | DAY 3  | DAY 4  | DAY 5  |
        |==================+========+========+========+========+========|
        | 5-MINUTE (INCHES) |   0.58|   0.27|   0.12|   0.06|   0.04|
        |30-MINUTE (INCHES) |   1.22|   0.56|   0.24|   0.13|   0.09|
        |   1-HOUR (INCHES) |   1.62|   0.75|   0.33|   0.17|   0.12|
        |   3-HOUR (INCHES) |   2.71|   1.25|   0.54|   0.28|   0.21|
        |   6-HOUR (INCHES) |   3.75|   1.73|   0.75|   0.39|   0.29|
        |  24-HOUR (INCHES) |   6.28|   2.89|   1.26|   0.66|   0.48|
        |==================+========+========+========+========+========|
        | LOSS RATE(IN/HR)  |   0.210|   0.210|   0.210|   0.210|   0.210|
        | LOW LOSS FRACTION |   0.450|   0.690|   0.900|   0.980|   0.990|
        +------------------+--------+--------+--------+--------+--------+
          5-MINUTE FACTOR = 0.969
         30-MINUTE FACTOR = 0.969
          1-HOUR FACTOR = 0.969
          3-HOUR FACTOR = 0.995
          6-HOUR FACTOR = 0.998
         24-HOUR FACTOR = 0.999

        UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
        UNIT INTERVAL PERCENTAGE OF LAG-TIME =  24.510


        RUNOFF HYDROGRAPH LISTING LIMITS:
        MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  96.00
        MODEL TIME(HOURS) FOR END OF RESULTS = 124.00


================================================================================
                      UNIT HYDROGRAPH DETERMINATION

--------------------------------------------------------------------------------
     INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
      NUMBER         MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------------
         1                1.545              130.419
         2                7.337              488.804
         3               20.261             1090.852
         4               37.173             1427.448
         5               57.561             1720.753
         6               73.834             1373.504
         7               84.155              871.070
         8               90.157              506.624
         9               93.846              311.340
        10               95.934              176.209
        11               96.823               75.053
        12               97.453               53.201
        13               98.047               50.140
        14               98.563               43.554
        15               98.877               26.445
        16               99.042               13.975
        17               99.137                8.025
        18               99.206                5.797
        19               99.261                4.649
        20               99.315                4.546
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21	99.365	4.228
22	99.414	4.161
23	99.461	3.902
24	99.505	3.743
25	99.548	3.674
26	99.587	3.272
27	99.625	3.204
28	99.663	3.169
29	99.695	2.719
30	99.726	2.582
31	99.756	2.583
32	99.787	2.570
33	99.813	2.195
34	99.830	1.492
35	99.848	1.489
36	99.866	1.488
37	99.883	1.487
38	99.899	1.328
39	99.905	0.518
40	99.910	0.406
41	99.915	0.406
42	99.919	0.404
43	99.924	0.406
44	99.929	0.406
45	99.934	0.405
46	99.939	0.408
47	99.944	0.405
48	99.948	0.408
49	99.953	0.404
50	99.958	0.405
51	99.963	0.405
52	99.968	0.405
53	99.972	0.405
54	99.977	0.404
55	99.982	0.405
56	99.987	0.405
57	99.992	0.405
58	99.996	0.405
59	100.000	0.311

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 349.4661

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 322.3159

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5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	400.0	800.0	1200.0	1600.0
96.000	87.4798	10.14	Q	V	.	.	.
(PEAK DAY 2, HOUR 24.000)							
96.083	87.5521	10.50	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.083)							
96.167	87.6352	12.06	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.167)							
96.250	87.7427	15.61	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.250)							
96.333	87.8825	20.31	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.333)							
96.417	88.0616	26.00	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.417)							
96.500	88.2723	30.59	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.500)							
96.583	88.5034	33.55	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.583)							
96.667	88.7466	35.32	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.667)							
96.750	88.9977	36.46	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.750)							
96.833	89.2536	37.16	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.833)							
96.917	89.5120	37.53	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.917)							
97.000	89.7725	37.82	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.000)							
97.083	90.0351	38.12	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.083)							
97.167	90.2995	38.39	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.167)							
97.250	90.5654	38.61	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.250)							
97.333	90.8325	38.79	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.333)							
97.417	91.1007	38.95	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.417)							
97.500	91.3700	39.10	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.500)							
97.583	91.6403	39.25	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.583)							
97.667	91.9117	39.41	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.667)							
97.750	92.1842	39.56	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.750)							
97.833	92.4577	39.71	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.833)							
97.917	92.7323	39.87	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.917)							
98.000	93.0079	40.03	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.000)							
98.083	93.2847	40.18	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.083)							
98.167	93.5625	40.34	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.167)							
98.250	93.8414	40.50	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.250)							
98.333	94.1214	40.66	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.333)							
98.417	94.4026	40.82	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.417)							
98.500	94.6848	40.98	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.500)							
98.583	94.9682	41.14	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.583)							
98.667	95.2526	41.31	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.667)							
98.750	95.5383	41.47	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.750)							
98.833	95.8250	41.63	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.833)							
98.917	96.1129	41.80	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.917)							
99.000	96.4019	41.97	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.000)							
99.083	96.6921	42.14	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.083)							
99.167	96.9835	42.31	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.167)							
99.250	97.2760	42.48	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.250)							
99.333	97.5697	42.65	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.333)							
99.417	97.8646	42.82	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.417)							
99.500	98.1607	42.99	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.500)							
99.583	98.4580	43.17	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.583)							
99.667	98.7566	43.35	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.667)							
99.750	99.0563	43.53	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.750)							
99.833	99.3573	43.71	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.833)							
99.917	99.6596	43.89	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.917)							
100.000	99.9632	44.08	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.000)							
100.083	100.2680	44.26	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.083)							
100.167	100.5742	44.45	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.167)							
100.250	100.8816	44.65	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.250)							
100.333	101.1905	44.84	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.333)							
100.417	101.5006	45.04	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.417)							
100.500	101.8121	45.23	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.500)							
100.583	102.1251	45.43	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.583)							
100.667	102.4394	45.64	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.667)							
100.750	102.7551	45.84	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.750)							
100.833	103.0722	46.05	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.833)							
100.917	103.3908	46.26	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.917)							
101.000	103.7108	46.47	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 5.000)							
101.083	104.0324	46.68	.Q	. V	.	.	.

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 (PEAK DAY 1, HOUR   5.083)
 101.167    104.3554     46.90  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.167)
 101.250    104.6799     47.12  .Q        . V       .         .         .
 (PEAK DAY 1, HOUR   5.250)
 101.333    105.0059     47.34  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   5.333)
 101.417    105.3335     47.56  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   5.417)
 101.500    105.6626     47.79  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   5.500)
 101.583    105.9933     48.02  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   5.583)
 101.667    106.3257     48.25  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   5.667)
 101.750    106.6596     48.49  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   5.750)
 101.833    106.9952     48.73  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   5.833)
 101.917    107.3325     48.97  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   5.917)
 102.000    107.6714     49.21  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.000)
 102.083    108.0120     49.46  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.083)
 102.167    108.3544     49.71  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.167)
 102.250    108.6985     49.97  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.250)
 102.333    109.0444     50.23  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.333)
 102.417    109.3922     50.49  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.417)
 102.500    109.7417     50.75  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.500)
 102.583    110.0931     51.02  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.583)
 102.667    110.4463     51.29  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.667)
 102.750    110.8015     51.57  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.750)
 102.833    111.1586     51.85  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.833)
 102.917    111.5177     52.14  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   6.917)
 103.000    111.8787     52.42  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.000)
 103.083    112.2418     52.72  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.083)
 103.167    112.6068     53.01  .Q        .  V      .         .         .
 (PEAK DAY 1, HOUR   7.167)
 103.250    112.9740     53.31  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   7.250)
 103.333    113.3433     53.62  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   7.333)
 103.417    113.7147     53.93  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   7.417)
 103.500    114.0882     54.24  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   7.500)
 103.583    114.4640     54.56  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   7.583)
 103.667    114.8420     54.89  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   7.667)
 103.750    115.2223     55.22  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   7.750)
 103.833    115.6049     55.55  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   7.833)
 103.917    115.9898     55.89  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   7.917)
 104.000    116.3771     56.24  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.000)
 104.083    116.7669     56.59  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.083)
 104.167    117.1590     56.94  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.167)
 104.250    117.5537     57.31  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.250)
 104.333    117.9509     57.68  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.333)
 104.417    118.3508     58.05  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.417)
 104.500    118.7532     58.43  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.500)
 104.583    119.1583     58.82  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.583)
 104.667    119.5661     59.22  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.667)
 104.750    119.9767     59.62  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.750)
 104.833    120.3901     60.03  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.833)
 104.917    120.8064     60.45  .Q        .   V     .         .         .
 (PEAK DAY 1, HOUR   8.917)
 105.000    121.2256     60.87  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.000)
 105.083    121.6478     61.30  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.083)
 105.167    122.0730     61.74  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.167)
 105.250    122.5013     62.19  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.250)
 105.333    122.9327     62.64  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.333)
 105.417    123.3674     63.11  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.417)
 105.500    123.8053     63.58  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.500)
 105.583    124.2466     64.07  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.583)
 105.667    124.6912     64.56  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.667)
 105.750    125.1393     65.07  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.750)
 105.833    125.5910     65.58  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.833)
 105.917    126.0462     66.11  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR   9.917)
 106.000    126.5052     66.64  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.000)
 106.083    126.9679     67.19  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.083)
 106.167    127.4345     67.74  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.167)
 106.250    127.9050     68.32  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.250)
 106.333    128.3795     68.90  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.333)
 106.417    128.8582     69.50  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.417)
 106.500    129.3410     70.11  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  10.500)
 106.583    129.8282     70.74  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  10.583)
 106.667    130.3197     71.37  .Q        .     V   .         .         .
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(PEAK DAY 1, HOUR  10.667)
106.750    130.8158     72.03  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.750)
106.833    131.3165     72.70  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.833)
106.917    131.8219     73.39  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.917)
107.000    132.3321     74.09  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.000)
107.083    132.8474     74.81  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.083)
107.167    133.3677     75.55  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.167)
107.250    133.8932     76.31  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.250)
107.333    134.4241     77.09  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.333)
107.417    134.9606     77.90  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.417)
107.500    135.5027     78.71  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.500)
107.583    136.0507     79.56  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.583)
107.667    136.6046     80.43  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  11.667)
107.750    137.1647     81.33  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.750)
107.833    137.7311     82.24  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.833)
107.917    138.3041     83.20  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.917)
108.000    138.8838     84.17  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.000)
108.083    139.4731     85.56  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.083)
108.167    140.0790     87.98  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.167)
108.250    140.7138     92.17  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.250)
108.333    141.3842     97.34  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.333)
108.417    142.0964    103.42  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.417)
108.500    142.8440    108.54  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.500)
108.583    143.6175    112.31  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.583)
108.667    144.4101    115.08  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.667)
108.750    145.2184    117.37  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  12.750)
108.833    146.0400    119.30  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  12.833)
108.917    146.8734    121.02  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  12.917)
109.000    147.7185    122.71  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.000)
109.083    148.5758    124.48  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.083)
109.167    149.4454    126.26  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.167)
109.250    150.3275    128.09  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.250)
109.333    151.2224    129.93  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.333)
109.417    152.1305    131.86  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.417)
109.500    153.0522    133.83  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.500)
109.583    153.9883    135.93  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.583)
109.667    154.9393    138.08  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.667)
109.750    155.9060    140.37  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.750)
109.833    156.8890    142.73  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.833)
109.917    157.8894    145.25  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  13.917)
110.000    158.9077    147.86  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  14.000)
110.083    159.9461    150.77  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  14.083)
110.167    161.0074    154.10  .  Q      .       V.          .         .
(PEAK DAY 1, HOUR  14.167)
110.250    162.0967    158.17  .  Q      .        V          .         .
(PEAK DAY 1, HOUR  14.250)
110.333    163.2173    162.70  .   Q     .        V          .         .
(PEAK DAY 1, HOUR  14.333)
110.417    164.3738    167.94  .   Q     .        V          .         .
(PEAK DAY 1, HOUR  14.417)
110.500    165.5685    173.47  .   Q     .        V          .         .
(PEAK DAY 1, HOUR  14.500)
110.583    166.8051    179.55  .   Q     .        V          .         .
(PEAK DAY 1, HOUR  14.583)
110.667    168.0883    186.32  .   Q     .        V          .         .
(PEAK DAY 1, HOUR  14.667)
110.750    169.4257    194.19  .   Q     .        .V         .         .
(PEAK DAY 1, HOUR  14.750)
110.833    170.8223    202.78  .    Q    .        .V         .         .
(PEAK DAY 1, HOUR  14.833)
110.917    172.2852    212.42  .    Q    .        .V         .         .
(PEAK DAY 1, HOUR  14.917)
111.000    173.8201    222.86  .    Q    .        .V         .         .
(PEAK DAY 1, HOUR  15.000)
111.083    175.4357    234.58  .    Q    .        .V         .         .
(PEAK DAY 1, HOUR  15.083)
111.167    177.1388    247.30  .     Q   .        .V         .         .
(PEAK DAY 1, HOUR  15.167)
111.250    178.9411    261.69  .     Q   .        . V        .         .
(PEAK DAY 1, HOUR  15.250)
111.333    180.8522    277.50  .     Q   .        . V        .         .
(PEAK DAY 1, HOUR  15.333)
111.417    182.8791    294.30  .      Q  .        . V        .         .
(PEAK DAY 1, HOUR  15.417)
111.500    185.0097    309.37  .      Q  .        . V        .         .
(PEAK DAY 1, HOUR  15.500)
111.583    187.2243    321.55  .       Q .        .  V       .         .
(PEAK DAY 1, HOUR  15.583)
111.667    189.5230    333.78  .       Q .        .  V       .         .
(PEAK DAY 1, HOUR  15.667)
111.750    191.9303    349.53  .       Q .        .  V       .         .
(PEAK DAY 1, HOUR  15.750)
111.833    194.5298    377.44  .        Q.        .   V      .         .
(PEAK DAY 1, HOUR  15.833)
111.917    197.4737    427.47  .         Q        .   V      .         .
(PEAK DAY 1, HOUR  15.917)
112.000    200.9750    508.38  .         . Q      .   V      .         .
(PEAK DAY 1, HOUR  16.000)
112.083    205.6728    682.13  .         .     Q  .    V     .         .
(PEAK DAY 1, HOUR  16.083)
112.167    212.3362    967.53  .         .        .   Q V    .         .
(PEAK DAY 1, HOUR  16.167)
112.250    221.4721   1326.53  .         .        .      V . Q       .
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 (PEAK DAY 1, HOUR  16.250)
112.333    231.8962   1513.58  .         .         .       V .      Q  .
 (PEAK DAY 1, HOUR  16.333)
112.417    242.8206   1586.22  .         .         .         V        Q.
 (PEAK DAY 1, HOUR  16.417)
112.500    251.9846   1330.62  .         .         .         .V Q      .
 (PEAK DAY 1, HOUR  16.500)
112.583    258.8450    996.13  .         .         .   Q     . V       .
 (PEAK DAY 1, HOUR  16.583)
112.667    263.9171    736.46  .         .       Q .         . V       .
 (PEAK DAY 1, HOUR  16.667)
112.750    267.8633    572.98  .         .   Q     .         .  V      .
 (PEAK DAY 1, HOUR  16.750)
112.833    270.9846    453.22  .         .Q        .         .  V      .
 (PEAK DAY 1, HOUR  16.833)
112.917    273.4837    362.87  .        Q.         .         .  V      .
 (PEAK DAY 1, HOUR  16.917)
113.000    275.6631    316.44  .      Q  .         .         .   V     .
 (PEAK DAY 1, HOUR  17.000)
113.083    277.6262    285.04  .      Q  .         .         .   V     .
 (PEAK DAY 1, HOUR  17.083)
113.167    279.3894    256.02  .     Q   .         .         .   V     .
 (PEAK DAY 1, HOUR  17.167)
113.250    280.9456    225.96  .    Q    .         .         .   V     .
 (PEAK DAY 1, HOUR  17.250)
113.333    282.3374    202.09  .    Q    .         .         .    V    .
 (PEAK DAY 1, HOUR  17.333)
113.417    283.6112    184.96  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  17.417)
113.500    284.8014    172.81  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  17.500)
113.583    285.9275    163.52  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  17.583)
113.667    287.0038    156.28  .  Q      .         .         .    V    .
 (PEAK DAY 1, HOUR  17.667)
113.750    288.0374    150.07  .  Q      .         .         .    V    .
 (PEAK DAY 1, HOUR  17.750)
113.833    289.0344    144.76  .  Q      .         .         .    V    .
 (PEAK DAY 1, HOUR  17.833)
113.917    289.9984    139.98  .  Q      .         .         .    V    .
 (PEAK DAY 1, HOUR  17.917)
114.000    290.9330    135.70  .  Q      .         .         .     V   .
 (PEAK DAY 1, HOUR  18.000)
114.083    291.8382    131.44  .  Q      .         .         .     V   .
 (PEAK DAY 1, HOUR  18.083)
114.167    292.7084    126.36  .  Q      .         .         .     V   .
 (PEAK DAY 1, HOUR  18.167)
114.250    293.5348    119.99  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.250)
114.333    294.3125    112.92  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.333)
114.417    295.0361    105.07  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.417)
114.500    295.7149     98.56  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.500)
114.583    296.3602     93.70  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.583)
114.667    296.9800     89.99  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.667)
114.750    297.5778     86.80  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.750)
114.833    298.1563     84.01  . Q       .         .         .      V  .
 (PEAK DAY 1, HOUR  18.833)
114.917    298.7205     81.92  . Q       .         .         .      V  .
 (PEAK DAY 1, HOUR  18.917)
115.000    299.2716     80.01  . Q       .         .         .      V  .
 (PEAK DAY 1, HOUR  19.000)
115.083    299.8099     78.17  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.083)
115.167    300.3355     76.31  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.167)
115.250    300.8476     74.35  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.250)
115.333    301.3492     72.83  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.333)
115.417    301.8414     71.47  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.417)
115.500    302.3248     70.19  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.500)
115.583    302.7998     68.97  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.583)
115.667    303.2668     67.81  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.667)
115.750    303.7261     66.70  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.750)
115.833    304.1781     65.64  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.833)
115.917    304.6231     64.62  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.917)
116.000    305.0614     63.64  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  20.000)
116.083    305.4932     62.70  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  20.083)
116.167    305.9187     61.79  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  20.167)
116.250    306.3383     60.92  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.250)
116.333    306.7520     60.08  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.333)
116.417    307.1602     59.26  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.417)
116.500    307.5629     58.48  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.500)
116.583    307.9604     57.71  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.583)
116.667    308.3527     56.97  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.667)
116.750    308.7400     56.24  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.750)
116.833    309.1223     55.51  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.833)
116.917    309.4995     54.76  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.917)
117.000    309.8710     53.95  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.000)
117.083    310.2382     53.31  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.083)
117.167    310.6010     52.69  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.167)
117.250    310.9598     52.10  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.250)
117.333    311.3147     51.52  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.333)
117.417    311.6657     50.97  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.417)
117.500    312.0130     50.43  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.500)
117.583    312.3567     49.90  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.583)
117.667    312.6969     49.39  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.667)
117.750    313.0336     48.90  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.750)
117.833    313.3671     48.41  .Q        .         .         .       V .
```

(PEAK DAY 1, HOUR 21.833)
117.917 313.6973 47.94 .Q . . . V .
(PEAK DAY 1, HOUR 21.917)
118.000 314.0243 47.49 .Q . . . V .
(PEAK DAY 1, HOUR 22.000)
118.083 314.3483 47.04 .Q . . . V.
(PEAK DAY 1, HOUR 22.083)
118.167 314.6692 46.60 .Q . . . V.
(PEAK DAY 1, HOUR 22.167)
118.250 314.9872 46.18 .Q . . . V.
(PEAK DAY 1, HOUR 22.250)
118.333 315.3024 45.76 .Q . . . V.
(PEAK DAY 1, HOUR 22.333)
118.417 315.6148 45.36 .Q . . . V.
(PEAK DAY 1, HOUR 22.417)
118.500 315.9244 44.96 .Q . . . V.
(PEAK DAY 1, HOUR 22.500)
118.583 316.2314 44.57 .Q . . . V.
(PEAK DAY 1, HOUR 22.583)
118.667 316.5357 44.19 .Q . . . V.
(PEAK DAY 1, HOUR 22.667)
118.750 316.8376 43.82 .Q . . . V.
(PEAK DAY 1, HOUR 22.750)
118.833 317.1369 43.46 .Q . . . V.
(PEAK DAY 1, HOUR 22.833)
118.917 317.4337 43.10 .Q . . . V.
(PEAK DAY 1, HOUR 22.917)
119.000 317.7282 42.76 .Q . . . V.
(PEAK DAY 1, HOUR 23.000)
119.083 318.0204 42.42 .Q . . . V.
(PEAK DAY 1, HOUR 23.083)
119.167 318.3102 42.09 .Q . . . V.
(PEAK DAY 1, HOUR 23.167)
119.250 318.5978 41.76 .Q . . . V.
(PEAK DAY 1, HOUR 23.250)
119.333 318.8832 41.44 .Q . . . V.
(PEAK DAY 1, HOUR 23.333)
119.417 319.1664 41.13 .Q . . . V.
(PEAK DAY 1, HOUR 23.417)
119.500 319.4476 40.82 .Q . . . V.
(PEAK DAY 1, HOUR 23.500)
119.583 319.7266 40.52 .Q . . . V.
(PEAK DAY 1, HOUR 23.583)
119.667 320.0037 40.22 .Q . . . V.
(PEAK DAY 1, HOUR 23.667)
119.750 320.2787 39.94 Q . . . V.
(PEAK DAY 1, HOUR 23.750)
119.833 320.5518 39.65 Q . . . V.
(PEAK DAY 1, HOUR 23.833)
119.917 320.8229 39.37 Q . . . V.
(PEAK DAY 1, HOUR 23.917)
120.000 321.0922 39.10 Q . . . V.
(PEAK DAY 1, HOUR 24.000)
120.083 321.3556 38.25 Q . . . V.
(PEAK DAY 1, HOUR 24.083)
120.167 321.6022 35.81 Q . . . V.
(PEAK DAY 1, HOUR 24.167)
120.250 321.8137 30.70 Q . . . V.
(PEAK DAY 1, HOUR 24.250)
120.333 321.9799 24.13 Q . . . V.
(PEAK DAY 1, HOUR 24.333)
120.417 322.0921 16.30 Q . . . V.
(PEAK DAY 1, HOUR 24.417)
120.500 322.1615 10.07 Q . . . V.
(PEAK DAY 1, HOUR 24.500)
120.583 322.2036 6.12 Q . . . V.
(PEAK DAY 1, HOUR 24.583)
120.667 322.2299 3.82 Q . . . V.
(PEAK DAY 1, HOUR 24.667)
120.750 322.2465 2.40 Q . . . V.
(PEAK DAY 1, HOUR 24.750)
120.833 322.2575 1.60 Q . . . V.
(PEAK DAY 1, HOUR 24.833)
120.917 322.2662 1.26 Q . . . V.
(PEAK DAY 1, HOUR 24.917)
121.000 322.2732 1.01 Q . . . V.
(PEAK DAY 1, HOUR 25.000)
121.083 322.2785 0.78 Q . . . V.
(PEAK DAY 1, HOUR 25.083)
121.167 322.2825 0.58 Q . . . V.
(PEAK DAY 1, HOUR 25.167)
121.250 322.2857 0.46 Q . . . V.
(PEAK DAY 1, HOUR 25.250)
121.333 322.2884 0.39 Q . . . V.
(PEAK DAY 1, HOUR 25.333)
121.417 322.2908 0.35 Q . . . V.
(PEAK DAY 1, HOUR 25.417)
121.500 322.2931 0.33 Q . . . V.
(PEAK DAY 1, HOUR 25.500)
121.583 322.2951 0.30 Q . . . V.
(PEAK DAY 1, HOUR 25.583)
121.667 322.2971 0.28 Q . . . V.
(PEAK DAY 1, HOUR 25.667)
121.750 322.2988 0.26 Q . . . V.
(PEAK DAY 1, HOUR 25.750)
121.833 322.3005 0.24 Q . . . V.
(PEAK DAY 1, HOUR 25.833)
121.917 322.3020 0.22 Q . . . V.
(PEAK DAY 1, HOUR 25.917)
122.000 322.3033 0.20 Q . . . V.
(PEAK DAY 1, HOUR 26.000)
122.083 322.3046 0.18 Q . . . V.
(PEAK DAY 1, HOUR 26.083)
122.167 322.3058 0.17 Q . . . V.
(PEAK DAY 1, HOUR 26.167)
122.250 322.3068 0.15 Q . . . V.
(PEAK DAY 1, HOUR 26.250)
122.333 322.3077 0.14 Q . . . V.
(PEAK DAY 1, HOUR 26.333)
122.417 322.3086 0.12 Q . . . V.
(PEAK DAY 1, HOUR 26.417)
122.500 322.3094 0.11 Q . . . V.
(PEAK DAY 1, HOUR 26.500)
122.583 322.3100 0.10 Q . . . V.
(PEAK DAY 1, HOUR 26.583)
122.667 322.3106 0.09 Q . . . V.
(PEAK DAY 1, HOUR 26.667)
122.750 322.3111 0.08 Q . . . V.
(PEAK DAY 1, HOUR 26.750)
122.833 322.3116 0.07 Q . . . V.
(PEAK DAY 1, HOUR 26.833)
122.917 322.3120 0.06 Q . . . V.
(PEAK DAY 1, HOUR 26.917)
123.000 322.3124 0.05 Q . . . V.
(PEAK DAY 1, HOUR 27.000)
123.083 322.3127 0.05 Q . . . V.
(PEAK DAY 1, HOUR 27.083)
123.167 322.3130 0.04 Q . . . V.
(PEAK DAY 1, HOUR 27.167)
123.250 322.3133 0.04 Q . . . V.
(PEAK DAY 1, HOUR 27.250)
123.333 322.3135 0.04 Q . . . V.
(PEAK DAY 1, HOUR 27.333)
123.417 322.3138 0.03 Q . . . V.

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 (PEAK DAY 1, HOUR  27.417)
 123.500    322.3140      0.03  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.500)
 123.583    322.3142      0.03  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.583)
 123.667    322.3144      0.03  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.667)
 123.750    322.3145      0.03  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.750)
 123.833    322.3147      0.02  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.833)
 123.917    322.3148      0.02  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.917)
 124.000    322.3150      0.02  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  28.000)
================================================================================

  END OF FLOODSCx ROUTING ANALYSIS



********************************************************************************
  FLOW PROCESS FROM NODE   6355.00 TO NODE   6355.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  6039.2 Ac. ***
================================================================================

  END OF FLOODSCx ROUTING ANALYSIS



********************************************************************************
  FLOW PROCESS FROM NODE   6355.00 TO NODE   6355.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  6039.2 Ac. ***

           STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
        (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      850.0    1700.0    2550.0    3400.0
--------------------------------------------------------------------------------
  96.000    680.5054     77.86  Q         V         .         .         .
 (PEAK DAY 2, HOUR  24.000)
  96.083    681.0406     77.71  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.083)
  96.167    681.5831     78.77  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.167)
  96.250    682.1497     82.27  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.250)
  96.333    682.7601     88.63  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.333)
  96.417    683.4410     98.88  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.417)
  96.500    684.2018    110.46  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.500)
  96.583    685.0416    121.93  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.583)
  96.667    685.9674    134.43  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.667)
  96.750    687.0102    151.41  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.750)
  96.833    688.2061    173.65  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   0.833)
  96.917    689.5552    195.88  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   0.917)
  97.000    691.0252    213.44  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.000)
  97.083    692.5840    226.34  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.083)
  97.167    694.2106    236.18  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.167)
  97.250    695.8914    244.05  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.250)
  97.333    697.6174    250.62  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.333)
  97.417    699.3824    256.28  .  Q      V         .         .         .
 (PEAK DAY 1, HOUR   1.417)
  97.500    701.1816    261.24  .  Q      V         .         .         .
 (PEAK DAY 1, HOUR   1.500)
  97.583    703.0110    265.63  .  Q      V         .         .         .
 (PEAK DAY 1, HOUR   1.583)
  97.667    704.8675    269.56  .  Q      V         .         .         .
 (PEAK DAY 1, HOUR   1.667)
  97.750    706.7487    273.16  .  Q      V         .         .         .
 (PEAK DAY 1, HOUR   1.750)
  97.833    708.6525    276.43  .  Q      V         .         .         .
 (PEAK DAY 1, HOUR   1.833)
  97.917    710.5768    279.41  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   1.917)
  98.000    712.5197    282.11  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.000)
  98.083    714.4794    284.54  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.083)
  98.167    716.4542    286.75  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.167)
  98.250    718.4432    288.81  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.250)
  98.333    720.4453    290.70  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.333)
  98.417    722.4587    292.35  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.417)
  98.500    724.4821    293.79  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.500)
  98.583    726.5145    295.12  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.583)
  98.667    728.5559    296.41  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.667)
  98.750    730.6061    297.69  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.750)
  98.833    732.6652    298.97  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.833)
  98.917    734.7330    300.26  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   2.917)
  99.000    736.8098    301.54  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   3.000)
  99.083    738.8954    302.83  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   3.083)
  99.167    740.9900    304.14  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   3.167)
  99.250    743.0936    305.45  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   3.250)
  99.333    745.2064    306.77  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   3.333)
  99.417    747.3283    308.11  .  Q      .V        .         .         .
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(PEAK DAY 1, HOUR 3.417)
99.500 749.4596 309.46 . Q .V . . .
(PEAK DAY 1, HOUR 3.500)
99.583 751.6003 310.82 . Q .V . . .
(PEAK DAY 1, HOUR 3.583)
99.667 753.7504 312.20 . Q .V . . .
(PEAK DAY 1, HOUR 3.667)
99.750 755.9102 313.59 . Q .V . . .
(PEAK DAY 1, HOUR 3.750)
99.833 758.0795 314.99 . Q .V . . .
(PEAK DAY 1, HOUR 3.833)
99.917 760.2586 316.40 . Q .V . . .
(PEAK DAY 1, HOUR 3.917)
100.000 762.4475 317.83 . Q .V . . .
(PEAK DAY 1, HOUR 4.000)
100.083 764.6463 319.26 . Q .V . . .
(PEAK DAY 1, HOUR 4.083)
100.167 766.8550 320.70 . Q .V . . .
(PEAK DAY 1, HOUR 4.167)
100.250 769.0733 322.10 . Q .V . . .
(PEAK DAY 1, HOUR 4.250)
100.333 771.3011 323.48 . Q .V . . .
(PEAK DAY 1, HOUR 4.333)
100.417 773.5384 324.84 . Q .V . . .
(PEAK DAY 1, HOUR 4.417)
100.500 775.7850 326.21 . Q . V . . .
(PEAK DAY 1, HOUR 4.500)
100.583 778.0411 327.58 . Q . V . . .
(PEAK DAY 1, HOUR 4.583)
100.667 780.3067 328.97 . Q . V . . .
(PEAK DAY 1, HOUR 4.667)
100.750 782.5820 330.38 . Q . V . . .
(PEAK DAY 1, HOUR 4.750)
100.833 784.8671 331.80 . Q . V . . .
(PEAK DAY 1, HOUR 4.833)
100.917 787.1621 333.23 . Q . V . . .
(PEAK DAY 1, HOUR 4.917)
101.000 789.4671 334.68 . Q . V . . .
(PEAK DAY 1, HOUR 5.000)
101.083 791.7822 336.15 . Q . V . . .
(PEAK DAY 1, HOUR 5.083)
101.167 794.1075 337.64 . Q . V . . .
(PEAK DAY 1, HOUR 5.167)
101.250 796.4432 339.14 . Q . V . . .
(PEAK DAY 1, HOUR 5.250)
101.333 798.7894 340.66 . Q . V . . .
(PEAK DAY 1, HOUR 5.333)
101.417 801.1461 342.20 . Q . V . . .
(PEAK DAY 1, HOUR 5.417)
101.500 803.5135 343.75 . Q . V . . .
(PEAK DAY 1, HOUR 5.500)
101.583 805.8918 345.32 . Q . V . . .
(PEAK DAY 1, HOUR 5.583)
101.667 808.2810 346.92 . Q . V . . .
(PEAK DAY 1, HOUR 5.667)
101.750 810.6813 348.53 . Q . V . . .
(PEAK DAY 1, HOUR 5.750)
101.833 813.0929 350.16 . Q . V . . .
(PEAK DAY 1, HOUR 5.833)
101.917 815.5159 351.81 . Q . V . . .
(PEAK DAY 1, HOUR 5.917)
102.000 817.9503 353.48 . Q . V . . .
(PEAK DAY 1, HOUR 6.000)
102.083 820.3964 355.18 . Q . V . . .
(PEAK DAY 1, HOUR 6.083)
102.167 822.8544 356.89 . Q . V . . .
(PEAK DAY 1, HOUR 6.167)
102.250 825.3243 358.63 . Q . V . . .
(PEAK DAY 1, HOUR 6.250)
102.333 827.8063 360.38 . Q . V . . .
(PEAK DAY 1, HOUR 6.333)
102.417 830.3005 362.17 . Q . V . . .
(PEAK DAY 1, HOUR 6.417)
102.500 832.8072 363.97 . Q . V . . .
(PEAK DAY 1, HOUR 6.500)
102.583 835.3265 365.80 . Q . V . . .
(PEAK DAY 1, HOUR 6.583)
102.667 837.8585 367.65 . Q . V . . .
(PEAK DAY 1, HOUR 6.667)
102.750 840.4034 369.52 . Q . V . . .
(PEAK DAY 1, HOUR 6.750)
102.833 842.9614 371.42 . Q . V . . .
(PEAK DAY 1, HOUR 6.833)
102.917 845.5320 373.26 . Q . V . . .
(PEAK DAY 1, HOUR 6.917)
103.000 848.1136 374.85 . Q . V . . .
(PEAK DAY 1, HOUR 7.000)
103.083 850.7040 376.11 . Q . V . . .
(PEAK DAY 1, HOUR 7.083)
103.167 853.3018 377.20 . Q . V . . .
(PEAK DAY 1, HOUR 7.167)
103.250 855.9072 378.30 . Q . V . . .
(PEAK DAY 1, HOUR 7.250)
103.333 858.5209 379.51 . Q . V . . .
(PEAK DAY 1, HOUR 7.333)
103.417 861.1437 380.84 . Q . V . . .
(PEAK DAY 1, HOUR 7.417)
103.500 863.7766 382.28 . Q . V . . .
(PEAK DAY 1, HOUR 7.500)
103.583 866.4200 383.84 . Q . V . . .
(PEAK DAY 1, HOUR 7.583)
103.667 869.0749 385.49 . Q . V . . .
(PEAK DAY 1, HOUR 7.667)
103.750 871.7418 387.23 . Q . V . . .
(PEAK DAY 1, HOUR 7.750)
103.833 874.4212 389.05 . Q . V . . .
(PEAK DAY 1, HOUR 7.833)
103.917 877.1137 390.95 . Q . V . . .
(PEAK DAY 1, HOUR 7.917)
104.000 879.8197 392.91 . Q . V . . .
(PEAK DAY 1, HOUR 8.000)
104.083 882.5397 394.95 . Q . V . . .
(PEAK DAY 1, HOUR 8.083)
104.167 885.2742 397.04 . Q . V . . .
(PEAK DAY 1, HOUR 8.167)
104.250 888.0234 399.19 . Q . V . . .
(PEAK DAY 1, HOUR 8.250)
104.333 890.7878 401.39 . Q . V . . .
(PEAK DAY 1, HOUR 8.333)
104.417 893.5678 403.65 . Q . V . . .
(PEAK DAY 1, HOUR 8.417)
104.500 896.3636 405.96 . Q . V . . .
(PEAK DAY 1, HOUR 8.500)
104.583 899.1758 408.32 . Q . V . . .
(PEAK DAY 1, HOUR 8.583)
104.667 902.0045 410.72 . Q . V . . .
(PEAK DAY 1, HOUR 8.667)
104.750 904.8501 413.18 . Q . V . . .
(PEAK DAY 1, HOUR 8.750)
104.833 907.7130 415.69 . Q . V . . .
(PEAK DAY 1, HOUR 8.833)
104.917 910.5934 418.24 . Q . V . . .
(PEAK DAY 1, HOUR 8.917)
105.000 913.4918 420.84 . Q . V . . .

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 (PEAK DAY 1, HOUR   9.000)
105.083    916.4084    423.50  .   Q     .   V     .         .         .
 (PEAK DAY 1, HOUR   9.083)
105.167    919.3436    426.19  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR   9.167)
105.250    922.2973    428.88  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR   9.250)
105.333    925.2682    431.37  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR   9.333)
105.417    928.2540    433.54  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR   9.417)
105.500    931.2533    435.49  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR   9.500)
105.583    934.2657    437.41  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR   9.583)
105.667    937.2917    439.37  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR   9.667)
105.750    940.3318    441.42  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR   9.750)
105.833    943.3867    443.56  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR   9.833)
105.917    946.4568    445.80  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR   9.917)
106.000    949.5430    448.12  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR  10.000)
106.083    952.6459    450.54  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR  10.083)
106.167    955.7661    453.04  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR  10.167)
106.250    958.9042    455.65  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR  10.250)
106.333    962.0608    458.34  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR  10.333)
106.417    965.2366    461.13  .    Q    .   V     .         .         .
 (PEAK DAY 1, HOUR  10.417)
106.500    968.4323    464.01  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  10.500)
106.583    971.6484    466.98  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  10.583)
106.667    974.8856    470.04  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  10.667)
106.750    978.1445    473.20  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  10.750)
106.833    981.4258    476.45  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  10.833)
106.917    984.7303    479.80  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  10.917)
107.000    988.0582    483.22  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  11.000)
107.083    991.4092    486.57  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  11.083)
107.167    994.7814    489.64  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  11.167)
107.250    998.1736    492.54  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  11.250)
107.333   1001.5854    495.41  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  11.333)
107.417   1005.0176    498.35  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  11.417)
107.500   1008.4705    501.37  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  11.500)
107.583   1011.9451    504.52  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  11.583)
107.667   1015.4421    507.77  .    Q    .    V    .         .         .
 (PEAK DAY 1, HOUR  11.667)
107.750   1018.9625    511.15  .     Q   .    V    .         .         .
 (PEAK DAY 1, HOUR  11.750)
107.833   1022.5068    514.64  .     Q   .    V    .         .         .
 (PEAK DAY 1, HOUR  11.833)
107.917   1026.0762    518.27  .     Q   .    V    .         .         .
 (PEAK DAY 1, HOUR  11.917)
108.000   1029.6714    522.02  .     Q   .    V    .         .         .
 (PEAK DAY 1, HOUR  12.000)
108.083   1033.2960    526.29  .     Q   .     V   .         .         .
 (PEAK DAY 1, HOUR  12.083)
108.167   1036.9579    531.70  .     Q   .     V   .         .         .
 (PEAK DAY 1, HOUR  12.167)
108.250   1040.6724    539.34  .     Q   .     V   .         .         .
 (PEAK DAY 1, HOUR  12.250)
108.333   1044.4548    549.21  .     Q   .     V   .         .         .
 (PEAK DAY 1, HOUR  12.333)
108.417   1048.3217    561.46  .     Q   .     V   .         .         .
 (PEAK DAY 1, HOUR  12.417)
108.500   1052.2679    572.99  .     Q   .     V   .         .         .
 (PEAK DAY 1, HOUR  12.500)
108.583   1056.2778    582.23  .     Q   .     V   .         .         .
 (PEAK DAY 1, HOUR  12.583)
108.667   1060.3385    589.62  .     Q   .     V   .         .         .
 (PEAK DAY 1, HOUR  12.667)
108.750   1064.4449    596.26  .      Q  .     V   .         .         .
 (PEAK DAY 1, HOUR  12.750)
108.833   1068.5955    602.66  .      Q  .     V   .         .         .
 (PEAK DAY 1, HOUR  12.833)
108.917   1072.7903    609.08  .      Q  .     V   .         .         .
 (PEAK DAY 1, HOUR  12.917)
109.000   1077.0308    615.72  .      Q  .     V   .         .         .
 (PEAK DAY 1, HOUR  13.000)
109.083   1081.3188    622.63  .      Q  .     V   .         .         .
 (PEAK DAY 1, HOUR  13.083)
109.167   1085.6559    629.74  .      Q  .     V   .         .         .
 (PEAK DAY 1, HOUR  13.167)
109.250   1090.0432    637.04  .      Q  .     V   .         .         .
 (PEAK DAY 1, HOUR  13.250)
109.333   1094.4819    644.51  .      Q  .     V   .         .         .
 (PEAK DAY 1, HOUR  13.333)
109.417   1098.9738    652.21  .      Q  .      V  .         .         .
 (PEAK DAY 1, HOUR  13.417)
109.500   1103.5201    660.13  .      Q  .      V  .         .         .
 (PEAK DAY 1, HOUR  13.500)
109.583   1108.1232    668.35  .      Q  .      V  .         .         .
 (PEAK DAY 1, HOUR  13.583)
109.667   1112.7845    676.83  .      Q  .      V  .         .         .
 (PEAK DAY 1, HOUR  13.667)
109.750   1117.5062    685.59  .       Q .      V  .         .         .
 (PEAK DAY 1, HOUR  13.750)
109.833   1122.2880    694.31  .       Q .      V  .         .         .
 (PEAK DAY 1, HOUR  13.833)
109.917   1127.1287    702.86  .       Q .      V  .         .         .
 (PEAK DAY 1, HOUR  13.917)
110.000   1132.0276    711.32  .       Q .      V  .         .         .
 (PEAK DAY 1, HOUR  14.000)
110.083   1136.9874    720.16  .       Q .      V  .         .         .
 (PEAK DAY 1, HOUR  14.083)
110.167   1142.0127    729.67  .       Q .      V  .         .         .
 (PEAK DAY 1, HOUR  14.167)
110.250   1147.1110    740.27  .       Q .      V  .         .         .
 (PEAK DAY 1, HOUR  14.250)
110.333   1152.2888    751.83  .       Q .      V  .         .         .
 (PEAK DAY 1, HOUR  14.333)
110.417   1157.5557    764.74  .       Q .      V  .         .         .
 (PEAK DAY 1, HOUR  14.417)
110.500   1162.9176    778.55  .        Q.       V .         .         .
 (PEAK DAY 1, HOUR  14.500)
110.583   1168.3826    793.51  .        Q.       V .         .         .
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 (PEAK DAY 1, HOUR  14.583)
110.667   1173.9597    809.81  .        Q.       V .         .         .
 (PEAK DAY 1, HOUR  14.667)
110.750   1179.6619    827.96  .        Q.       V .         .         .
 (PEAK DAY 1, HOUR  14.750)
110.833   1185.5007    847.80  .        Q.       V .         .         .
 (PEAK DAY 1, HOUR  14.833)
110.917   1191.4915    869.85  .         Q       V .         .         .
 (PEAK DAY 1, HOUR  14.917)
111.000   1197.6482    893.97  .         Q       V .         .         .
 (PEAK DAY 1, HOUR  15.000)
111.083   1203.9869    920.39  .         Q       V .         .         .
 (PEAK DAY 1, HOUR  15.083)
111.167   1210.5164    948.08  .         .Q      V .         .         .
 (PEAK DAY 1, HOUR  15.167)
111.250   1217.2485    977.51  .         .Q      V .         .         .
 (PEAK DAY 1, HOUR  15.250)
111.333   1224.1979   1009.04  .         .Q      V .         .         .
 (PEAK DAY 1, HOUR  15.333)
111.417   1231.3809   1042.98  .         . Q      V.         .         .
 (PEAK DAY 1, HOUR  15.417)
111.500   1238.7980   1076.97  .         . Q      V.         .         .
 (PEAK DAY 1, HOUR  15.500)
111.583   1246.4358   1109.01  .         .  Q     V.         .         .
 (PEAK DAY 1, HOUR  15.583)
111.667   1254.2833   1139.47  .         .  Q     V.         .         .
 (PEAK DAY 1, HOUR  15.667)
111.750   1262.3488   1171.09  .         .  Q     V.         .         .
 (PEAK DAY 1, HOUR  15.750)
111.833   1270.7300   1216.95  .         .   Q    V.         .         .
 (PEAK DAY 1, HOUR  15.833)
111.917   1279.6332   1292.74  .         .    Q   V.         .         .
 (PEAK DAY 1, HOUR  15.917)
112.000   1289.3462   1410.33  .         .     Q  V.         .         .
 (PEAK DAY 1, HOUR  16.000)
112.083   1300.6155   1636.30  .         .        QV         .         .
 (PEAK DAY 1, HOUR  16.083)
112.167   1314.3947   2000.73  .         .         V  Q      .         .
 (PEAK DAY 1, HOUR  16.167)
112.250   1331.7782   2524.09  .         .         V        Q.         .
 (PEAK DAY 1, HOUR  16.250)
112.333   1352.4279   2998.33  .         .         V         .    Q    .
 (PEAK DAY 1, HOUR  16.333)
112.417   1375.5278   3354.12  .         .         .V        .        Q.
 (PEAK DAY 1, HOUR  16.417)
112.500   1397.2065   3147.74  .         .         .V        .      Q  .
 (PEAK DAY 1, HOUR  16.500)
112.583   1415.4064   2642.61  .         .         .V       .Q         .
 (PEAK DAY 1, HOUR  16.583)
112.667   1430.5173   2194.11  .         .         . V  Q    .         .
 (PEAK DAY 1, HOUR  16.667)
112.750   1443.6626   1908.70  .         .         . Q       .         .
 (PEAK DAY 1, HOUR  16.750)
112.833   1455.4584   1712.76  .         .         Q V       .         .
 (PEAK DAY 1, HOUR  16.833)
112.917   1466.2455   1566.28  .         .       Q . V       .         .
 (PEAK DAY 1, HOUR  16.917)
113.000   1476.3983   1474.20  .         .      Q  . V       .         .
 (PEAK DAY 1, HOUR  17.000)
113.083   1486.0757   1405.16  .         .     Q   .  V      .         .
 (PEAK DAY 1, HOUR  17.083)
113.167   1495.3348   1344.42  .         .    Q    .  V      .         .
 (PEAK DAY 1, HOUR  17.167)
113.250   1504.2045   1287.87  .         .    Q    .  V      .         .
 (PEAK DAY 1, HOUR  17.250)
113.333   1512.7566   1241.77  .         .   Q     .  V      .         .
 (PEAK DAY 1, HOUR  17.333)
113.417   1521.0710   1207.26  .         .   Q     .  V      .         .
 (PEAK DAY 1, HOUR  17.417)
113.500   1529.2080   1181.49  .         .  Q      .  V      .         .
 (PEAK DAY 1, HOUR  17.500)
113.583   1537.2155   1162.67  .         .  Q      .  V      .         .
 (PEAK DAY 1, HOUR  17.583)
113.667   1545.1206   1147.83  .         .  Q      .  V      .         .
 (PEAK DAY 1, HOUR  17.667)
113.750   1552.9386   1135.17  .         .  Q      .   V     .         .
 (PEAK DAY 1, HOUR  17.750)
113.833   1560.6759   1123.46  .         .  Q      .   V     .         .
 (PEAK DAY 1, HOUR  17.833)
113.917   1568.3405   1112.90  .         .  Q      .   V     .         .
 (PEAK DAY 1, HOUR  17.917)
114.000   1575.9327   1102.40  .         . Q       .   V     .         .
 (PEAK DAY 1, HOUR  18.000)
114.083   1583.4550   1092.23  .         . Q       .   V     .         .
 (PEAK DAY 1, HOUR  18.083)
114.167   1590.9062   1081.93  .         . Q       .   V     .         .
 (PEAK DAY 1, HOUR  18.167)
114.250   1598.2675   1068.84  .         . Q       .   V     .         .
 (PEAK DAY 1, HOUR  18.250)
114.333   1605.5299   1054.51  .         . Q       .   V     .         .
 (PEAK DAY 1, HOUR  18.333)
114.417   1612.6848   1038.89  .         . Q       .    V    .         .
 (PEAK DAY 1, HOUR  18.417)
114.500   1619.7362   1023.86  .         . Q       .    V    .         .
 (PEAK DAY 1, HOUR  18.500)
114.583   1626.6899   1009.68  .         .Q        .    V    .         .
 (PEAK DAY 1, HOUR  18.583)
114.667   1633.5651    998.27  .         .Q        .    V    .         .
 (PEAK DAY 1, HOUR  18.667)
114.750   1640.3789    989.37  .         .Q        .    V    .         .
 (PEAK DAY 1, HOUR  18.750)
114.833   1647.1409    981.84  .         .Q        .    V    .         .
 (PEAK DAY 1, HOUR  18.833)
114.917   1653.8503    974.22  .         .Q        .    V    .         .
 (PEAK DAY 1, HOUR  18.917)
115.000   1660.5109    967.11  .         .Q        .    V    .         .
 (PEAK DAY 1, HOUR  19.000)
115.083   1667.1331    961.55  .         .Q        .    V    .         .
 (PEAK DAY 1, HOUR  19.083)
115.167   1673.7219    956.70  .         .Q        .    V    .         .
 (PEAK DAY 1, HOUR  19.167)
115.250   1680.2791    952.10  .         .Q        .     V   .         .
 (PEAK DAY 1, HOUR  19.250)
115.333   1686.8088    948.12  .         .Q        .     V   .         .
 (PEAK DAY 1, HOUR  19.333)
115.417   1693.3132    944.43  .         .Q        .     V   .         .
 (PEAK DAY 1, HOUR  19.417)
115.500   1699.7933    940.91  .         .Q        .     V   .         .
 (PEAK DAY 1, HOUR  19.500)
115.583   1706.2499    937.48  .         .Q        .     V   .         .
 (PEAK DAY 1, HOUR  19.583)
115.667   1712.6831    934.10  .         Q         .     V   .         .
 (PEAK DAY 1, HOUR  19.667)
115.750   1719.0930    930.72  .         Q         .     V   .         .
 (PEAK DAY 1, HOUR  19.750)
115.833   1725.4772    926.99  .         Q         .     V   .         .
 (PEAK DAY 1, HOUR  19.833)
115.917   1731.8347    923.12  .         Q         .     V   .         .
 (PEAK DAY 1, HOUR  19.917)
116.000   1738.1683    919.65  .         Q         .     V   .         .
 (PEAK DAY 1, HOUR  20.000)
116.083   1744.4807    916.55  .         Q         .      V  .         .
 (PEAK DAY 1, HOUR  20.083)
116.167   1750.7729    913.63  .         Q         .      V  .         .
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(PEAK DAY 1, HOUR  20.167)
116.250   1757.0452    910.73  .        Q        .      V  .        .
(PEAK DAY 1, HOUR  20.250)
116.333   1763.2971    907.79  .        Q        .      V  .        .
(PEAK DAY 1, HOUR  20.333)
116.417   1769.5244    904.20  .        Q        .      V  .        .
(PEAK DAY 1, HOUR  20.417)
116.500   1775.7301    901.06  .        Q        .      V  .        .
(PEAK DAY 1, HOUR  20.500)
116.583   1781.9171    898.36  .        Q        .      V  .        .
(PEAK DAY 1, HOUR  20.583)
116.667   1788.0870    895.87  .        Q        .      V  .        .
(PEAK DAY 1, HOUR  20.667)
116.750   1794.2405    893.48  .        Q        .      V  .        .
(PEAK DAY 1, HOUR  20.750)
116.833   1800.3778    891.14  .        Q        .      V  .        .
(PEAK DAY 1, HOUR  20.833)
116.917   1806.4991    888.82  .        Q        .       V .        .
(PEAK DAY 1, HOUR  20.917)
117.000   1812.6044    886.48  .        Q        .       V .        .
(PEAK DAY 1, HOUR  21.000)
117.083   1818.6948    884.33  .        Q        .       V .        .
(PEAK DAY 1, HOUR  21.083)
117.167   1824.7708    882.23  .        Q        .       V .        .
(PEAK DAY 1, HOUR  21.167)
117.250   1830.8325    880.16  .        Q        .       V .        .
(PEAK DAY 1, HOUR  21.250)
117.333   1836.8802    878.13  .        Q        .       V .        .
(PEAK DAY 1, HOUR  21.333)
117.417   1842.9142    876.13  .        Q        .       V .        .
(PEAK DAY 1, HOUR  21.417)
117.500   1848.9346    874.16  .        Q        .       V .        .
(PEAK DAY 1, HOUR  21.500)
117.583   1854.9415    872.21  .        Q        .       V .        .
(PEAK DAY 1, HOUR  21.583)
117.667   1860.9354    870.31  .        Q        .       V .        .
(PEAK DAY 1, HOUR  21.667)
117.750   1866.9165    868.45  .        Q        .       V .        .
(PEAK DAY 1, HOUR  21.750)
117.833   1872.8850    866.63  .        Q        .        V.        .
(PEAK DAY 1, HOUR  21.833)
117.917   1878.8413    864.86  .        Q        .        V.        .
(PEAK DAY 1, HOUR  21.917)
118.000   1884.7855    863.11  .        Q        .        V.        .
(PEAK DAY 1, HOUR  22.000)
118.083   1890.7179    861.38  .        Q        .        V.        .
(PEAK DAY 1, HOUR  22.083)
118.167   1896.6385    859.67  .        Q        .        V.        .
(PEAK DAY 1, HOUR  22.167)
118.250   1902.5475    857.98  .        Q        .        V.        .
(PEAK DAY 1, HOUR  22.250)
118.333   1908.4449    856.31  .        Q        .        V.        .
(PEAK DAY 1, HOUR  22.333)
118.417   1914.3311    854.66  .        Q        .        V.        .
(PEAK DAY 1, HOUR  22.417)
118.500   1920.2059    853.03  .        Q        .        V.        .
(PEAK DAY 1, HOUR  22.500)
118.583   1926.0697    851.42  .        Q        .        V.        .
(PEAK DAY 1, HOUR  22.583)
118.667   1931.9224    849.82  .       Q.        .        V.        .
(PEAK DAY 1, HOUR  22.667)
118.750   1937.7642    848.23  .       Q.        .         V        .
(PEAK DAY 1, HOUR  22.750)
118.833   1943.5951    846.66  .       Q.        .         V        .
(PEAK DAY 1, HOUR  22.833)
118.917   1949.4153    845.10  .       Q.        .         V        .
(PEAK DAY 1, HOUR  22.917)
119.000   1955.2249    843.55  .       Q.        .         V        .
(PEAK DAY 1, HOUR  23.000)
119.083   1961.0239    842.02  .       Q.        .         V        .
(PEAK DAY 1, HOUR  23.083)
119.167   1966.8125    840.50  .       Q.        .         V        .
(PEAK DAY 1, HOUR  23.167)
119.250   1972.5906    838.99  .       Q.        .         V        .
(PEAK DAY 1, HOUR  23.250)
119.333   1978.3584    837.49  .       Q.        .         V        .
(PEAK DAY 1, HOUR  23.333)
119.417   1984.1160    836.00  .       Q.        .         V        .
(PEAK DAY 1, HOUR  23.417)
119.500   1989.8633    834.52  .       Q.        .         V        .
(PEAK DAY 1, HOUR  23.500)
119.583   1995.6006    833.05  .       Q.        .         V        .
(PEAK DAY 1, HOUR  23.583)
119.667   2001.3279    831.60  .       Q.        .        .V        .
(PEAK DAY 1, HOUR  23.667)
119.750   2007.0454    830.18  .       Q.        .        .V        .
(PEAK DAY 1, HOUR  23.750)
119.833   2012.7533    828.79  .       Q.        .        .V        .
(PEAK DAY 1, HOUR  23.833)
119.917   2018.4518    827.42  .       Q.        .        .V        .
(PEAK DAY 1, HOUR  23.917)
120.000   2024.1409    826.06  .       Q.        .        .V        .
(PEAK DAY 1, HOUR  24.000)
120.083   2029.8168    824.14  .       Q.        .        .V        .
(PEAK DAY 1, HOUR  24.083)
120.167   2035.4685    820.63  .       Q.        .        .V        .
(PEAK DAY 1, HOUR  24.167)
120.250   2041.0739    813.89  .       Q.        .        .V        .
(PEAK DAY 1, HOUR  24.250)
120.333   2046.6102    803.89  .       Q.        .        .V        .
(PEAK DAY 1, HOUR  24.333)
120.417   2052.0535    790.35  .       Q.        .        .V        .
(PEAK DAY 1, HOUR  24.417)
120.500   2057.4106    777.85  .       Q.        .        .V        .
(PEAK DAY 1, HOUR  24.500)
120.583   2062.7058    768.85  .       Q.        .        .V        .
(PEAK DAY 1, HOUR  24.583)
120.667   2067.9595    762.83  .      Q .        .        . V       .
(PEAK DAY 1, HOUR  24.667)
120.750   2073.1831    758.48  .      Q .        .        . V       .
(PEAK DAY 1, HOUR  24.750)
120.833   2078.3840    755.17  .      Q .        .        . V       .
(PEAK DAY 1, HOUR  24.833)
120.917   2083.5674    752.61  .      Q .        .        . V       .
(PEAK DAY 1, HOUR  24.917)
121.000   2088.7349    750.34  .      Q .        .        . V       .
(PEAK DAY 1, HOUR  25.000)
121.083   2093.8879    748.22  .      Q .        .        . V       .
(PEAK DAY 1, HOUR  25.083)
121.167   2099.0273    746.25  .      Q .        .        . V       .
(PEAK DAY 1, HOUR  25.167)
121.250   2104.1545    744.45  .      Q .        .        . V       .
(PEAK DAY 1, HOUR  25.250)
121.333   2109.2695    742.69  .      Q .        .        . V       .
(PEAK DAY 1, HOUR  25.333)
121.417   2114.3711    740.73  .      Q .        .        . V       .
(PEAK DAY 1, HOUR  25.417)
121.500   2119.4570    738.50  .      Q .        .        . V       .
(PEAK DAY 1, HOUR  25.500)
121.583   2124.5264    736.07  .      Q .        .        . V       .
(PEAK DAY 1, HOUR  25.583)
121.667   2129.5786    733.58  .      Q .        .        .  V      .
(PEAK DAY 1, HOUR  25.667)
121.750   2134.6135    731.07  .      Q .        .        .  V      .
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 (PEAK DAY 1, HOUR  25.750)
 121.833   2139.6313    728.57  .       Q .         .         .  V      .
 (PEAK DAY 1, HOUR  25.833)
 121.917   2144.6318    726.08  .       Q .         .         .  V      .
 (PEAK DAY 1, HOUR  25.917)
 122.000   2149.6155    723.62  .       Q .         .         .  V      .
 (PEAK DAY 1, HOUR  26.000)
 122.083   2154.5823    721.17  .       Q .         .         .  V      .
 (PEAK DAY 1, HOUR  26.083)
 122.167   2159.5322    718.73  .       Q .         .         .  V      .
 (PEAK DAY 1, HOUR  26.167)
 122.250   2164.4656    716.32  .       Q .         .         .  V      .
 (PEAK DAY 1, HOUR  26.250)
 122.333   2169.3826    713.94  .       Q .         .         .  V      .
 (PEAK DAY 1, HOUR  26.333)
 122.417   2174.2832    711.57  .       Q .         .         .  V      .
 (PEAK DAY 1, HOUR  26.417)
 122.500   2179.1675    709.21  .       Q .         .         .  V      .
 (PEAK DAY 1, HOUR  26.500)
 122.583   2184.0359    706.88  .       Q .         .         .  V      .
 (PEAK DAY 1, HOUR  26.583)
 122.667   2188.8884    704.58  .       Q .         .         .  V      .
 (PEAK DAY 1, HOUR  26.667)
 122.750   2193.7249    702.27  .       Q .         .         .   V     .
 (PEAK DAY 1, HOUR  26.750)
 122.833   2198.5454    699.93  .       Q .         .         .   V     .
 (PEAK DAY 1, HOUR  26.833)
 122.917   2203.3499    697.59  .       Q .         .         .   V     .
 (PEAK DAY 1, HOUR  26.917)
 123.000   2208.1382    695.26  .       Q .         .         .   V     .
 (PEAK DAY 1, HOUR  27.000)
 123.083   2212.9106    692.94  .       Q .         .         .   V     .
 (PEAK DAY 1, HOUR  27.083)
 123.167   2217.6670    690.63  .       Q .         .         .   V     .
 (PEAK DAY 1, HOUR  27.167)
 123.250   2222.4075    688.33  .       Q .         .         .   V     .
 (PEAK DAY 1, HOUR  27.250)
 123.333   2227.1323    686.04  .       Q .         .         .   V     .
 (PEAK DAY 1, HOUR  27.333)
 123.417   2231.8413    683.76  .       Q .         .         .   V     .
 (PEAK DAY 1, HOUR  27.417)
 123.500   2236.5347    681.48  .       Q .         .         .   V     .
 (PEAK DAY 1, HOUR  27.500)
 123.583   2241.2124    679.21  .      Q  .         .         .   V     .
 (PEAK DAY 1, HOUR  27.583)
 123.667   2245.8745    676.94  .      Q  .         .         .   V     .
 (PEAK DAY 1, HOUR  27.667)
 123.750   2250.5212    674.69  .      Q  .         .         .   V     .
 (PEAK DAY 1, HOUR  27.750)
 123.833   2255.1523    672.44  .      Q  .         .         .   V     .
 (PEAK DAY 1, HOUR  27.833)
 123.917   2259.7681    670.21  .      Q  .         .         .    V    .
 (PEAK DAY 1, HOUR  27.917)
 124.000   2264.3684    667.98  .      Q  .         .         .    V    .
 (PEAK DAY 1, HOUR  28.000)
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
===============================================================================

  END OF FLOODSCx ROUTING ANALYSIS



*******************************************************************************
  FLOW PROCESS FROM NODE   6355.00 TO NODE   6371.00 IS CODE = 5.2
-------------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
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         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  6039.2 Ac. ***

         THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
         TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
         INTERVALS(Reference: the National Engineering Handbook,
         Hydrology, Chapter 17, page 17-52, August,1972,
         U.S. Department of Commerce).


         ASSUMED REGULAR CHANNEL INFORMATION:
           BASEWIDTH(FT) =   30.00     CHANNEL Z =  1.00
           UPSTREAM ELEVATION(FT) =     314.00
           DOWNSTREAM ELEVATION(FT) =     220.00
           CHANNEL LENGTH(FT) =    5919.00     MANNING'S FACTOR = 0.040
           CONSTANT LOSS RATE(CFS) =    0.00



         CHANNEL ROUTING COEFFICIENT ESTIMATED:
           MAXIMUM INFLOW(CFS) =  3354.12
           AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  2498.13
           CHANNEL NORMAL VELOCITY FOR Q =  2498.13 CFS =  12.51 FPS
           ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.880

         MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
         UNIT INTERVALS IS CSTAR = 0.822


         CONVEX METHOD CHANNEL ROUTING RESULTS:
                                                              OUTFLOW LESS
                    CLOCK        INFLOW      ROUTED          LOSS
PEAK     TIME       TIME       (STREAM 1)    FLOW         (STREAM 1)
 DAY     (HRS)      (HRS)        (CFS)       (CFS)          (CFS)
  2    24.000     96.000        77.86       78.81          78.81
  1     0.083     96.083        77.71       78.22          78.22
  1     0.167     96.167        78.77       77.85          77.85
  1     0.250     96.250        82.27       78.27          78.27
  1     0.333     96.333        88.63       80.44          80.44
  1     0.417     96.417        98.88       85.14          85.14
  1     0.500     96.500       110.46       93.16          93.16
  1     0.583     96.583       121.93      103.69         103.69
  1     0.667     96.667       134.43      115.03         115.03
  1     0.750     96.750       151.41      126.99         126.99
  1     0.833     96.833       173.65      141.65         141.65
  1     0.917     96.917       195.88      160.86         160.86
  1     1.000     97.000       213.44      182.56         182.56
  1     1.083     97.083       226.34      202.35         202.35
  1     1.167     97.167       236.18      217.96         217.96
  1     1.250     97.250       244.05      229.80         229.80
  1     1.333     97.333       250.62      239.00         239.00
  1     1.417     97.417       256.28      246.46         246.46
  1     1.500     97.500       261.24      252.73         252.73
  1     1.583     97.583       265.63      258.15         258.15
  1     1.667     97.667       269.56      262.90         262.90
  1     1.750     97.750       273.16      267.12         267.12
  1     1.833     97.833       276.43      270.94         270.94
  1     1.917     97.917       279.41      274.41         274.41
  1     2.000     98.000       282.11      277.57         277.57
  1     2.083     98.083       284.54      280.44         280.44
  1     2.167     98.167       286.75      283.04         283.04
  1     2.250     98.250       288.81      285.38         285.38
  1     2.333     98.333       290.70      287.54         287.54
  1     2.417     98.417       292.35      289.53         289.53
  1     2.500     98.500       293.79      291.32         291.32
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1	2.583	98.583	295.12	292.89	292.89
1	2.667	98.667	296.41	294.30	294.30
1	2.750	98.750	297.69	295.62	295.62
1	2.833	98.833	298.97	296.91	296.91
1	2.917	98.917	300.26	298.20	298.20
1	3.000	99.000	301.54	299.48	299.48
1	3.083	99.083	302.83	300.77	300.77
1	3.167	99.167	304.14	302.05	302.05
1	3.250	99.250	305.45	303.35	303.35
1	3.333	99.333	306.77	304.66	304.66
1	3.417	99.417	308.11	305.97	305.97
1	3.500	99.500	309.46	307.30	307.30
1	3.583	99.583	310.82	308.65	308.65
1	3.667	99.667	312.20	310.00	310.00
1	3.750	99.750	313.59	311.37	311.37
1	3.833	99.833	314.99	312.75	312.75
1	3.917	99.917	316.40	314.15	314.15
1	4.000	100.000	317.83	315.55	315.55
1	4.083	100.083	319.26	316.97	316.97
1	4.167	100.167	320.70	318.40	318.40
1	4.250	100.250	322.10	319.83	319.83
1	4.333	100.333	323.48	321.25	321.25
1	4.417	100.417	324.84	322.64	322.64
1	4.500	100.500	326.21	324.02	324.02
1	4.583	100.583	327.58	325.38	325.38
1	4.667	100.667	328.97	326.75	326.75
1	4.750	100.750	330.38	328.14	328.14
1	4.833	100.833	331.80	329.53	329.53
1	4.917	100.917	333.23	330.94	330.94
1	5.000	101.000	334.68	332.37	332.37
1	5.083	101.083	336.15	333.81	333.81
1	5.167	101.167	337.64	335.27	335.27
1	5.250	101.250	339.14	336.74	336.74
1	5.333	101.333	340.66	338.23	338.23
1	5.417	101.417	342.20	339.74	339.74
1	5.500	101.500	343.75	341.27	341.27
1	5.583	101.583	345.32	342.81	342.81
1	5.667	101.667	346.92	344.37	344.37
1	5.750	101.750	348.53	345.96	345.96
1	5.833	101.833	350.16	347.56	347.56
1	5.917	101.917	351.81	349.18	349.18
1	6.000	102.000	353.48	350.82	350.82
1	6.083	102.083	355.18	352.48	352.48
1	6.167	102.167	356.89	354.16	354.16
1	6.250	102.250	358.63	355.86	355.86
1	6.333	102.333	360.38	357.58	357.58
1	6.417	102.417	362.17	359.32	359.32
1	6.500	102.500	363.97	361.09	361.09
1	6.583	102.583	365.80	362.88	362.88
1	6.667	102.667	367.65	364.70	364.70
1	6.750	102.750	369.52	366.53	366.53
1	6.833	102.833	371.42	368.39	368.39
1	6.917	102.917	373.26	370.28	370.28
1	7.000	103.000	374.85	372.14	372.14
1	7.083	103.083	376.11	373.86	373.86
1	7.167	103.167	377.20	375.31	375.31
1	7.250	103.250	378.30	376.51	376.51
1	7.333	103.333	379.51	377.63	377.63
1	7.417	103.417	380.84	378.79	378.79
1	7.500	103.500	382.28	380.05	380.05
1	7.583	103.583	383.84	381.43	381.43
1	7.667	103.667	385.49	382.91	382.91
1	7.750	103.750	387.23	384.50	384.50
1	7.833	103.833	389.05	386.19	386.19
1	7.917	103.917	390.95	387.96	387.96
1	8.000	104.000	392.91	389.81	389.81
1	8.083	104.083	394.95	391.74	391.74
1	8.167	104.167	397.04	393.73	393.73
1	8.250	104.250	399.19	395.78	395.78
1	8.333	104.333	401.39	397.90	397.90
1	8.417	104.417	403.65	400.07	400.07
1	8.500	104.500	405.96	402.29	402.29
1	8.583	104.583	408.32	404.57	404.57
1	8.667	104.667	410.72	406.90	406.90
1	8.750	104.750	413.18	409.28	409.28
1	8.833	104.833	415.69	411.70	411.70
1	8.917	104.917	418.24	414.18	414.18
1	9.000	105.000	420.84	416.70	416.70
1	9.083	105.083	423.50	419.28	419.28
1	9.167	105.167	426.19	421.90	421.90
1	9.250	105.250	428.88	424.57	424.57
1	9.333	105.333	431.37	427.26	427.26
1	9.417	105.417	433.54	429.85	429.85
1	9.500	105.500	435.49	432.19	432.19
1	9.583	105.583	437.41	434.28	434.28
1	9.667	105.667	439.37	436.24	436.24
1	9.750	105.750	441.42	438.19	438.19
1	9.833	105.833	443.56	440.19	440.19
1	9.917	105.917	445.80	442.28	442.28
1	10.000	106.000	448.12	444.46	444.46
1	10.083	106.083	450.54	446.72	446.72
1	10.167	106.167	453.04	449.09	449.09
1	10.250	106.250	455.65	451.54	451.54
1	10.333	106.333	458.34	454.09	454.09
1	10.417	106.417	461.13	456.73	456.73
1	10.500	106.500	464.01	459.46	459.46
1	10.583	106.583	466.98	462.28	462.28
1	10.667	106.667	470.04	465.20	465.20
1	10.750	106.750	473.20	468.20	468.20
1	10.833	106.833	476.45	471.30	471.30
1	10.917	106.917	479.80	474.50	474.50
1	11.000	107.000	483.22	477.79	477.79
1	11.083	107.083	486.57	481.16	481.16
1	11.167	107.167	489.64	484.54	484.54
1	11.250	107.250	492.54	487.75	487.75
1	11.333	107.333	495.41	490.77	490.77
1	11.417	107.417	498.35	493.67	493.67
1	11.500	107.500	501.37	496.58	496.58
1	11.583	107.583	504.52	499.55	499.55
1	11.667	107.667	507.77	502.63	502.63
1	11.750	107.750	511.15	505.82	505.82
1	11.833	107.833	514.64	509.12	509.12
1	11.917	107.917	518.27	512.54	512.54
1	12.000	108.000	522.02	516.10	516.10
1	12.083	108.083	526.29	519.77	519.77
1	12.167	108.167	531.70	523.77	523.77
1	12.250	108.250	539.34	528.56	528.56
1	12.333	108.333	549.21	534.98	534.98
1	12.417	108.417	561.46	543.53	543.53
1	12.500	108.500	572.99	554.36	554.36
1	12.583	108.583	582.23	566.00	566.00
1	12.667	108.667	589.62	576.39	576.39
1	12.750	108.750	596.26	584.91	584.91
1	12.833	108.833	602.66	592.12	592.12
1	12.917	108.917	609.08	598.74	598.74
1	13.000	109.000	615.72	605.19	605.19
1	13.083	109.083	622.63	611.73	611.73
1	13.167	109.167	629.74	618.49	618.49
1	13.250	109.250	637.04	625.47	625.47
1	13.333	109.333	644.51	632.65	632.65
1	13.417	109.417	652.21	640.02	640.02
1	13.500	109.500	660.13	647.58	647.58
1	13.583	109.583	668.35	655.37	655.37
1	13.667	109.667	676.83	663.42	663.42

1	13.750	109.750	685.59	671.74	671.74
1	13.833	109.833	694.31	680.33	680.33
1	13.917	109.917	702.86	689.04	689.04
1	14.000	110.000	711.32	697.68	697.68
1	14.083	110.083	720.16	706.19	706.19
1	14.167	110.167	729.67	714.86	714.86
1	14.250	110.250	740.27	724.00	724.00
1	14.333	110.333	751.83	733.99	733.99
1	14.417	110.417	764.74	744.97	744.97
1	14.500	110.500	778.55	757.10	757.10
1	14.583	110.583	793.51	770.33	770.33
1	14.667	110.667	809.81	784.61	784.61
1	14.750	110.750	827.96	800.13	800.13
1	14.833	110.833	847.80	817.22	817.22
1	14.917	110.917	869.85	836.03	836.03
1	15.000	111.000	893.97	856.80	856.80
1	15.083	111.083	920.39	879.66	879.66
1	15.167	111.167	948.08	904.71	904.71
1	15.250	111.250	977.51	931.53	931.53
1	15.333	111.333	1009.04	959.94	959.94
1	15.417	111.417	1042.98	990.25	990.25
1	15.500	111.500	1076.97	1022.77	1022.77
1	15.583	111.583	1109.01	1056.48	1056.48
1	15.667	111.667	1139.47	1089.44	1089.44
1	15.750	111.750	1171.09	1120.85	1120.85
1	15.833	111.833	1216.95	1152.06	1152.06
1	15.917	111.917	1292.74	1190.77	1190.77
1	16.000	112.000	1410.33	1250.41	1250.41
1	16.083	112.083	1636.30	1344.36	1344.36
1	16.167	112.167	2000.73	1512.25	1512.25
1	16.250	112.250	2524.09	1797.54	1797.54
1	16.333	112.333	2998.33	2227.83	2227.83
1	16.417	112.417	3354.12	2709.94	2709.94
1	16.500	112.500	3147.74	3126.01	3126.01
1	16.583	112.583	2642.61	3209.78	3209.78
1	16.667	112.667	2194.11	2904.72	2904.72
1	16.750	112.750	1908.70	2463.64	2463.64
1	16.833	112.833	1712.76	2098.47	2098.47
1	16.917	112.917	1566.28	1843.88	1843.88
1	17.000	113.000	1474.20	1662.40	1662.40
1	17.083	113.083	1405.16	1537.05	1537.05
1	17.167	113.167	1344.42	1450.65	1450.65
1	17.250	113.250	1287.87	1382.70	1382.70
1	17.333	113.333	1241.77	1322.78	1322.78
1	17.417	113.417	1207.26	1270.89	1270.89
1	17.500	113.500	1181.49	1229.59	1229.59
1	17.583	113.583	1162.67	1198.27	1198.27
1	17.667	113.667	1147.83	1175.01	1175.01
1	17.750	113.750	1135.17	1157.40	1157.40
1	17.833	113.833	1123.46	1143.16	1143.16
1	17.917	113.917	1112.90	1130.70	1130.70
1	18.000	114.000	1102.40	1119.44	1119.44
1	18.083	114.083	1092.23	1108.78	1108.78
1	18.167	114.167	1081.93	1098.42	1098.42
1	18.250	114.250	1068.84	1088.15	1088.15
1	18.333	114.333	1054.51	1076.45	1076.45
1	18.417	114.417	1038.89	1062.99	1062.99
1	18.500	114.500	1023.86	1048.16	1048.16
1	18.583	114.583	1009.68	1032.98	1032.98
1	18.667	114.667	998.27	1018.35	1018.35
1	18.750	114.750	989.37	1005.48	1005.48
1	18.833	114.833	981.84	995.08	995.08
1	18.917	114.917	974.22	986.60	986.60
1	19.000	115.000	967.11	978.85	978.85
1	19.083	115.083	961.55	971.47	971.47
1	19.167	115.167	956.70	965.09	965.09
1	19.250	115.250	952.10	959.74	959.74
1	19.333	115.333	948.12	954.93	954.93
1	19.417	115.417	944.43	950.60	950.60
1	19.500	115.500	940.91	946.71	946.71
1	19.583	115.583	937.48	943.06	943.06
1	19.667	115.667	934.10	939.57	939.57
1	19.750	115.750	930.72	936.15	936.15
1	19.833	115.833	926.99	932.76	932.76
1	19.917	115.917	923.12	929.20	929.20
1	20.000	116.000	919.65	925.43	925.43
1	20.083	116.083	916.55	921.78	921.78
1	20.167	116.167	913.63	918.47	918.47
1	20.250	116.250	910.73	915.42	915.42
1	20.333	116.333	907.79	912.49	912.49
1	20.417	116.417	904.20	909.56	909.56
1	20.500	116.500	901.06	906.30	906.30
1	20.583	116.583	898.36	902.99	902.99
1	20.667	116.667	895.87	900.04	900.04
1	20.750	116.750	893.48	897.41	897.41
1	20.833	116.833	891.14	894.94	894.94
1	20.917	116.917	888.82	892.57	892.57
1	21.000	117.000	886.48	890.23	890.23
1	21.083	117.083	884.33	887.89	887.89
1	21.167	117.167	882.23	885.65	885.65
1	21.250	117.250	880.16	883.51	883.51
1	21.333	117.333	878.13	881.41	881.41
1	21.417	117.417	876.13	879.36	879.36
1	21.500	117.500	874.16	877.34	877.34
1	21.583	117.583	872.21	875.35	875.35
1	21.667	117.667	870.31	873.39	873.39
1	21.750	117.750	868.45	871.46	871.46
1	21.833	117.833	866.63	869.58	869.58
1	21.917	117.917	864.86	867.73	867.73
1	22.000	118.000	863.11	865.93	865.93
1	22.083	118.083	861.38	864.17	864.17
1	22.167	118.167	859.67	862.43	862.43
1	22.250	118.250	857.98	860.71	860.71
1	22.333	118.333	856.31	859.01	859.01
1	22.417	118.417	854.66	857.32	857.32
1	22.500	118.500	853.03	855.66	855.66
1	22.583	118.583	851.42	854.02	854.02
1	22.667	118.667	849.82	852.39	852.39
1	22.750	118.750	848.23	850.78	850.78
1	22.833	118.833	846.66	849.19	849.19
1	22.917	118.917	845.10	847.61	847.61
1	23.000	119.000	843.55	846.04	846.04
1	23.083	119.083	842.02	844.49	844.49
1	23.167	119.167	840.50	842.95	842.95
1	23.250	119.250	838.99	841.42	841.42
1	23.333	119.333	837.49	839.90	839.90
1	23.417	119.417	836.00	838.39	838.39
1	23.500	119.500	834.52	836.90	836.90
1	23.583	119.583	833.05	835.41	835.41
1	23.667	119.667	831.60	833.94	833.94
1	23.750	119.750	830.18	832.48	832.48
1	23.833	119.833	828.79	831.04	831.04
1	23.917	119.917	827.42	829.63	829.63
1	24.000	120.000	826.06	828.25	828.25
1	24.083	120.083	824.14	826.89	826.89
1	24.167	120.167	820.63	825.24	825.24
1	24.250	120.250	813.89	822.57	822.57
1	24.333	120.333	803.89	817.58	817.58
1	24.417	120.417	790.35	809.51	809.51
1	24.500	120.500	777.85	798.08	798.08
1	24.583	120.583	768.85	785.44	785.44
1	24.667	120.667	762.83	774.67	774.67
1	24.750	120.750	758.48	766.86	766.86
1	24.833	120.833	755.17	761.36	761.36

1	24.917	120.917	752.61	757.33	757.33
1	25.000	121.000	750.34	754.26	754.26
1	25.083	121.083	748.22	751.76	751.76
1	25.167	121.167	746.25	749.52	749.52
1	25.250	121.250	744.45	747.46	747.46
1	25.333	121.333	742.69	745.56	745.56
1	25.417	121.417	740.73	743.76	743.76
1	25.500	121.500	738.50	741.90	741.90
1	25.583	121.583	736.07	739.82	739.82
1	25.667	121.667	733.58	737.51	737.51
1	25.750	121.750	731.07	735.08	735.08
1	25.833	121.833	728.57	732.58	732.58
1	25.917	121.917	726.08	730.08	730.08
1	26.000	122.000	723.62	727.59	727.59
1	26.083	122.083	721.17	725.11	725.11
1	26.167	122.167	718.73	722.65	722.65
1	26.250	122.250	716.32	720.21	720.21
1	26.333	122.333	713.94	717.78	717.78
1	26.417	122.417	711.57	715.38	715.38
1	26.500	122.500	709.21	713.00	713.00
1	26.583	122.583	706.88	710.64	710.64
1	26.667	122.667	704.58	708.29	708.29
1	26.750	122.750	702.27	705.98	705.98
1	26.833	122.833	699.93	703.66	703.66
1	26.917	122.917	697.59	701.34	701.34
1	27.000	123.000	695.26	699.00	699.00
1	27.083	123.083	692.94	696.67	696.67
1	27.167	123.167	690.63	694.35	694.35
1	27.250	123.250	688.33	692.03	692.03
1	27.333	123.333	686.04	689.73	689.73
1	27.417	123.417	683.76	687.43	687.43
1	27.500	123.500	681.48	685.14	685.14
1	27.583	123.583	679.21	682.86	682.86
1	27.667	123.667	676.94	680.58	680.58
1	27.750	123.750	674.69	678.31	678.31
1	27.833	123.833	672.44	676.05	676.05
1	27.917	123.917	670.21	673.80	673.80
1	28.000	124.000	667.98	671.56	671.56

Note: Computed Hydrograph continues past two days after the peak day of the design storm.

PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 2579.017 AF
OUTFLOW VOLUME = 2579.013 AF
LOSS VOLUME = 0.000 AF

END OF FLOODSCx ROUTING ANALYSIS

FLOW PROCESS FROM NODE 6360.00 TO NODE 6371.00 IS CODE = 1

*** Note: This link/process output is based on its ***
*** tributary area being adjusted, for depth-area ***
*** effects, using a specified area of 922.3 Ac. ***
>>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<

(UNIT-HYDROGRAPH ADDED TO STREAM #2)

WATERSHED AREA = 922.300 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.250 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY(DEVELOPED):
"S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.900
FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.050
MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.050
VALLEY(UNDEVELOPED)/DESERT:
"S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.000
DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) = 0.000
BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:

RAINFALL DEPTHS & LOSS RATES	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
5-MINUTE (INCHES)	0.58	0.27	0.12	0.06	0.04
30-MINUTE (INCHES)	1.22	0.56	0.24	0.13	0.09
1-HOUR (INCHES)	1.62	0.75	0.33	0.17	0.12
3-HOUR (INCHES)	2.71	1.25	0.54	0.28	0.21
6-HOUR (INCHES)	3.75	1.73	0.75	0.39	0.29
24-HOUR (INCHES)	6.28	2.89	1.26	0.66	0.48
LOSS RATE(IN/HR)	0.120	0.120	0.120	0.120	0.120
LOW LOSS FRACTION	0.510	0.760	0.950	0.990	0.990

5-MINUTE FACTOR = 0.959
30-MINUTE FACTOR = 0.959
1-HOUR FACTOR = 0.959
3-HOUR FACTOR = 0.994
6-HOUR FACTOR = 0.997
24-HOUR FACTOR = 0.998

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 33.333

RUNOFF HYDROGRAPH LISTING LIMITS:
MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 96.00
MODEL TIME(HOURS) FOR END OF RESULTS = 124.00

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	2.292	255.704
2	13.821	1285.900
3	35.522	2420.567
4	62.164	2971.648
5	80.648	2061.668
6	89.997	1042.866
7	94.646	518.513
8	96.625	220.790
9	97.489	96.296
10	98.211	80.598
11	98.708	55.360
12	99.005	33.223
13	99.174	18.845
14	99.253	8.821
15	99.326	8.100
16	99.394	7.535
17	99.458	7.164
18	99.518	6.727
19	99.574	6.257
20	99.626	5.759

21	99.675	5.514
22	99.718	4.708
23	99.759	4.643
24	99.799	4.443
25	99.827	3.130
26	99.851	2.675
27	99.875	2.675
28	99.897	2.469
29	99.906	1.014
30	99.913	0.730
31	99.919	0.731
32	99.926	0.729
33	99.932	0.731
34	99.939	0.729
35	99.946	0.730
36	99.952	0.729
37	99.959	0.729
38	99.965	0.729
39	99.972	0.730
40	99.978	0.729
41	99.985	0.729
42	99.991	0.729
43	99.998	0.729
44	100.000	0.237

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 433.5397
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 453.8287

5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	650.0	1300.0	1950.0	2600.0
96.000	126.4908	10.29	Q	.V	.	.	.
(PEAK DAY 2, HOUR 24.000)							
96.083	126.5666	11.01	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.083)							
96.167	126.6693	14.91	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.167)							
96.250	126.8231	22.33	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.250)							
96.333	127.0401	31.50	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.333)							
96.417	127.3012	37.92	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.417)							
96.500	127.5853	41.24	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.500)							
96.583	127.8812	42.97	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.583)							
96.667	128.1828	43.79	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.667)							
96.750	128.4874	44.23	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.750)							
96.833	128.7947	44.62	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.833)							
96.917	129.1042	44.94	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.917)							
97.000	129.4155	45.20	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.000)							
97.083	129.7283	45.41	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.083)							
97.167	130.0422	45.59	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.167)							
97.250	130.3575	45.77	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.250)							
97.333	130.6740	45.95	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.333)							
97.417	130.9917	46.14	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.417)							
97.500	131.3107	46.32	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.500)							
97.583	131.6310	46.50	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.583)							
97.667	131.9525	46.68	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.667)							
97.750	132.2753	46.87	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.750)							
97.833	132.5993	47.05	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.833)							
97.917	132.9246	47.23	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.917)							
98.000	133.2512	47.42	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.000)							
98.083	133.5791	47.60	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.083)							
98.167	133.9082	47.79	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.167)							
98.250	134.2386	47.97	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.250)							
98.333	134.5703	48.16	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.333)							
98.417	134.9032	48.34	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.417)							
98.500	135.2374	48.53	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.500)							
98.583	135.5729	48.71	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.583)							
98.667	135.9097	48.90	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.667)							
98.750	136.2478	49.09	Q	. V	.	.	.
(PEAK DAY 1, HOUR 2.750)							
98.833	136.5872	49.28	Q	. V	.	.	.
(PEAK DAY 1, HOUR 2.833)							
98.917	136.9279	49.48	Q	. V	.	.	.
(PEAK DAY 1, HOUR 2.917)							
99.000	137.2700	49.67	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.000)							
99.083	137.6135	49.87	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.083)							
99.167	137.9583	50.07	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.167)							
99.250	138.3045	50.27	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.250)							
99.333	138.6522	50.48	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.333)							
99.417	139.0012	50.68	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.417)							
99.500	139.3517	50.89	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.500)							
99.583	139.7036	51.10	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.583)							
99.667	140.0570	51.31	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.667)							
99.750	140.4118	51.52	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.750)							
99.833	140.7682	51.74	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.833)							
99.917	141.1260	51.95	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.917)							
100.000	141.4853	52.18	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.000)							
100.083	141.8462	52.40	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.083)							
100.167	142.2086	52.62	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.167)							
100.250	142.5726	52.85	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.250)							
100.333	142.9381	53.08	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.333)							
100.417	143.3053	53.31	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.417)							
100.500	143.6741	53.55	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.500)							
100.583	144.0445	53.78	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.583)							
100.667	144.4165	54.02	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.667)							
100.750	144.7903	54.27	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.750)							
100.833	145.1657	54.51	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.833)							
100.917	145.5429	54.76	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.917)							
101.000	145.9218	55.02	Q	. V	.	.	.
(PEAK DAY 1, HOUR 5.000)							
101.083	146.3024	55.27	Q	. V	.	.	.

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 (PEAK DAY 1, HOUR   5.083)
 101.167    146.6848     55.53  Q          . V        .          .          .
 (PEAK DAY 1, HOUR   5.167)
 101.250    147.0691     55.79  Q          . V        .          .          .
 (PEAK DAY 1, HOUR   5.250)
 101.333    147.4551     56.05  Q          . V        .          .          .
 (PEAK DAY 1, HOUR   5.333)
 101.417    147.8430     56.32  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   5.417)
 101.500    148.2327     56.59  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   5.500)
 101.583    148.6244     56.87  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   5.583)
 101.667    149.0179     57.14  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   5.667)
 101.750    149.4134     57.42  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   5.750)
 101.833    149.8109     57.71  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   5.833)
 101.917    150.2103     58.00  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   5.917)
 102.000    150.6118     58.29  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.000)
 102.083    151.0152     58.59  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.083)
 102.167    151.4208     58.89  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.167)
 102.250    151.8285     59.19  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.250)
 102.333    152.2383     59.50  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.333)
 102.417    152.6502     59.81  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.417)
 102.500    153.0643     60.13  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.500)
 102.583    153.4807     60.45  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.583)
 102.667    153.8993     60.78  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.667)
 102.750    154.3201     61.11  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.750)
 102.833    154.7433     61.45  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.833)
 102.917    155.1688     61.78  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   6.917)
 103.000    155.5967     62.13  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   7.000)
 103.083    156.0270     62.48  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   7.083)
 103.167    156.4598     62.84  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   7.167)
 103.250    156.8950     63.19  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   7.250)
 103.333    157.3327     63.56  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   7.333)
 103.417    157.7730     63.93  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   7.417)
 103.500    158.2159     64.31  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   7.500)
 103.583    158.6615     64.69  Q          .  V       .          .          .
 (PEAK DAY 1, HOUR   7.583)
 103.667    159.1097     65.08  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   7.667)
 103.750    159.5606     65.47  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   7.750)
 103.833    160.0143     65.88  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   7.833)
 103.917    160.4708     66.28  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   7.917)
 104.000    160.9302     66.70  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.000)
 104.083    161.3924     67.12  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.083)
 104.167    161.8577     67.55  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.167)
 104.250    162.3259     67.98  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.250)
 104.333    162.7971     68.43  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.333)
 104.417    163.2715     68.88  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.417)
 104.500    163.7490     69.34  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.500)
 104.583    164.2297     69.80  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.583)
 104.667    164.7137     70.28  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.667)
 104.750    165.2010     70.76  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.750)
 104.833    165.6917     71.25  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.833)
 104.917    166.1859     71.75  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   8.917)
 105.000    166.6836     72.26  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   9.000)
 105.083    167.1848     72.78  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   9.083)
 105.167    167.6897     73.31  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   9.167)
 105.250    168.1983     73.85  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   9.250)
 105.333    168.7106     74.40  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   9.333)
 105.417    169.2269     74.96  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   9.417)
 105.500    169.7471     75.53  .Q         .   V      .          .          .
 (PEAK DAY 1, HOUR   9.500)
 105.583    170.2712     76.11  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR   9.583)
 105.667    170.7995     76.71  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR   9.667)
 105.750    171.3320     77.31  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR   9.750)
 105.833    171.8687     77.93  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR   9.833)
 105.917    172.4097     78.56  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR   9.917)
 106.000    172.9553     79.21  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR  10.000)
 106.083    173.5053     79.87  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR  10.083)
 106.167    174.0600     80.55  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR  10.167)
 106.250    174.6195     81.23  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR  10.250)
 106.333    175.1838     81.94  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR  10.333)
 106.417    175.7531     82.66  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR  10.417)
 106.500    176.3275     83.40  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR  10.500)
 106.583    176.9070     84.15  .Q         .    V     .          .          .
 (PEAK DAY 1, HOUR  10.583)
 106.667    177.4919     84.93  .Q         .    V     .          .          .
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 (PEAK DAY 1, HOUR  10.667)
106.750    178.0822     85.71  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.750)
106.833    178.6782     86.53  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.833)
106.917    179.2798     87.36  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.917)
107.000    179.8873     88.21  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.000)
107.083    180.5009     89.08  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.083)
107.167    181.1206     89.99  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.167)
107.250    181.7466     90.90  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.250)
107.333    182.3792     91.85  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.333)
107.417    183.0185     92.82  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.417)
107.500    183.6647     93.83  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.500)
107.583    184.3179     94.85  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.583)
107.667    184.9784     95.91  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.667)
107.750    185.6464     96.99  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.750)
107.833    186.3222     98.12  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.833)
107.917    187.0058     99.27  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.917)
108.000    187.6978    100.47  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  12.000)
108.083    188.4071    103.00  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  12.083)
108.167    189.1709    110.90  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  12.167)
108.250    190.0303    124.79  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  12.250)
108.333    191.0077    141.92  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.333)
108.417    192.0742    154.86  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.417)
108.500    193.1971    163.04  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.500)
108.583    194.3594    168.77  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.583)
108.667    195.5523    173.20  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.667)
108.750    196.7720    177.11  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.750)
108.833    198.0194    181.12  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.833)
108.917    199.2942    185.10  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.917)
109.000    200.5969    189.16  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.000)
109.083    201.9279    193.26  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.083)
109.167    203.2883    197.53  .  Q      .      V  .         .         .
 (PEAK DAY 1, HOUR  13.167)
109.250    204.6788    201.90  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.250)
109.333    206.1012    206.52  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.333)
109.417    207.5563    211.28  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.417)
109.500    209.0460    216.31  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.500)
109.583    210.5715    221.50  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.583)
109.667    212.1349    227.01  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.667)
109.750    213.7376    232.71  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.750)
109.833    215.3821    238.78  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.833)
109.917    217.0699    245.07  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  13.917)
110.000    218.8041    251.80  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  14.000)
110.083    220.5902    259.34  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  14.083)
110.167    222.4465    269.54  .   Q     .        V.         .         .
 (PEAK DAY 1, HOUR  14.167)
110.250    224.3919    282.46  .   Q     .        V.         .         .
 (PEAK DAY 1, HOUR  14.250)
110.333    226.4383    297.14  .   Q     .        V.         .         .
 (PEAK DAY 1, HOUR  14.333)
110.417    228.5758    310.36  .   Q     .         V         .         .
 (PEAK DAY 1, HOUR  14.417)
110.500    230.7948    322.20  .   Q     .         V         .         .
 (PEAK DAY 1, HOUR  14.500)
110.583    233.0915    333.49  .    Q    .         V         .         .
 (PEAK DAY 1, HOUR  14.583)
110.667    235.4680    345.08  .    Q    .         V         .         .
 (PEAK DAY 1, HOUR  14.667)
110.750    237.9275    357.12  .    Q    .         V         .         .
 (PEAK DAY 1, HOUR  14.750)
110.833    240.4778    370.30  .    Q    .         .V        .         .
 (PEAK DAY 1, HOUR  14.833)
110.917    243.1250    384.38  .    Q    .         .V        .         .
 (PEAK DAY 1, HOUR  14.917)
111.000    245.8795    399.94  .     Q   .         .V        .         .
 (PEAK DAY 1, HOUR  15.000)
111.083    248.7500    416.80  .     Q   .         .V        .         .
 (PEAK DAY 1, HOUR  15.083)
111.167    251.7508    435.72  .     Q   .         . V       .         .
 (PEAK DAY 1, HOUR  15.167)
111.250    254.8950    456.54  .      Q  .         . V       .         .
 (PEAK DAY 1, HOUR  15.250)
111.333    258.2032    480.36  .      Q  .         . V       .         .
 (PEAK DAY 1, HOUR  15.333)
111.417    261.6745    504.03  .      Q  .         .  V      .         .
 (PEAK DAY 1, HOUR  15.417)
111.500    265.2556    519.98  .      Q  .         .  V      .         .
 (PEAK DAY 1, HOUR  15.500)
111.583    268.8864    527.19  .       Q .         .  V      .         .
 (PEAK DAY 1, HOUR  15.583)
111.667    272.5746    535.52  .       Q .         .   V     .         .
 (PEAK DAY 1, HOUR  15.667)
111.750    276.4615    564.39  .       Q .         .   V     .         .
 (PEAK DAY 1, HOUR  15.750)
111.833    280.7536    623.20  .        Q.         .   V     .         .
 (PEAK DAY 1, HOUR  15.833)
111.917    285.6821    715.63  .         .Q        .    V    .         .
 (PEAK DAY 1, HOUR  15.917)
112.000    291.6738    869.99  .         . Q       .    V    .         .
 (PEAK DAY 1, HOUR  16.000)
112.083    299.9257   1198.18  .         .       Q .     V   .         .
 (PEAK DAY 1, HOUR  16.083)
112.167    312.6125   1842.12  .         .         .      VQ .         .
 (PEAK DAY 1, HOUR  16.167)
112.250    329.2037   2409.04  .         .         .        V.      Q  .
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 (PEAK DAY 1, HOUR  16.250)
112.333    346.6870   2538.58  .         .         .         V         Q.
 (PEAK DAY 1, HOUR  16.333)
112.417    360.1437   1953.91  .         .         .         QV        .
 (PEAK DAY 1, HOUR  16.417)
112.500    369.2429   1321.20  .         .         Q         . V       .
 (PEAK DAY 1, HOUR  16.500)
112.583    375.7551    945.57  .         .   Q     .         .  V      .
 (PEAK DAY 1, HOUR  16.583)
112.667    380.7361    723.23  .         .Q        .         .  V      .
 (PEAK DAY 1, HOUR  16.667)
112.750    384.8868    602.69  .        Q.         .         .  V      .
 (PEAK DAY 1, HOUR  16.750)
112.833    388.6063    540.07  .       Q .         .         .   V     .
 (PEAK DAY 1, HOUR  16.833)
112.917    391.9329    483.02  .      Q  .         .         .   V     .
 (PEAK DAY 1, HOUR  16.917)
113.000    394.9217    433.96  .     Q   .         .         .   V     .
 (PEAK DAY 1, HOUR  17.000)
113.083    397.6353    394.02  .     Q   .         .         .    V    .
 (PEAK DAY 1, HOUR  17.083)
113.167    400.1144    359.97  .    Q    .         .         .    V    .
 (PEAK DAY 1, HOUR  17.167)
113.250    402.3992    331.75  .    Q    .         .         .    V    .
 (PEAK DAY 1, HOUR  17.250)
113.333    404.5044    305.67  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  17.333)
113.417    406.4601    283.98  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  17.417)
113.500    408.2940    266.28  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  17.500)
113.583    410.0247    251.30  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  17.583)
113.667    411.6657    238.27  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  17.667)
113.750    413.2271    226.73  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  17.750)
113.833    414.7146    215.98  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  17.833)
113.917    416.1360    206.38  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  17.917)
114.000    417.4958    197.44  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.000)
114.083    418.7867    187.45  .Q        .         .         .     V   .
 (PEAK DAY 1, HOUR  18.083)
114.167    419.9803    173.31  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  18.167)
114.250    421.0444    154.50  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  18.250)
114.333    421.9666    133.89  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  18.333)
114.417    422.7832    118.57 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  18.417)
114.500    423.5391    109.76 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  18.500)
114.583    424.2572    104.27 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  18.583)
114.667    424.9502    100.61 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  18.667)
114.750    425.6237     97.79 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  18.750)
114.833    426.2794     95.21 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  18.833)
114.917    426.9191     92.90 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  18.917)
115.000    427.5446     90.82 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  19.000)
115.083    428.1571     88.93 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  19.083)
115.167    428.7575     87.18 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  19.167)
115.250    429.3465     85.52 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  19.250)
115.333    429.9244     83.92 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  19.333)
115.417    430.4919     82.39 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  19.417)
115.500    431.0491     80.91 .Q         .         .         .      V  .
 (PEAK DAY 1, HOUR  19.500)
115.583    431.5964     79.46 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  19.583)
115.667    432.1327     77.87 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  19.667)
115.750    432.6594     76.47 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  19.750)
115.833    433.1776     75.24 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  19.833)
115.917    433.6878     74.08 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  19.917)
116.000    434.1903     72.96 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  20.000)
116.083    434.6854     71.89 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  20.083)
116.167    435.1735     70.87 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  20.167)
116.250    435.6548     69.88 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  20.250)
116.333    436.1295     68.93 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  20.333)
116.417    436.5980     68.02 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  20.417)
116.500    437.0605     67.15 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  20.500)
116.583    437.5171     66.30 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  20.583)
116.667    437.9680     65.48 .Q         .         .         .       V .
 (PEAK DAY 1, HOUR  20.667)
116.750    438.4135     64.69 Q          .         .         .       V .
 (PEAK DAY 1, HOUR  20.750)
116.833    438.8538     63.92 Q          .         .         .       V .
 (PEAK DAY 1, HOUR  20.833)
116.917    439.2888     63.18 Q          .         .         .       V .
 (PEAK DAY 1, HOUR  20.917)
117.000    439.7190     62.45 Q          .         .         .       V .
 (PEAK DAY 1, HOUR  21.000)
117.083    440.1443     61.75 Q          .         .         .       V .
 (PEAK DAY 1, HOUR  21.083)
117.167    440.5648     61.07 Q          .         .         .       V .
 (PEAK DAY 1, HOUR  21.167)
117.250    440.9809     60.41 Q          .         .         .       V .
 (PEAK DAY 1, HOUR  21.250)
117.333    441.3925     59.77 Q          .         .         .       V .
 (PEAK DAY 1, HOUR  21.333)
117.417    441.7998     59.14 Q          .         .         .       V .
 (PEAK DAY 1, HOUR  21.417)
117.500    442.2029     58.53 Q          .         .         .       V .
 (PEAK DAY 1, HOUR  21.500)
117.583    442.6020     57.94 Q          .         .         .        V.
 (PEAK DAY 1, HOUR  21.583)
117.667    442.9971     57.37 Q          .         .         .        V.
 (PEAK DAY 1, HOUR  21.667)
117.750    443.3883     56.81 Q          .         .         .        V.
 (PEAK DAY 1, HOUR  21.750)
117.833    443.7758     56.26 Q          .         .         .        V.
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(PEAK DAY 1, HOUR 21.833)
117.917 444.1596 55.73 Q . . . V.
(PEAK DAY 1, HOUR 21.917)
118.000 444.5399 55.21 Q . . . V.
(PEAK DAY 1, HOUR 22.000)
118.083 444.9166 54.71 Q . . . V.
(PEAK DAY 1, HOUR 22.083)
118.167 445.2900 54.21 Q . . . V.
(PEAK DAY 1, HOUR 22.167)
118.250 445.6600 53.73 Q . . . V.
(PEAK DAY 1, HOUR 22.250)
118.333 446.0268 53.26 Q . . . V.
(PEAK DAY 1, HOUR 22.333)
118.417 446.3904 52.79 Q . . . V.
(PEAK DAY 1, HOUR 22.417)
118.500 446.7509 52.34 Q . . . V.
(PEAK DAY 1, HOUR 22.500)
118.583 447.1083 51.90 Q . . . V.
(PEAK DAY 1, HOUR 22.583)
118.667 447.4628 51.47 Q . . . V.
(PEAK DAY 1, HOUR 22.667)
118.750 447.8144 51.05 Q . . . V.
(PEAK DAY 1, HOUR 22.750)
118.833 448.1631 50.64 Q . . . V.
(PEAK DAY 1, HOUR 22.833)
118.917 448.5091 50.23 Q . . . V.
(PEAK DAY 1, HOUR 22.917)
119.000 448.8523 49.83 Q . . . V.
(PEAK DAY 1, HOUR 23.000)
119.083 449.1928 49.45 Q . . . V.
(PEAK DAY 1, HOUR 23.083)
119.167 449.5307 49.06 Q . . . V.
(PEAK DAY 1, HOUR 23.167)
119.250 449.8661 48.69 Q . . . V.
(PEAK DAY 1, HOUR 23.250)
119.333 450.1989 48.33 Q . . . V.
(PEAK DAY 1, HOUR 23.333)
119.417 450.5292 47.97 Q . . . V.
(PEAK DAY 1, HOUR 23.417)
119.500 450.8572 47.62 Q . . . V.
(PEAK DAY 1, HOUR 23.500)
119.583 451.1827 47.27 Q . . . V.
(PEAK DAY 1, HOUR 23.583)
119.667 451.5060 46.93 Q . . . V.
(PEAK DAY 1, HOUR 23.667)
119.750 451.8269 46.60 Q . . . V.
(PEAK DAY 1, HOUR 23.750)
119.833 452.1455 46.27 Q . . . V.
(PEAK DAY 1, HOUR 23.833)
119.917 452.4620 45.95 Q . . . V.
(PEAK DAY 1, HOUR 23.917)
120.000 452.7763 45.64 Q . . . V.
(PEAK DAY 1, HOUR 24.000)
120.083 453.0815 44.31 Q . . . V.
(PEAK DAY 1, HOUR 24.083)
120.167 453.3494 38.91 Q . . . V.
(PEAK DAY 1, HOUR 24.167)
120.250 453.5494 29.03 Q . . . V.
(PEAK DAY 1, HOUR 24.250)
120.333 453.6667 17.04 Q . . . V.
(PEAK DAY 1, HOUR 24.333)
120.417 453.7269 8.73 Q . . . V.
(PEAK DAY 1, HOUR 24.417)
120.500 453.7581 4.53 Q . . . V.
(PEAK DAY 1, HOUR 24.500)
120.583 453.7749 2.44 Q . . . V.
(PEAK DAY 1, HOUR 24.583)
120.667 453.7856 1.55 Q . . . V.
(PEAK DAY 1, HOUR 24.667)
120.750 453.7936 1.16 Q . . . V.
(PEAK DAY 1, HOUR 24.750)
120.833 453.7993 0.83 Q . . . V.
(PEAK DAY 1, HOUR 24.833)
120.917 453.8034 0.60 Q . . . V.
(PEAK DAY 1, HOUR 24.917)
121.000 453.8066 0.47 Q . . . V.
(PEAK DAY 1, HOUR 25.000)
121.083 453.8093 0.39 Q . . . V.
(PEAK DAY 1, HOUR 25.083)
121.167 453.8117 0.35 Q . . . V.
(PEAK DAY 1, HOUR 25.167)
121.250 453.8139 0.32 Q . . . V.
(PEAK DAY 1, HOUR 25.250)
121.333 453.8159 0.28 Q . . . V.
(PEAK DAY 1, HOUR 25.333)
121.417 453.8176 0.25 Q . . . V.
(PEAK DAY 1, HOUR 25.417)
121.500 453.8192 0.23 Q . . . V.
(PEAK DAY 1, HOUR 25.500)
121.583 453.8205 0.20 Q . . . V.
(PEAK DAY 1, HOUR 25.583)
121.667 453.8217 0.17 Q . . . V.
(PEAK DAY 1, HOUR 25.667)
121.750 453.8228 0.15 Q . . . V.
(PEAK DAY 1, HOUR 25.750)
121.833 453.8237 0.13 Q . . . V.
(PEAK DAY 1, HOUR 25.833)
121.917 453.8244 0.11 Q . . . V.
(PEAK DAY 1, HOUR 25.917)
122.000 453.8251 0.09 Q . . . V.
(PEAK DAY 1, HOUR 26.000)
122.083 453.8256 0.08 Q . . . V.
(PEAK DAY 1, HOUR 26.083)
122.167 453.8261 0.07 Q . . . V.
(PEAK DAY 1, HOUR 26.167)
122.250 453.8265 0.06 Q . . . V.
(PEAK DAY 1, HOUR 26.250)
122.333 453.8268 0.05 Q . . . V.
(PEAK DAY 1, HOUR 26.333)
122.417 453.8271 0.04 Q . . . V.
(PEAK DAY 1, HOUR 26.417)
122.500 453.8274 0.04 Q . . . V.
(PEAK DAY 1, HOUR 26.500)
122.583 453.8277 0.04 Q . . . V.
(PEAK DAY 1, HOUR 26.583)
122.667 453.8279 0.03 Q . . . V.
(PEAK DAY 1, HOUR 26.667)
122.750 453.8281 0.03 Q . . . V.
(PEAK DAY 1, HOUR 26.750)
122.833 453.8283 0.03 Q . . . V.
(PEAK DAY 1, HOUR 26.833)
122.917 453.8285 0.02 Q . . . V.
(PEAK DAY 1, HOUR 26.917)
123.000 453.8286 0.02 Q . . . V.
(PEAK DAY 1, HOUR 27.000)
123.083 453.8288 0.02 Q . . . V
(PEAK DAY 1, HOUR 27.083)
123.167 453.8289 0.02 Q . . . V
(PEAK DAY 1, HOUR 27.167)
123.250 453.8290 0.01 Q . . . V
(PEAK DAY 1, HOUR 27.250)
123.333 453.8290 0.01 Q . . . V
(PEAK DAY 1, HOUR 27.333)
==========

```
  END OF FLOODSCx ROUTING ANALYSIS



****************************************************************************
  FLOW PROCESS FROM NODE   6371.00 TO NODE   6371.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  6961.5 Ac. ***
============================================================================

  END OF FLOODSCx ROUTING ANALYSIS



****************************************************************************
  FLOW PROCESS FROM NODE   6371.00 TO NODE   6371.00 IS CODE =  11
----------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
============================================================================

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  6961.5 Ac. ***

           STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
        (Note: Time indicated is at END of Each Unit Intervals)
----------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.     1200.0    2400.0    3600.0    4800.0
----------------------------------------------------------------------------
  96.000    806.1330     89.10  Q         V         .         .         .
 (PEAK DAY 2, HOUR  24.000)
  96.083    806.7475     89.22  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.083)
  96.167    807.3863     92.76  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.167)
  96.250    808.0791    100.60  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.250)
  96.333    808.8501    111.95  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.333)
  96.417    809.6977    123.07  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.417)
  96.500    810.6234    134.41  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.500)
  96.583    811.6334    146.66  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.583)
  96.667    812.7272    158.82  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.667)
  96.750    813.9064    171.22  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.750)
  96.833    815.1892    186.27  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.833)
  96.917    816.6066    205.80  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.917)
  97.000    818.1751    227.75  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   1.000)
  97.083    819.8814    247.75  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.083)
  97.167    821.6965    263.55  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.167)
  97.250    823.5943    275.57  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.250)
  97.333    825.5568    284.96  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.333)
  97.417    827.5719    292.59  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.417)
  97.500    829.6315    299.05  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.500)
  97.583    831.7296    304.65  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.583)
  97.667    833.8616    309.58  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.667)
  97.750    836.0241    313.99  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   1.750)
  97.833    838.2141    317.99  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   1.833)
  97.917    840.4293    321.64  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   1.917)
  98.000    842.6675    324.99  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.000)
  98.083    844.9268    328.04  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.083)
  98.167    847.2052    330.82  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.167)
  98.250    849.5010    333.36  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.250)
  98.333    851.8130    335.70  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.333)
  98.417    854.1400    337.87  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.417)
  98.500    856.4805    339.85  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.500)
  98.583    858.8331    341.60  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.583)
  98.667    861.1968    343.20  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.667)
  98.750    863.5708    344.71  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.750)
  98.833    865.9551    346.20  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.833)
  98.917    868.3495    347.67  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.917)
  99.000    870.7542    349.16  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.000)
  99.083    873.1691    350.64  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.083)
  99.167    875.5942    352.12  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.167)
  99.250    878.0296    353.62  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.250)
  99.333    880.4754    355.13  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.333)
  99.417    882.9317    356.65  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.417)
  99.500    885.3986    358.19  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.500)
  99.583    887.8762    359.74  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.583)
  99.667    890.3646    361.31  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   3.667)
  99.750    892.8639    362.89  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   3.750)
  99.833    895.3741    364.49  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   3.833)
  99.917    897.8955    366.10  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   3.917)
 100.000    900.4281    367.73  .  Q      .V        .         .         .
 (PEAK DAY 1, HOUR   4.000)
 100.083    902.9719    369.37  .  Q      .V        .         .         .
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(PEAK DAY 1, HOUR 4.083)
100.167 905.5272 371.02 . Q .V . . .
(PEAK DAY 1, HOUR 4.167)
100.250 908.0938 372.68 . Q .V . . .
(PEAK DAY 1, HOUR 4.250)
100.333 910.6718 374.33 . Q . V . . .
(PEAK DAY 1, HOUR 4.333)
100.417 913.2610 375.96 . Q . V . . .
(PEAK DAY 1, HOUR 4.417)
100.500 915.8613 377.57 . Q . V . . .
(PEAK DAY 1, HOUR 4.500)
100.583 918.4727 379.17 . Q . V . . .
(PEAK DAY 1, HOUR 4.583)
100.667 921.0951 380.78 . Q . V . . .
(PEAK DAY 1, HOUR 4.667)
100.750 923.7287 382.40 . Q . V . . .
(PEAK DAY 1, HOUR 4.750)
100.833 926.3737 384.05 . Q . V . . .
(PEAK DAY 1, HOUR 4.833)
100.917 929.0300 385.70 . Q . V . . .
(PEAK DAY 1, HOUR 4.917)
101.000 931.6979 387.38 . Q . V . . .
(PEAK DAY 1, HOUR 5.000)
101.083 934.3776 389.08 . Q . V . . .
(PEAK DAY 1, HOUR 5.083)
101.167 937.0690 390.80 . Q . V . . .
(PEAK DAY 1, HOUR 5.167)
101.250 939.7723 392.53 . Q . V . . .
(PEAK DAY 1, HOUR 5.250)
101.333 942.4878 394.29 . Q . V . . .
(PEAK DAY 1, HOUR 5.333)
101.417 945.2155 396.06 . Q . V . . .
(PEAK DAY 1, HOUR 5.417)
101.500 947.9556 397.86 . Q . V . . .
(PEAK DAY 1, HOUR 5.500)
101.583 950.7083 399.68 . Q . V . . .
(PEAK DAY 1, HOUR 5.583)
101.667 953.4735 401.52 . Q . V . . .
(PEAK DAY 1, HOUR 5.667)
101.750 956.2516 403.38 . Q . V . . .
(PEAK DAY 1, HOUR 5.750)
101.833 959.0427 405.27 . Q . V . . .
(PEAK DAY 1, HOUR 5.833)
101.917 961.8469 407.17 . Q . V . . .
(PEAK DAY 1, HOUR 5.917)
102.000 964.6645 409.11 . Q . V . . .
(PEAK DAY 1, HOUR 6.000)
102.083 967.4955 411.06 . Q . V . . .
(PEAK DAY 1, HOUR 6.083)
102.167 970.3401 413.05 . Q . V . . .
(PEAK DAY 1, HOUR 6.167)
102.250 973.1986 415.05 . Q . V . . .
(PEAK DAY 1, HOUR 6.250)
102.333 976.0711 417.08 . Q . V . . .
(PEAK DAY 1, HOUR 6.333)
102.417 978.9577 419.14 . Q . V . . .
(PEAK DAY 1, HOUR 6.417)
102.500 981.8587 421.22 . Q . V . . .
(PEAK DAY 1, HOUR 6.500)
102.583 984.7742 423.33 . Q . V . . .
(PEAK DAY 1, HOUR 6.583)
102.667 987.7045 425.48 . Q . V . . .
(PEAK DAY 1, HOUR 6.667)
102.750 990.6497 427.64 . Q . V . . .
(PEAK DAY 1, HOUR 6.750)
102.833 993.6100 429.84 . Q . V . . .
(PEAK DAY 1, HOUR 6.833)
102.917 996.5856 432.06 . Q . V . . .
(PEAK DAY 1, HOUR 6.917)
103.000 999.5765 434.27 . Q . V . . .
(PEAK DAY 1, HOUR 7.000)
103.083 1002.5816 436.34 . Q . V . . .
(PEAK DAY 1, HOUR 7.083)
103.167 1005.5991 438.15 . Q . V . . .
(PEAK DAY 1, HOUR 7.167)
103.250 1008.6274 439.71 . Q . V . . .
(PEAK DAY 1, HOUR 7.250)
103.333 1011.6660 441.19 . Q . V . . .
(PEAK DAY 1, HOUR 7.333)
103.417 1014.7150 442.72 . Q . V . . .
(PEAK DAY 1, HOUR 7.417)
103.500 1017.7754 444.36 . Q . V . . .
(PEAK DAY 1, HOUR 7.500)
103.583 1020.8478 446.12 . Q . V . . .
(PEAK DAY 1, HOUR 7.583)
103.667 1023.9332 448.00 . Q . V . . .
(PEAK DAY 1, HOUR 7.667)
103.750 1027.0322 449.98 . Q . V . . .
(PEAK DAY 1, HOUR 7.750)
103.833 1030.1456 452.07 . Q . V . . .
(PEAK DAY 1, HOUR 7.833)
103.917 1033.2740 454.25 . Q . V . . .
(PEAK DAY 1, HOUR 7.917)
104.000 1036.4181 456.51 . Q . V . . .
(PEAK DAY 1, HOUR 8.000)
104.083 1039.5782 458.86 . Q . V . . .
(PEAK DAY 1, HOUR 8.083)
104.167 1042.7551 461.28 . Q . V . . .
(PEAK DAY 1, HOUR 8.167)
104.250 1045.9491 463.76 . Q . V . . .
(PEAK DAY 1, HOUR 8.250)
104.333 1049.1606 466.33 . Q . V . . .
(PEAK DAY 1, HOUR 8.333)
104.417 1052.3903 468.94 . Q . V . . .
(PEAK DAY 1, HOUR 8.417)
104.500 1055.6384 471.63 . Q . V . . .
(PEAK DAY 1, HOUR 8.500)
104.583 1058.9054 474.37 . Q . V . . .
(PEAK DAY 1, HOUR 8.583)
104.667 1062.1918 477.18 . Q . V . . .
(PEAK DAY 1, HOUR 8.667)
104.750 1065.4978 480.03 . Q . V . . .
(PEAK DAY 1, HOUR 8.750)
104.833 1068.8240 482.96 . Q . V . . .
(PEAK DAY 1, HOUR 8.833)
104.917 1072.1705 485.93 . Q . V . . .
(PEAK DAY 1, HOUR 8.917)
105.000 1075.5381 488.97 . Q . V . . .
(PEAK DAY 1, HOUR 9.000)
105.083 1078.9269 492.05 . Q . V . . .
(PEAK DAY 1, HOUR 9.083)
105.167 1082.3374 495.21 . Q . V . . .
(PEAK DAY 1, HOUR 9.167)
105.250 1085.7700 498.41 . Q . V . . .
(PEAK DAY 1, HOUR 9.250)
105.333 1089.2250 501.66 . Q . V . . .
(PEAK DAY 1, HOUR 9.333)
105.417 1092.7015 504.80 . Q . V . . .
(PEAK DAY 1, HOUR 9.417)
105.500 1096.1982 507.72 . Q . V . . .
(PEAK DAY 1, HOUR 9.500)
105.583 1099.7134 510.39 . Q . V . . .
(PEAK DAY 1, HOUR 9.583)
105.667 1103.2461 512.95 . Q . V . . .

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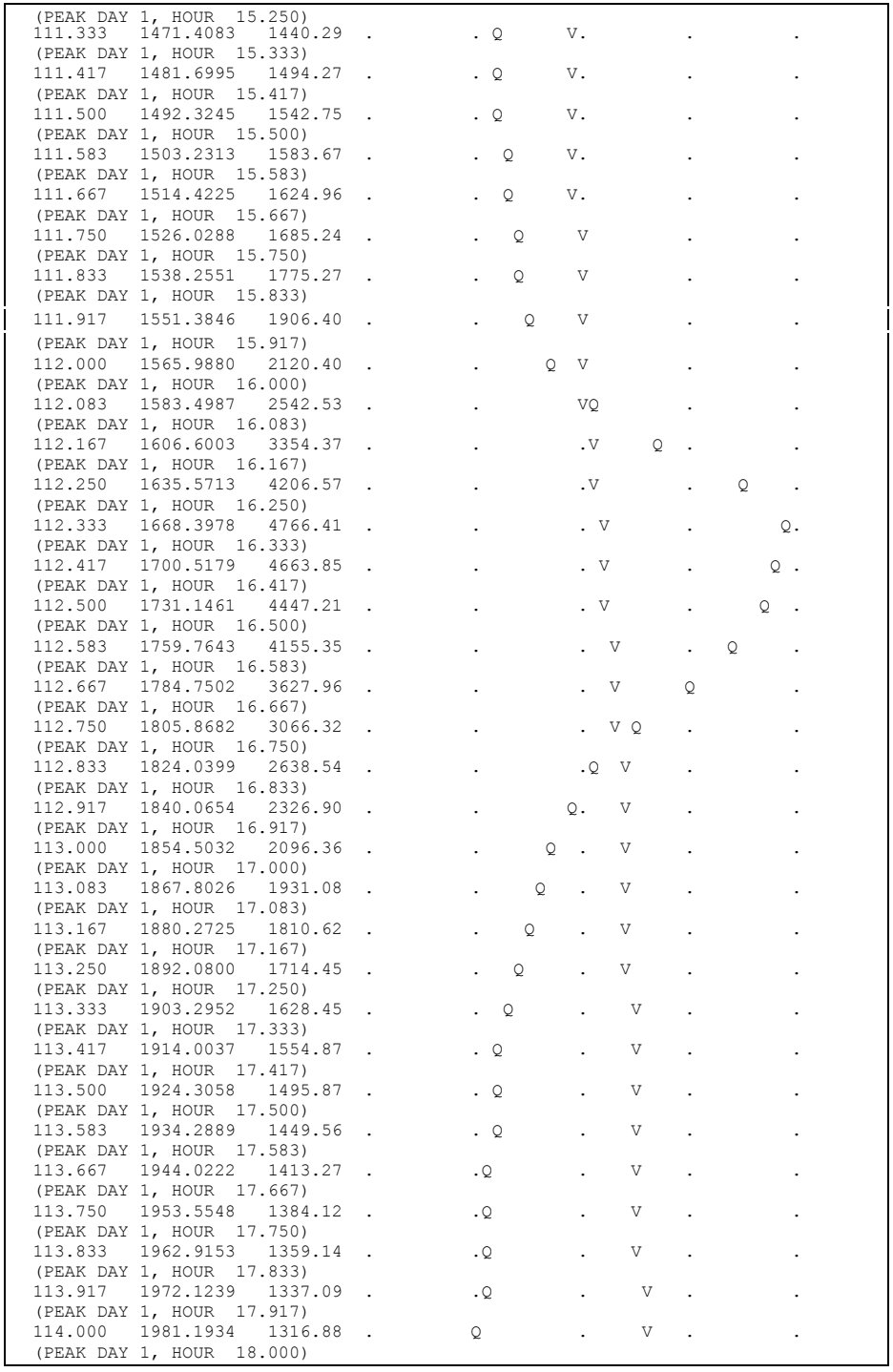
(PEAK DAY 1, HOUR   9.667)
105.750   1106.7964    515.50  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR   9.750)
105.833   1110.3647    518.13  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR   9.833)
105.917   1113.9518    520.84  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR   9.917)
106.000   1117.5583    523.67  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.000)
106.083   1121.1851    526.59  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.083)
106.167   1124.8326    529.63  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.167)
106.250   1128.5018    532.77  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.250)
106.333   1132.1935    536.03  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.333)
106.417   1135.9082    539.38  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.417)
106.500   1139.6469    542.86  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  10.500)
106.583   1143.4102    546.43  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  10.583)
106.667   1147.1989    550.12  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  10.667)
106.750   1151.0137    553.92  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  10.750)
106.833   1154.8555    557.83  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  10.833)
106.917   1158.7250    561.85  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  10.917)
107.000   1162.6230    566.00  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.000)
107.083   1166.5504    570.25  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.083)
107.167   1170.5072    574.52  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.167)
107.250   1174.4924    578.66  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.250)
107.333   1178.5050    582.62  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.333)
107.417   1182.5442    586.49  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.417)
107.500   1186.6104    590.40  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.500)
107.583   1190.7040    594.40  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.583)
107.667   1194.8262    598.54  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.667)
107.750   1198.9778    602.81  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  11.750)
107.833   1203.1599    607.24  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  11.833)
107.917   1207.3735    611.81  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  11.917)
108.000   1211.6199    616.56  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  12.000)
108.083   1215.9089    622.77  .    Q    .     V   .         .         .
(PEAK DAY 1, HOUR  12.083)
108.167   1220.2799    634.66  .    Q    .     V   .         .         .
(PEAK DAY 1, HOUR  12.167)
108.250   1224.7795    653.35  .    Q    .     V   .         .         .
(PEAK DAY 1, HOUR  12.250)
108.333   1229.4414    676.90  .    Q    .     V   .         .         .
(PEAK DAY 1, HOUR  12.333)
108.417   1234.2512    698.39  .    Q    .     V   .         .         .
(PEAK DAY 1, HOUR  12.417)
108.500   1239.1920    717.41  .    Q    .     V   .         .         .
(PEAK DAY 1, HOUR  12.500)
108.583   1244.2524    734.77  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  12.583)
108.667   1249.4149    749.60  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  12.667)
108.750   1254.6630    762.01  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  12.750)
108.833   1259.9883    773.24  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  12.833)
108.917   1265.3866    783.84  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  12.917)
109.000   1270.8574    794.36  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  13.000)
109.083   1276.4014    804.99  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  13.083)
109.167   1282.0212    816.01  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  13.167)
109.250   1287.7194    827.37  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  13.250)
109.333   1293.4988    839.18  .     Q   .      V  .         .         .
(PEAK DAY 1, HOUR  13.333)
109.417   1299.3617    851.29  .      Q  .      V  .         .         .
(PEAK DAY 1, HOUR  13.417)
109.500   1305.3114    863.90  .      Q  .      V  .         .         .
(PEAK DAY 1, HOUR  13.500)
109.583   1311.3505    876.88  .      Q  .      V  .         .         .
(PEAK DAY 1, HOUR  13.583)
109.667   1317.4829    890.43  .      Q  .      V  .         .         .
(PEAK DAY 1, HOUR  13.667)
109.750   1323.7119    904.45  .      Q  .      V  .         .         .
(PEAK DAY 1, HOUR  13.750)
109.833   1330.0419    919.11  .      Q  .      V  .         .         .
(PEAK DAY 1, HOUR  13.833)
109.917   1336.4752    934.12  .      Q  .      V  .         .         .
(PEAK DAY 1, HOUR  13.917)
110.000   1343.0143    949.48  .      Q  .      V  .         .         .
(PEAK DAY 1, HOUR  14.000)
110.083   1349.6639    965.53  .       Q .      V  .         .         .
(PEAK DAY 1, HOUR  14.083)
110.167   1356.4435    984.40  .       Q .      V  .         .         .
(PEAK DAY 1, HOUR  14.167)
110.250   1363.3750   1006.46  .       Q .      V  .         .         .
(PEAK DAY 1, HOUR  14.250)
110.333   1370.4764   1031.14  .       Q .       V .         .         .
(PEAK DAY 1, HOUR  14.333)
110.417   1377.7445   1055.33  .       Q .       V .         .         .
(PEAK DAY 1, HOUR  14.417)
110.500   1385.1777   1079.30  .       Q .       V .         .         .
(PEAK DAY 1, HOUR  14.500)
110.583   1392.7798   1103.81  .        Q.       V .         .         .
(PEAK DAY 1, HOUR  14.583)
110.667   1400.5601   1129.69  .        Q.       V .         .         .
(PEAK DAY 1, HOUR  14.667)
110.750   1408.5300   1157.25  .        Q.       V .         .         .
(PEAK DAY 1, HOUR  14.750)
110.833   1416.7085   1187.52  .        Q.       V .         .         .
(PEAK DAY 1, HOUR  14.833)
110.917   1425.1135   1220.40  .         Q       V .         .         .
(PEAK DAY 1, HOUR  14.917)
111.000   1433.7688   1256.74  .         Q       V .         .         .
(PEAK DAY 1, HOUR  15.000)
111.083   1442.6975   1296.46  .         Q        V.         .         .
(PEAK DAY 1, HOUR  15.083)
111.167   1451.9292   1340.43  .         .Q       V.         .         .
(PEAK DAY 1, HOUR  15.167)
111.250   1461.4889   1388.07  .         .Q       V.         .         .
```


(PEAK DAY 1, HOUR 15.250)
111.333 1471.4083 1440.29
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111.417 1481.6995 1494.27
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111.500 1492.3245 1542.75
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111.583 1503.2313 1583.67
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111.667 1514.4225 1624.96
(PEAK DAY 1, HOUR 15.667)
111.750 1526.0288 1685.24
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111.833 1538.2551 1775.27
(PEAK DAY 1, HOUR 15.833)
111.917 1551.3846 1906.40
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112.000 1565.9880 2120.40
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(PEAK DAY 1, HOUR 16.083)
112.167 1606.6003 3354.37
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112.250 1635.5713 4206.57
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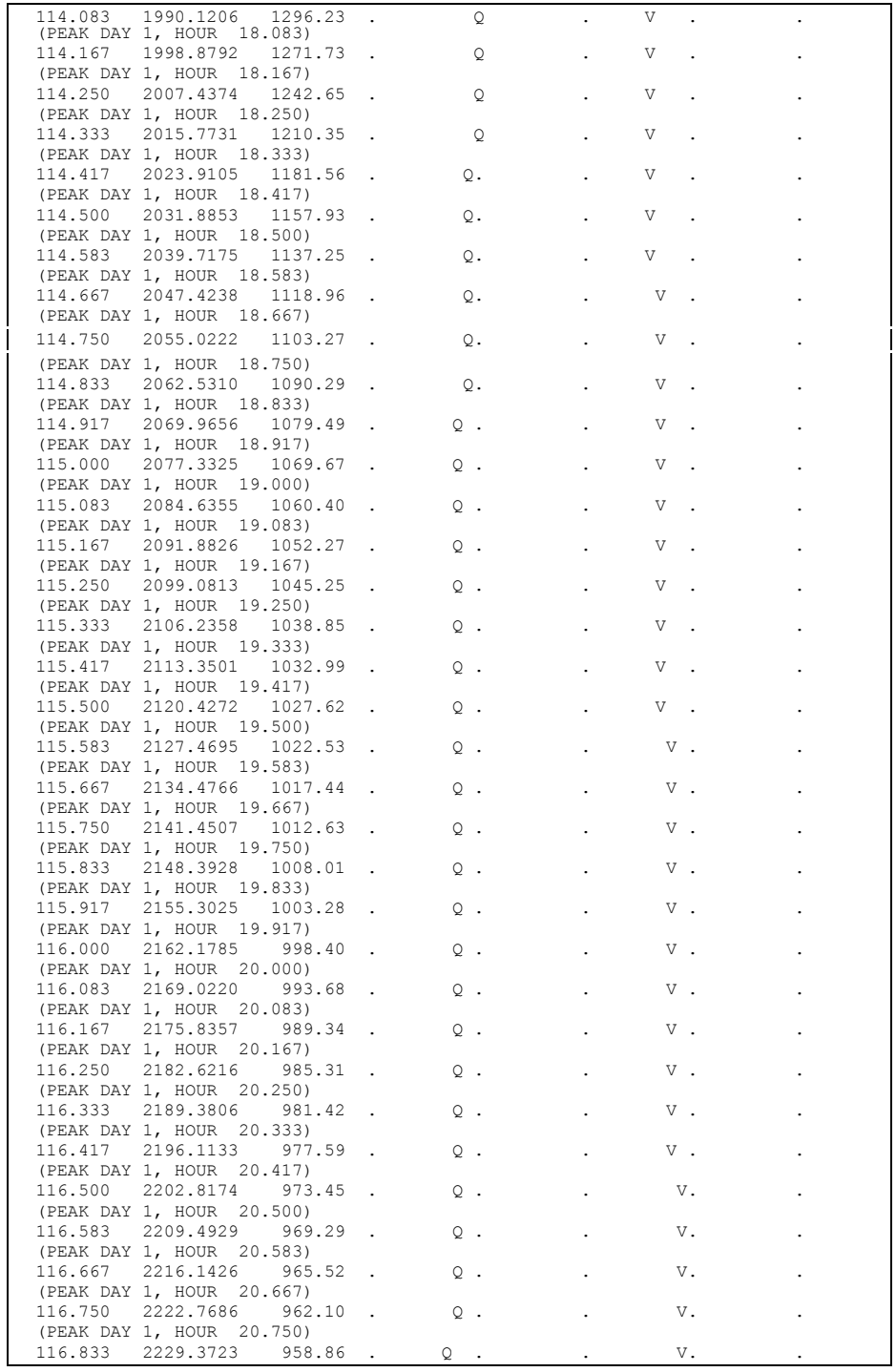
112.333 1668.3978 4766.41
(PEAK DAY 1, HOUR 16.333)
112.417 1700.5179 4663.85
(PEAK DAY 1, HOUR 16.417)
112.500 1731.1461 4447.21
(PEAK DAY 1, HOUR 16.500)
112.583 1759.7643 4155.35
(PEAK DAY 1, HOUR 16.583)
112.667 1784.7502 3627.96
(PEAK DAY 1, HOUR 16.667)
112.750 1805.8682 3066.32
(PEAK DAY 1, HOUR 16.750)
112.833 1824.0399 2638.54
(PEAK DAY 1, HOUR 16.833)
112.917 1840.0654 2326.90
(PEAK DAY 1, HOUR 16.917)
113.000 1854.5032 2096.36
(PEAK DAY 1, HOUR 17.000)
113.083 1867.8026 1931.08
(PEAK DAY 1, HOUR 17.083)
113.167 1880.2725 1810.62
(PEAK DAY 1, HOUR 17.167)
113.250 1892.0800 1714.45
(PEAK DAY 1, HOUR 17.250)
113.333 1903.2952 1628.45
(PEAK DAY 1, HOUR 17.333)
113.417 1914.0037 1554.87
(PEAK DAY 1, HOUR 17.417)
113.500 1924.3058 1495.87
(PEAK DAY 1, HOUR 17.500)
113.583 1934.2889 1449.56
(PEAK DAY 1, HOUR 17.583)
113.667 1944.0222 1413.27
(PEAK DAY 1, HOUR 17.667)
113.750 1953.5548 1384.12
(PEAK DAY 1, HOUR 17.750)
113.833 1962.9153 1359.14
(PEAK DAY 1, HOUR 17.833)
113.917 1972.1239 1337.09
(PEAK DAY 1, HOUR 17.917)
114.000 1981.1934 1316.88
(PEAK DAY 1, HOUR 18.000)


114.083 1990.1206 1296.23
(PEAK DAY 1, HOUR 18.083)
114.167 1998.8792 1271.73
(PEAK DAY 1, HOUR 18.167)
114.250 2007.4374 1242.65
(PEAK DAY 1, HOUR 18.250)
114.333 2015.7731 1210.35
(PEAK DAY 1, HOUR 18.333)
114.417 2023.9105 1181.56
(PEAK DAY 1, HOUR 18.417)
114.500 2031.8853 1157.93
(PEAK DAY 1, HOUR 18.500)
114.583 2039.7175 1137.25
(PEAK DAY 1, HOUR 18.583)
114.667 2047.4238 1118.96
(PEAK DAY 1, HOUR 18.667)
114.750 2055.0222 1103.27
(PEAK DAY 1, HOUR 18.750)
114.833 2062.5310 1090.29
(PEAK DAY 1, HOUR 18.833)
114.917 2069.9656 1079.49
(PEAK DAY 1, HOUR 18.917)
115.000 2077.3325 1069.67
(PEAK DAY 1, HOUR 19.000)
115.083 2084.6355 1060.40
(PEAK DAY 1, HOUR 19.083)
115.167 2091.8826 1052.27
(PEAK DAY 1, HOUR 19.167)
115.250 2099.0813 1045.25
(PEAK DAY 1, HOUR 19.250)
115.333 2106.2358 1038.85
(PEAK DAY 1, HOUR 19.333)
115.417 2113.3501 1032.99
(PEAK DAY 1, HOUR 19.417)
115.500 2120.4272 1027.62
(PEAK DAY 1, HOUR 19.500)
115.583 2127.4695 1022.53
(PEAK DAY 1, HOUR 19.583)
115.667 2134.4766 1017.44
(PEAK DAY 1, HOUR 19.667)
115.750 2141.4507 1012.63
(PEAK DAY 1, HOUR 19.750)
115.833 2148.3928 1008.01
(PEAK DAY 1, HOUR 19.833)
115.917 2155.3025 1003.28
(PEAK DAY 1, HOUR 19.917)
116.000 2162.1785 998.40
(PEAK DAY 1, HOUR 20.000)
116.083 2169.0220 993.68
(PEAK DAY 1, HOUR 20.083)
116.167 2175.8357 989.34
(PEAK DAY 1, HOUR 20.167)
116.250 2182.6216 985.31
(PEAK DAY 1, HOUR 20.250)
116.333 2189.3806 981.42
(PEAK DAY 1, HOUR 20.333)
116.417 2196.1133 977.59
(PEAK DAY 1, HOUR 20.417)
116.500 2202.8174 973.45
(PEAK DAY 1, HOUR 20.500)
116.583 2209.4929 969.29
(PEAK DAY 1, HOUR 20.583)
116.667 2216.1426 965.52
(PEAK DAY 1, HOUR 20.667)
116.750 2222.7686 962.10
(PEAK DAY 1, HOUR 20.750)
116.833 2229.3723 958.86

(PEAK DAY 1, HOUR 20.833)
116.917 2235.9546 955.74 . Q . . V. .
(PEAK DAY 1, HOUR 20.917)
117.000 2242.5159 952.68 . Q . . V. .
(PEAK DAY 1, HOUR 21.000)
117.083 2249.0562 949.65 . Q . . V. .
(PEAK DAY 1, HOUR 21.083)
117.167 2255.5762 946.72 . Q . . V. .
(PEAK DAY 1, HOUR 21.167)
117.250 2262.0769 943.92 . Q . . V. .
(PEAK DAY 1, HOUR 21.250)
117.333 2268.5588 941.18 . Q . . V. .
(PEAK DAY 1, HOUR 21.333)
117.417 2275.0225 938.50 . Q . . V .
(PEAK DAY 1, HOUR 21.417)
117.500 2281.4678 935.88 . Q . . V .
(PEAK DAY 1, HOUR 21.500)
117.583 2287.8955 933.29 . Q . . V .
(PEAK DAY 1, HOUR 21.583)
117.667 2294.3057 930.76 . Q . . V .
(PEAK DAY 1, HOUR 21.667)
117.750 2300.6987 928.27 . Q . . V .
(PEAK DAY 1, HOUR 21.750)
117.833 2307.0750 925.84 . Q . . V .
(PEAK DAY 1, HOUR 21.833)
117.917 2313.4348 923.46 . Q . . V .
(PEAK DAY 1, HOUR 21.917)
118.000 2319.7788 921.15 . Q . . V .
(PEAK DAY 1, HOUR 22.000)
118.083 2326.1072 918.87 . Q . . V .
(PEAK DAY 1, HOUR 22.083)
118.167 2332.4202 916.64 . Q . . V .
(PEAK DAY 1, HOUR 22.167)
118.250 2338.7180 914.43 . Q . . V .
(PEAK DAY 1, HOUR 22.250)
118.333 2345.0007 912.26 . Q . . V .
(PEAK DAY 1, HOUR 22.333)
118.417 2351.2688 910.12 . Q . . .V .
(PEAK DAY 1, HOUR 22.417)
118.500 2357.5222 908.01 . Q . . .V .
(PEAK DAY 1, HOUR 22.500)
118.583 2363.7615 905.92 . Q . . .V .
(PEAK DAY 1, HOUR 22.583)
118.667 2369.9863 903.87 . Q . . .V .
(PEAK DAY 1, HOUR 22.667)
118.750 2376.1973 901.83 . Q . . .V .
(PEAK DAY 1, HOUR 22.750)
118.833 2382.3943 899.82 . Q . . .V .
(PEAK DAY 1, HOUR 22.833)
118.917 2388.5776 897.84 . Q . . .V .
(PEAK DAY 1, HOUR 22.917)
119.000 2394.7476 895.87 . Q . . .V .
(PEAK DAY 1, HOUR 23.000)
119.083 2400.9041 893.93 . Q . . .V .
(PEAK DAY 1, HOUR 23.083)
119.167 2407.0474 892.01 . Q . . .V .
(PEAK DAY 1, HOUR 23.167)
119.250 2413.1775 890.11 . Q . . .V .
(PEAK DAY 1, HOUR 23.250)
119.333 2419.2947 888.23 . Q . . .V .
(PEAK DAY 1, HOUR 23.333)
119.417 2425.3992 886.36 . Q . . .V .
(PEAK DAY 1, HOUR 23.417)
119.500 2431.4910 884.51 . Q . . . V .
(PEAK DAY 1, HOUR 23.500)
119.583 2437.5701 882.68 . Q . . . V .
(PEAK DAY 1, HOUR 23.583)
119.667 2443.6367 880.87 . Q . . . V .
(PEAK DAY 1, HOUR 23.667)
119.750 2449.6909 879.08 . Q . . . V .
(PEAK DAY 1, HOUR 23.750)
119.833 2455.7329 877.31 . Q . . . V .
(PEAK DAY 1, HOUR 23.833)
119.917 2461.7632 875.58 . Q . . . V .
(PEAK DAY 1, HOUR 23.917)
120.000 2467.7817 873.89 . Q . . . V .
(PEAK DAY 1, HOUR 24.000)
120.083 2473.7817 871.20 . Q . . . V .
(PEAK DAY 1, HOUR 24.083)
120.167 2479.7332 864.15 . Q . . . V .
(PEAK DAY 1, HOUR 24.167)
120.250 2485.5981 851.60 . Q . . . V .
(PEAK DAY 1, HOUR 24.250)
120.333 2491.3462 834.62 . Q . . . V .
(PEAK DAY 1, HOUR 24.333)
120.417 2496.9814 818.25 . Q . . . V .
(PEAK DAY 1, HOUR 24.417)
120.500 2502.5090 802.61 . Q . . . V .
(PEAK DAY 1, HOUR 24.500)
120.583 2507.9353 787.88 . Q . . . V .
(PEAK DAY 1, HOUR 24.583)
120.667 2513.2812 776.22 . Q . . . V .
(PEAK DAY 1, HOUR 24.667)
120.750 2518.5706 768.02 . Q . . . V .
(PEAK DAY 1, HOUR 24.750)
120.833 2523.8198 762.19 . Q . . . V .
(PEAK DAY 1, HOUR 24.833)
120.917 2529.0398 757.93 . Q . . . V .
(PEAK DAY 1, HOUR 24.917)
121.000 2534.2375 754.73 . Q . . . V .
(PEAK DAY 1, HOUR 25.000)
121.083 2539.4177 752.15 . Q . . . V .
(PEAK DAY 1, HOUR 25.083)
121.167 2544.5823 749.88 . Q . . . V .
(PEAK DAY 1, HOUR 25.167)
121.250 2549.7322 747.78 . Q . . . V .
(PEAK DAY 1, HOUR 25.250)
121.333 2554.8689 745.85 . Q . . . V .
(PEAK DAY 1, HOUR 25.333)
121.417 2559.9929 744.02 . Q . . . V .
(PEAK DAY 1, HOUR 25.417)
121.500 2565.1040 742.12 . Q . . . V .
(PEAK DAY 1, HOUR 25.500)
121.583 2570.2004 740.01 . Q . . . V .
(PEAK DAY 1, HOUR 25.583)
121.667 2575.2810 737.69 . Q . . . V .
(PEAK DAY 1, HOUR 25.667)
121.750 2580.3445 735.23 . Q . . . V .
(PEAK DAY 1, HOUR 25.750)
121.833 2585.3906 732.72 . Q . . . V .
(PEAK DAY 1, HOUR 25.833)
121.917 2590.4194 730.20 . Q . . . V .
(PEAK DAY 1, HOUR 25.917)
122.000 2595.4309 727.68 . Q . . . V .
(PEAK DAY 1, HOUR 26.000)
122.083 2600.4253 725.19 . Q . . . V .
(PEAK DAY 1, HOUR 26.083)
122.167 2605.4026 722.72 . Q . . . V .
(PEAK DAY 1, HOUR 26.167)
122.250 2610.3630 720.26 . Q . . . V .
(PEAK DAY 1, HOUR 26.250)
122.333 2615.3069 717.83 . Q . . . V .
(PEAK DAY 1, HOUR 26.333)
122.417 2620.2341 715.43 . Q . . . V .

```
 (PEAK DAY 1, HOUR  26.417)
 122.500   2625.1448    713.04  .    Q    .         .         .    V     .
 (PEAK DAY 1, HOUR  26.500)
 122.583   2630.0393    710.67  .    Q    .         .         .    V     .
 (PEAK DAY 1, HOUR  26.583)
 122.667   2634.9175    708.33  .    Q    .         .         .    V     .
 (PEAK DAY 1, HOUR  26.667)
 122.750   2639.7798    706.01  .    Q    .         .         .    V     .
 (PEAK DAY 1, HOUR  26.750)
 122.833   2644.6262    703.69  .    Q    .         .         .    V     .
 (PEAK DAY 1, HOUR  26.833)
 122.917   2649.4565    701.36  .    Q    .         .         .    V     .
 (PEAK DAY 1, HOUR  26.917)
 123.000   2654.2708    699.03  .    Q    .         .         .     V    .
 (PEAK DAY 1, HOUR  27.000)
 123.083   2659.0688    696.69  .    Q    .         .         .     V    .
 (PEAK DAY 1, HOUR  27.083)
 123.167   2663.8511    694.36  .    Q    .         .         .     V    .
 (PEAK DAY 1, HOUR  27.167)
 123.250   2668.6172    692.04  .    Q    .         .         .     V    .
 (PEAK DAY 1, HOUR  27.250)
 123.333   2673.3674    689.74  .    Q    .         .         .     V    .
 (PEAK DAY 1, HOUR  27.333)
 123.417   2678.1018    687.44  .    Q    .         .         .     V    .
 (PEAK DAY 1, HOUR  27.417)
 123.500   2682.8203    685.14  .    Q    .         .         .     V    .
 (PEAK DAY 1, HOUR  27.500)
 123.583   2687.5232    682.86  .    Q    .         .         .     V    .
 (PEAK DAY 1, HOUR  27.583)
 123.667   2692.2104    680.58  .    Q    .         .         .     V    .
 (PEAK DAY 1, HOUR  27.667)
 123.750   2696.8821    678.31  .    Q    .         .         .     V    .
 (PEAK DAY 1, HOUR  27.750)
 123.833   2701.5381    676.05  .    Q    .         .         .     V    .
 (PEAK DAY 1, HOUR  27.833)
 123.917   2706.1785    673.80  .    Q    .         .         .     V    .
 (PEAK DAY 1, HOUR  27.917)
 124.000   2710.8035    671.56  .    Q    .         .         .     V    .
 (PEAK DAY 1, HOUR  28.000)
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
================================================================================

  END OF FLOODSCx ROUTING ANALYSIS



********************************************************************************
  FLOW PROCESS FROM NODE   6371.00 TO NODE   6395.00 IS CODE = 5.2
--------------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  6961.5 Ac. ***

         THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
         TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
         INTERVALS(Reference: the National Engineering Handbook,
         Hydrology, Chapter 17, page 17-52, August,1972,
         U.S. Department of Commerce).


         ASSUMED REGULAR CHANNEL INFORMATION:
           BASEWIDTH(FT) =   35.00     CHANNEL Z =  1.00
           UPSTREAM ELEVATION(FT) =     220.00
           DOWNSTREAM ELEVATION(FT) =     213.00
           CHANNEL LENGTH(FT) =     959.00     MANNING'S FACTOR = 0.040
           CONSTANT LOSS RATE(CFS) =    0.00


         CHANNEL ROUTING COEFFICIENT ESTIMATED:
           MAXIMUM INFLOW(CFS) =  4766.41
           AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  3746.91
           CHANNEL NORMAL VELOCITY FOR Q =  3746.91 CFS =  10.57 FPS
           ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.862

         MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
         UNIT INTERVALS IS CSTAR = 0.997


         CONVEX METHOD CHANNEL ROUTING RESULTS:
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PEAK DAY	TIME (HRS)	CLOCK TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
2	24.000	96.000	89.10	89.28	89.28
1	0.083	96.083	89.22	89.19	89.19
1	0.167	96.167	92.76	91.83	91.83
1	0.250	96.250	100.60	98.53	98.53
1	0.333	96.333	111.95	108.96	108.96
1	0.417	96.417	123.07	120.13	120.13
1	0.500	96.500	134.41	131.42	131.42
1	0.583	96.583	146.66	143.43	143.43
1	0.667	96.667	158.82	155.61	155.61
1	0.750	96.750	171.22	167.95	167.95
1	0.833	96.833	186.27	182.30	182.30
1	0.917	96.917	205.80	200.65	200.65
1	1.000	97.000	227.75	221.97	221.97
1	1.083	97.083	247.75	242.48	242.48
1	1.167	97.167	263.55	259.38	259.38
1	1.250	97.250	275.57	272.39	272.39
1	1.333	97.333	284.96	282.48	282.48
1	1.417	97.417	292.59	290.58	290.58
1	1.500	97.500	299.05	297.34	297.34
1	1.583	97.583	304.65	303.17	303.17
1	1.667	97.667	309.58	308.28	308.28
1	1.750	97.750	313.99	312.83	312.83
1	1.833	97.833	317.99	316.93	316.93
1	1.917	97.917	321.64	320.68	320.68
1	2.000	98.000	324.99	324.11	324.11
1	2.083	98.083	328.04	327.24	327.24
1	2.167	98.167	330.82	330.09	330.09
1	2.250	98.250	333.36	332.69	332.69
1	2.333	98.333	335.70	335.08	335.08
1	2.417	98.417	337.87	337.30	337.30
1	2.500	98.500	339.85	339.33	339.33
1	2.583	98.583	341.60	341.14	341.14
1	2.667	98.667	343.20	342.78	342.78
1	2.750	98.750	344.71	344.31	344.31
1	2.833	98.833	346.20	345.81	345.81
1	2.917	98.917	347.67	347.28	347.28
1	3.000	99.000	349.16	348.76	348.76
1	3.083	99.083	350.64	350.25	350.25
1	3.167	99.167	352.12	351.73	351.73
1	3.250	99.250	353.62	353.23	353.23
1	3.333	99.333	355.13	354.73	354.73
1	3.417	99.417	356.65	356.25	356.25
1	3.500	99.500	358.19	357.79	357.79
1	3.583	99.583	359.74	359.34	359.34
1	3.667	99.667	361.31	360.90	360.90
1	3.750	99.750	362.89	362.48	362.48
1	3.833	99.833	364.49	364.07	364.07

1	3.917	99.917	366.10	365.68	365.68
1	4.000	100.000	367.73	367.30	367.30
1	4.083	100.083	369.37	368.93	368.93
1	4.167	100.167	371.02	370.58	370.58
1	4.250	100.250	372.68	372.24	372.24
1	4.333	100.333	374.33	373.89	373.89
1	4.417	100.417	375.96	375.53	375.53
1	4.500	100.500	377.57	377.14	377.14
1	4.583	100.583	379.17	378.74	378.74
1	4.667	100.667	380.78	380.35	380.35
1	4.750	100.750	382.40	381.97	381.97
1	4.833	100.833	384.05	383.61	383.61
1	4.917	100.917	385.70	385.27	385.27
1	5.000	101.000	387.38	386.94	386.94
1	5.083	101.083	389.08	388.63	388.63
1	5.167	101.167	390.80	390.34	390.34
1	5.250	101.250	392.53	392.07	392.07
1	5.333	101.333	394.29	393.82	393.82
1	5.417	101.417	396.06	395.59	395.59
1	5.500	101.500	397.86	397.39	397.39
1	5.583	101.583	399.68	399.20	399.20
1	5.667	101.667	401.52	401.03	401.03
1	5.750	101.750	403.38	402.89	402.89
1	5.833	101.833	405.27	404.77	404.77
1	5.917	101.917	407.17	406.67	406.67
1	6.000	102.000	409.11	408.60	408.60
1	6.083	102.083	411.06	410.55	410.55
1	6.167	102.167	413.05	412.52	412.52
1	6.250	102.250	415.05	414.52	414.52
1	6.333	102.333	417.08	416.55	416.55
1	6.417	102.417	419.14	418.60	418.60
1	6.500	102.500	421.22	420.67	420.67
1	6.583	102.583	423.33	422.78	422.78
1	6.667	102.667	425.48	424.91	424.91
1	6.750	102.750	427.64	427.07	427.07
1	6.833	102.833	429.84	429.26	429.26
1	6.917	102.917	432.06	431.47	431.47
1	7.000	103.000	434.27	433.69	433.69
1	7.083	103.083	436.34	435.80	435.80
1	7.167	103.167	438.15	437.67	437.67
1	7.250	103.250	439.71	439.30	439.30
1	7.333	103.333	441.19	440.80	440.80
1	7.417	103.417	442.72	442.32	442.32
1	7.500	103.500	444.36	443.93	443.93
1	7.583	103.583	446.12	445.65	445.65
1	7.667	103.667	448.00	447.50	447.50
1	7.750	103.750	449.98	449.46	449.46
1	7.833	103.833	452.07	451.52	451.52
1	7.917	103.917	454.25	453.67	453.67
1	8.000	104.000	456.51	455.92	455.92
1	8.083	104.083	458.86	458.24	458.24
1	8.167	104.167	461.28	460.64	460.64
1	8.250	104.250	463.76	463.11	463.11
1	8.333	104.333	466.33	465.65	465.65
1	8.417	104.417	468.94	468.25	468.25
1	8.500	104.500	471.63	470.92	470.92
1	8.583	104.583	474.37	473.65	473.65
1	8.667	104.667	477.18	476.44	476.44
1	8.750	104.750	480.03	479.28	479.28
1	8.833	104.833	482.96	482.18	482.18
1	8.917	104.917	485.93	485.14	485.14
1	9.000	105.000	488.97	488.16	488.16
1	9.083	105.083	492.05	491.24	491.24
1	9.167	105.167	495.21	494.38	494.38
1	9.250	105.250	498.41	497.57	497.57
1	9.333	105.333	501.66	500.80	500.80
1	9.417	105.417	504.80	503.97	503.97
1	9.500	105.500	507.72	506.95	506.95
1	9.583	105.583	510.39	509.69	509.69
1	9.667	105.667	512.95	512.27	512.27
1	9.750	105.750	515.50	514.83	514.83
1	9.833	105.833	518.13	517.43	517.43
1	9.917	105.917	520.84	520.13	520.13
1	10.000	106.000	523.67	522.92	522.92
1	10.083	106.083	526.59	525.82	525.82
1	10.167	106.167	529.63	528.83	528.83
1	10.250	106.250	532.77	531.94	531.94
1	10.333	106.333	536.03	535.17	535.17
1	10.417	106.417	539.38	538.50	538.50
1	10.500	106.500	542.86	541.94	541.94
1	10.583	106.583	546.43	545.49	545.49
1	10.667	106.667	550.12	549.15	549.15
1	10.750	106.750	553.92	552.92	552.92
1	10.833	106.833	557.83	556.80	556.80
1	10.917	106.917	561.85	560.79	560.79
1	11.000	107.000	566.00	564.91	564.91
1	11.083	107.083	570.25	569.13	569.13
1	11.167	107.167	574.52	573.40	573.40
1	11.250	107.250	578.66	577.57	577.57
1	11.333	107.333	582.62	581.57	581.57
1	11.417	107.417	586.49	585.47	585.47
1	11.500	107.500	590.40	589.37	589.37
1	11.583	107.583	594.40	593.34	593.34
1	11.667	107.667	598.54	597.45	597.45
1	11.750	107.750	602.81	601.68	601.68
1	11.833	107.833	607.24	606.07	606.07
1	11.917	107.917	611.81	610.61	610.61
1	12.000	108.000	616.56	615.31	615.31
1	12.083	108.083	622.77	621.14	621.14
1	12.167	108.167	634.66	631.53	631.53
1	12.250	108.250	653.35	648.43	648.43
1	12.333	108.333	676.90	670.69	670.69
1	12.417	108.417	698.39	692.72	692.72
1	12.500	108.500	717.41	712.39	712.39
1	12.583	108.583	734.77	730.19	730.19
1	12.667	108.667	749.60	745.68	745.68
1	12.750	108.750	762.01	758.74	758.74
1	12.833	108.833	773.24	770.28	770.28
1	12.917	108.917	783.84	781.04	781.04
1	13.000	109.000	794.36	791.58	791.58
1	13.083	109.083	804.99	802.19	802.19
1	13.167	109.167	816.01	813.10	813.10
1	13.250	109.250	827.37	824.37	824.37
1	13.333	109.333	839.18	836.06	836.06
1	13.417	109.417	851.29	848.10	848.10
1	13.500	109.500	863.90	860.57	860.57
1	13.583	109.583	876.88	873.45	873.45
1	13.667	109.667	890.43	886.86	886.86
1	13.750	109.750	904.45	900.75	900.75
1	13.833	109.833	919.11	915.24	915.24
1	13.917	109.917	934.12	930.16	930.16
1	14.000	110.000	949.48	945.43	945.43
1	14.083	110.083	965.53	961.30	961.30
1	14.167	110.167	984.40	979.42	979.42
1	14.250	110.250	1006.46	1000.64	1000.64
1	14.333	110.333	1031.14	1024.63	1024.63
1	14.417	110.417	1055.33	1048.95	1048.95
1	14.500	110.500	1079.30	1072.98	1072.98
1	14.583	110.583	1103.81	1097.35	1097.35
1	14.667	110.667	1129.69	1122.87	1122.87
1	14.750	110.750	1157.25	1149.98	1149.98
1	14.833	110.833	1187.52	1179.54	1179.54
1	14.917	110.917	1220.40	1211.73	1211.73
1	15.000	111.000	1256.74	1247.16	1247.16

1	15.083	111.083	1296.46	1285.98	1285.98
1	15.167	111.167	1340.43	1328.84	1328.84
1	15.250	111.250	1388.07	1375.51	1375.51
1	15.333	111.333	1440.29	1426.53	1426.53
1	15.417	111.417	1494.27	1480.04	1480.04
1	15.500	111.500	1542.75	1529.96	1529.96
1	15.583	111.583	1583.67	1572.87	1572.87
1	15.667	111.667	1624.96	1614.07	1614.07
1	15.750	111.750	1685.24	1669.36	1669.36
1	15.833	111.833	1775.27	1751.55	1751.55
1	15.917	111.917	1906.40	1871.85	1871.85
1	16.000	112.000	2120.40	2064.04	2064.04
1	16.083	112.083	2542.53	2431.39	2431.39
1	16.167	112.167	3354.37	3140.61	3140.61
1	16.250	112.250	4206.57	3981.87	3981.87
1	16.333	112.333	4766.41	4618.52	4618.52
1	16.417	112.417	4663.85	4690.32	4690.32
1	16.500	112.500	4447.21	4504.24	4504.24
1	16.583	112.583	4155.35	4232.25	4232.25
1	16.667	112.667	3627.96	3766.83	3766.83
1	16.750	112.750	3066.32	3214.40	3214.40
1	16.833	112.833	2638.54	2751.47	2751.47
1	16.917	112.917	2326.90	2409.19	2409.19
1	17.000	113.000	2096.36	2157.23	2157.23
1	17.083	113.083	1931.08	1974.72	1974.72
1	17.167	113.167	1810.62	1842.42	1842.42
1	17.250	113.250	1714.45	1739.83	1739.83
1	17.333	113.333	1628.45	1651.14	1651.14
1	17.417	113.417	1554.87	1574.28	1574.28
1	17.500	113.500	1495.87	1511.44	1511.44
1	17.583	113.583	1449.56	1461.78	1461.78
1	17.667	113.667	1413.27	1422.85	1422.85
1	17.750	113.750	1384.12	1391.82	1391.82
1	17.833	113.833	1359.14	1365.73	1365.73
1	17.917	113.917	1337.09	1342.90	1342.90
1	18.000	114.000	1316.88	1322.21	1322.21
1	18.083	114.083	1296.23	1301.68	1301.68
1	18.167	114.167	1271.73	1278.19	1278.19
1	18.250	114.250	1242.65	1250.32	1250.32
1	18.333	114.333	1210.35	1218.87	1218.87
1	18.417	114.417	1181.56	1189.16	1189.16
1	18.500	114.500	1157.93	1164.16	1164.16
1	18.583	114.583	1137.25	1142.71	1142.71
1	18.667	114.667	1118.96	1123.79	1123.79
1	18.750	114.750	1103.27	1107.41	1107.41
1	18.833	114.833	1090.29	1093.71	1093.71
1	18.917	114.917	1079.49	1082.34	1082.34
1	19.000	115.000	1069.67	1072.26	1072.26
1	19.083	115.083	1060.40	1062.84	1062.84
1	19.167	115.167	1052.27	1054.41	1054.41
1	19.250	115.250	1045.25	1047.10	1047.10
1	19.333	115.333	1038.85	1040.54	1040.54
1	19.417	115.417	1032.99	1034.54	1034.54
1	19.500	115.500	1027.62	1029.04	1029.04
1	19.583	115.583	1022.53	1023.87	1023.87
1	19.667	115.667	1017.44	1018.78	1018.78
1	19.750	115.750	1012.63	1013.90	1013.90
1	19.833	115.833	1008.01	1009.23	1009.23
1	19.917	115.917	1003.28	1004.53	1004.53
1	20.000	116.000	998.40	999.68	999.68
1	20.083	116.083	993.68	994.92	994.92
1	20.167	116.167	989.34	990.48	990.48
1	20.250	116.250	985.31	986.37	986.37
1	20.333	116.333	981.42	982.45	982.45
1	20.417	116.417	977.59	978.60	978.60
1	20.500	116.500	973.45	974.54	974.54
1	20.583	116.583	969.29	970.39	970.39
1	20.667	116.667	965.52	966.52	966.52
1	20.750	116.750	962.10	963.00	963.00
1	20.833	116.833	958.86	959.72	959.72
1	20.917	116.917	955.74	956.56	956.56
1	21.000	117.000	952.68	953.49	953.49
1	21.083	117.083	949.65	950.45	950.45
1	21.167	117.167	946.72	947.49	947.49
1	21.250	117.250	943.92	944.66	944.66
1	21.333	117.333	941.18	941.90	941.90
1	21.417	117.417	938.50	939.21	939.21
1	21.500	117.500	935.88	936.57	936.57
1	21.583	117.583	933.29	933.97	933.97
1	21.667	117.667	930.76	931.43	931.43
1	21.750	117.750	928.27	928.93	928.93
1	21.833	117.833	925.84	926.48	926.48
1	21.917	117.917	923.46	924.09	924.09
1	22.000	118.000	921.15	921.76	921.76
1	22.083	118.083	918.87	919.47	919.47
1	22.167	118.167	916.64	917.23	917.23
1	22.250	118.250	914.43	915.02	915.02
1	22.333	118.333	912.26	912.84	912.84
1	22.417	118.417	910.12	910.68	910.68
1	22.500	118.500	908.01	908.56	908.56
1	22.583	118.583	905.92	906.47	906.47
1	22.667	118.667	903.87	904.41	904.41
1	22.750	118.750	901.83	902.37	902.37
1	22.833	118.833	899.82	900.35	900.35
1	22.917	118.917	897.84	898.36	898.36
1	23.000	119.000	895.87	896.39	896.39
1	23.083	119.083	893.93	894.44	894.44
1	23.167	119.167	892.01	892.52	892.52
1	23.250	119.250	890.11	890.61	890.61
1	23.333	119.333	888.23	888.72	888.72
1	23.417	119.417	886.36	886.85	886.85
1	23.500	119.500	884.51	885.00	885.00
1	23.583	119.583	882.68	883.17	883.17
1	23.667	119.667	880.87	881.35	881.35
1	23.750	119.750	879.08	879.55	879.55
1	23.833	119.833	877.31	877.78	877.78
1	23.917	119.917	875.58	876.04	876.04
1	24.000	120.000	873.89	874.33	874.33
1	24.083	120.083	871.20	871.90	871.90
1	24.167	120.167	864.15	866.00	866.00
1	24.250	120.250	851.60	854.90	854.90
1	24.333	120.333	834.62	839.09	839.09
1	24.417	120.417	818.25	822.57	822.57
1	24.500	120.500	802.61	806.74	806.74
1	24.583	120.583	787.88	791.77	791.77
1	24.667	120.667	776.22	779.30	779.30
1	24.750	120.750	768.02	770.18	770.18
1	24.833	120.833	762.19	763.73	763.73
1	24.917	120.917	757.93	759.05	759.05
1	25.000	121.000	754.73	755.58	755.58
1	25.083	121.083	752.15	752.83	752.83
1	25.167	121.167	749.88	750.47	750.47
1	25.250	121.250	747.78	748.33	748.33
1	25.333	121.333	745.85	746.36	746.36
1	25.417	121.417	744.02	744.50	744.50
1	25.500	121.500	742.12	742.62	742.62
1	25.583	121.583	740.01	740.57	740.57
1	25.667	121.667	737.69	738.30	738.30
1	25.750	121.750	735.23	735.88	735.88
1	25.833	121.833	732.72	733.38	733.38
1	25.917	121.917	730.20	730.86	730.86
1	26.000	122.000	727.68	728.35	728.35
1	26.083	122.083	725.19	725.85	725.85
1	26.167	122.167	722.72	723.37	723.37

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  1   26.250 122.250       720.26      720.91      720.91
  1   26.333 122.333       717.83      718.47      718.47
  1   26.417 122.417       715.43      716.06      716.06
  1   26.500 122.500       713.04      713.67      713.67
  1   26.583 122.583       710.67      711.30      711.30
  1   26.667 122.667       708.33      708.95      708.95
  1   26.750 122.750       706.01      706.62      706.62
  1   26.833 122.833       703.69      704.30      704.30
  1   26.917 122.917       701.36      701.98      701.98
  1   27.000 123.000       699.03      699.64      699.64
  1   27.083 123.083       696.69      697.31      697.31
  1   27.167 123.167       694.36      694.98      694.98
  1   27.250 123.250       692.04      692.66      692.66
  1   27.333 123.333       689.74      690.34      690.34
  1   27.417 123.417       687.44      688.04      688.04
  1   27.500 123.500       685.14      685.75      685.75
  1   27.583 123.583       682.86      683.46      683.46
  1   27.667 123.667       680.58      681.18      681.18
  1   27.750 123.750       678.31      678.91      678.91
  1   27.833 123.833       676.05      676.65      676.65
  1   27.917 123.917       673.80      674.39      674.39
  1   28.000 124.000       671.56      672.15      672.15
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
================================================================================
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   3032.844 AF
    OUTFLOW VOLUME =   3032.844 AF
    LOSS    VOLUME =      0.000 AF
================================================================================

  END OF FLOODSCx ROUTING ANALYSIS



********************************************************************************
  FLOW PROCESS FROM NODE   6380.00 TO NODE   6395.00 IS CODE =   1
--------------------------------------------------------------------------------

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of   329.6 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
================================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #2)

        WATERSHED AREA =     329.600 ACRES
        BASEFLOW =   0.000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    0.330 HOURS
         CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
         THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
         MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
        VALLEY(DEVELOPED):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.900
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
        VALLEY(UNDEVELOPED)/DESERT:
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:
        +------------------+--------+--------+--------+--------+--------+
        | RAINFALL DEPTHS & |        |        |        |        |        |
        |    LOSS RATES     |  DAY 1 |  DAY 2 |  DAY 3 |  DAY 4 |  DAY 5 |
        |==================+========+========+========+========+========|
        | 5-MINUTE (INCHES) |    0.58|    0.27|    0.12|    0.06|    0.04|
        |30-MINUTE (INCHES) |    1.22|    0.56|    0.24|    0.13|    0.09|
        |  1-HOUR (INCHES) |    1.62|    0.75|    0.33|    0.17|    0.12|
        |  3-HOUR (INCHES) |    2.71|    1.25|    0.54|    0.28|    0.21|
        |  6-HOUR (INCHES) |    3.75|    1.73|    0.75|    0.39|    0.29|
        | 24-HOUR (INCHES) |    6.28|    2.89|    1.26|    0.66|    0.48|
        |==================+========+========+========+========+========|
        | LOSS RATE(IN/HR)  |   0.150|   0.150|   0.150|   0.150|   0.150|
        | LOW LOSS FRACTION |   0.500|   0.750|   0.950|   0.990|   0.990|
        +------------------+--------+--------+--------+--------+--------+
          5-MINUTE FACTOR = 0.985
         30-MINUTE FACTOR = 0.985
          1-HOUR FACTOR = 0.985
          3-HOUR FACTOR = 0.998
          6-HOUR FACTOR = 0.999
         24-HOUR FACTOR = 0.999

        UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
        UNIT INTERVAL PERCENTAGE OF LAG-TIME =  25.253


        RUNOFF HYDROGRAPH LISTING LIMITS:
        MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  96.00
        MODEL TIME(HOURS) FOR END OF RESULTS = 124.00


================================================================================
                      UNIT HYDROGRAPH DETERMINATION

--------------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER         MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------------
       1                1.602               63.859
       2                7.797              246.932
       3               21.404              542.405
       4               39.370              716.138
       5               60.064              824.885
       6               75.891              630.876
       7               85.613              387.515
       8               91.167              221.417
       9               94.489              132.407
      10               96.293               71.884
      11               97.026               29.243
      12               97.665               25.478
      13               98.270               24.118
      14               98.850               23.087
      15               98.984                5.349
      16               99.089                4.176
      17               99.176                3.468
      18               99.236                2.391
      19               99.292                2.234
      20               99.345                2.124
      21               99.396                2.026
      22               99.445                1.965
      23               99.491                1.826
      24               99.536                1.815
      25               99.577                1.639
      26               99.617                1.559
      27               99.656                1.556
      28               99.690                1.365
      29               99.721                1.257
      30               99.753                1.257
      31               99.784                1.254
      32               99.812                1.082
      33               99.830                0.737
      34               99.848                0.724
      35               99.866                0.724
      36               99.885                0.724
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37	99.900	0.614
38	99.906	0.230
39	99.911	0.198
40	99.916	0.197
41	99.921	0.199
42	99.926	0.197
43	99.930	0.197
44	99.935	0.198
45	99.940	0.198
46	99.945	0.197
47	99.950	0.199
48	99.955	0.197
49	99.960	0.197
50	99.965	0.196
51	99.970	0.197
52	99.975	0.197
53	99.980	0.197
54	99.985	0.196
55	99.990	0.197
56	99.995	0.197
57	100.000	0.197
58	100.000	0.013

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 162.7269

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 154.7721

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5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	200.0	400.0	600.0	800.0
96.000	41.7912	3.86	Q	V	.	.	.
(PEAK DAY 2, HOUR 24.000)							
96.083	41.8189	4.03	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.083)							
96.167	41.8518	4.78	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.167)							
96.250	41.8963	6.45	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.250)							
96.333	41.9561	8.68	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.333)							
96.417	42.0337	11.27	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.417)							
96.500	42.1251	13.26	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.500)							
96.583	42.2250	14.51	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.583)							
96.667	42.3300	15.24	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.667)							
96.750	42.4381	15.70	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.750)							
96.833	42.5482	15.98	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.833)							
96.917	42.6592	16.12	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.917)							
97.000	42.7712	16.26	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.000)							
97.083	42.8840	16.39	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.083)							
97.167	42.9978	16.51	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.167)							
97.250	43.1120	16.59	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.250)							
97.333	43.2267	16.66	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.333)							
97.417	43.3419	16.73	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.417)							
97.500	43.4576	16.79	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.500)							
97.583	43.5737	16.86	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.583)							
97.667	43.6902	16.92	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.667)							
97.750	43.8072	16.99	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.750)							
97.833	43.9247	17.06	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.833)							
97.917	44.0426	17.12	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.917)							
98.000	44.1610	17.19	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.000)							
98.083	44.2799	17.26	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.083)							
98.167	44.3992	17.33	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.167)							
98.250	44.5190	17.40	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.250)							
98.333	44.6393	17.46	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.333)							
98.417	44.7600	17.53	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.417)							
98.500	44.8812	17.60	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.500)							
98.583	45.0029	17.67	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.583)							
98.667	45.1251	17.74	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.667)							
98.750	45.2478	17.81	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.750)							
98.833	45.3710	17.88	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.833)							
98.917	45.4946	17.95	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.917)							
99.000	45.6188	18.03	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.000)							
99.083	45.7434	18.10	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.083)							
99.167	45.8686	18.17	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.167)							
99.250	45.9942	18.24	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.250)							
99.333	46.1204	18.32	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.333)							
99.417	46.2470	18.39	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.417)							
99.500	46.3742	18.47	Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.500)							
99.583	46.5019	18.54	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.583)							
99.667	46.6301	18.62	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.667)							
99.750	46.7589	18.70	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.750)							
99.833	46.8882	18.77	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.833)							
99.917	47.0181	18.85	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.917)							
100.000	47.1484	18.93	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.000)							
100.083	47.2794	19.01	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.083)							
100.167	47.4109	19.09	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.167)							
100.250	47.5430	19.18	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.250)							
100.333	47.6756	19.26	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.333)							
100.417	47.8089	19.35	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.417)							
100.500	47.9427	19.43	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.500)							
100.583	48.0771	19.52	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.583)							
100.667	48.2121	19.60	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.667)							
100.750	48.3477	19.69	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.750)							
100.833	48.4840	19.78	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.833)							
100.917	48.6208	19.87	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.917)							
101.000	48.7583	19.96	Q	. V	.	.	.
(PEAK DAY 1, HOUR 5.000)							
101.083	48.8964	20.05	.Q	. V	.	.	.

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(PEAK DAY 1, HOUR   5.083)
101.167     49.0351     20.15  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.167)
101.250     49.1745     20.24  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.250)
101.333     49.3146     20.34  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.333)
101.417     49.4553     20.43  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.417)
101.500     49.5967     20.53  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.500)
101.583     49.7388     20.63  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.583)
101.667     49.8815     20.73  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.667)
101.750     50.0250     20.83  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.750)
101.833     50.1692     20.93  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.833)
101.917     50.3140     21.04  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.917)
102.000     50.4596     21.14  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.000)
102.083     50.6060     21.25  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.083)
102.167     50.7531     21.36  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.167)
102.250     50.9009     21.47  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.250)
102.333     51.0495     21.58  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.333)
102.417     51.1989     21.69  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.417)
102.500     51.3491     21.80  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.500)
102.583     51.5000     21.92  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.583)
102.667     51.6518     22.04  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.667)
102.750     51.8044     22.16  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.750)
102.833     51.9578     22.28  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.833)
102.917     52.1121     22.40  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.917)
103.000     52.2672     22.52  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.000)
103.083     52.4232     22.65  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.083)
103.167     52.5800     22.78  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.167)
103.250     52.7378     22.91  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.250)
103.333     52.8965     23.04  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.333)
103.417     53.0560     23.17  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.417)
103.500     53.2166     23.31  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.500)
103.583     53.3780     23.44  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.583)
103.667     53.5404     23.58  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.667)
103.750     53.7038     23.73  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.750)
103.833     53.8682     23.87  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.833)
103.917     54.0336     24.02  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.917)
104.000     54.2001     24.16  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.000)
104.083     54.3675     24.32  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.083)
104.167     54.5361     24.47  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.167)
104.250     54.7057     24.63  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.250)
104.333     54.8764     24.78  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.333)
104.417     55.0482     24.95  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.417)
104.500     55.2211     25.11  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.500)
104.583     55.3952     25.28  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.583)
104.667     55.5705     25.45  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.667)
104.750     55.7469     25.62  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.750)
104.833     55.9246     25.80  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.833)
104.917     56.1035     25.98  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.917)
105.000     56.2836     26.16  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.000)
105.083     56.4651     26.35  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.083)
105.167     56.6478     26.53  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.167)
105.250     56.8319     26.73  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.250)
105.333     57.0173     26.92  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.333)
105.417     57.2041     27.13  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.417)
105.500     57.3923     27.33  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.500)
105.583     57.5820     27.54  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.583)
105.667     57.7731     27.75  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.667)
105.750     57.9657     27.97  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.750)
105.833     58.1598     28.19  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.833)
105.917     58.3555     28.41  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.917)
106.000     58.5528     28.64  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.000)
106.083     58.7517     28.88  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.083)
106.167     58.9523     29.12  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.167)
106.250     59.1545     29.37  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.250)
106.333     59.3585     29.62  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.333)
106.417     59.5643     29.88  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.417)
106.500     59.7718     30.14  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.500)
106.583     59.9813     30.41  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.583)
106.667     60.1926     30.68  .Q        .    V    .         .         .
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 (PEAK DAY 1, HOUR  10.667)
106.750     60.4058     30.97  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.750)
106.833     60.6211     31.25  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.833)
106.917     60.8384     31.55  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  10.917)
107.000     61.0578     31.85  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.000)
107.083     61.2793     32.17  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.083)
107.167     61.5030     32.48  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.167)
107.250     61.7290     32.81  .Q        .    V    .         .         .
 (PEAK DAY 1, HOUR  11.250)
107.333     61.9573     33.15  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.333)
107.417     62.1880     33.50  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.417)
107.500     62.4211     33.85  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.500)
107.583     62.6567     34.21  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.583)
107.667     62.8950     34.59  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.667)
107.750     63.1358     34.98  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.750)
107.833     63.3794     35.37  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.833)
107.917     63.6259     35.78  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  11.917)
108.000     63.8752     36.20  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  12.000)
108.083     64.1287     36.80  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  12.083)
108.167     64.3896     37.88  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  12.167)
108.250     64.6632     39.74  .Q        .     V   .         .         .
 (PEAK DAY 1, HOUR  12.250)
108.333     64.9529     42.06  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.333)
108.417     65.2611     44.75  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.417)
108.500     65.5850     47.04  . Q       .     V   .         .         .
 (PEAK DAY 1, HOUR  12.500)
108.583     65.9215     48.85  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.583)
108.667     66.2684     50.37  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.667)
108.750     66.6252     51.80  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.750)
108.833     66.9912     53.15  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.833)
108.917     67.3665     54.49  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  12.917)
109.000     67.7512     55.86  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.000)
109.083     68.1459     57.30  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.083)
109.167     68.5507     58.79  . Q       .      V  .         .         .
 (PEAK DAY 1, HOUR  13.167)
109.250     68.9661     60.31  .  Q      .      V  .         .         .
 (PEAK DAY 1, HOUR  13.250)
109.333     69.3921     61.87  .  Q      .      V  .         .         .
 (PEAK DAY 1, HOUR  13.333)
109.417     69.8296     63.52  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.417)
109.500     70.2787     65.21  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.500)
109.583     70.7402     67.01  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.583)
109.667     71.2144     68.86  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.667)
109.750     71.7022     70.83  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.750)
109.833     72.2041     72.87  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.833)
109.917     72.7209     75.04  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  13.917)
110.000     73.2533     77.30  .  Q      .       V .         .         .
 (PEAK DAY 1, HOUR  14.000)
110.083     73.8026     79.76  .  Q      .        V.         .         .
 (PEAK DAY 1, HOUR  14.083)
110.167     74.3704     82.45  .   Q     .        V.         .         .
 (PEAK DAY 1, HOUR  14.167)
110.250     74.9596     85.54  .   Q     .        V.         .         .
 (PEAK DAY 1, HOUR  14.250)
110.333     75.5717     88.89  .   Q     .        V.         .         .
 (PEAK DAY 1, HOUR  14.333)
110.417     76.2090     92.53  .   Q     .        V.         .         .
 (PEAK DAY 1, HOUR  14.417)
110.500     76.8715     96.20  .   Q     .        V.         .         .
 (PEAK DAY 1, HOUR  14.500)
110.583     77.5600     99.96  .   Q     .         V         .         .
 (PEAK DAY 1, HOUR  14.583)
110.667     78.2749    103.81  .    Q    .         V         .         .
 (PEAK DAY 1, HOUR  14.667)
110.750     79.0182    107.93  .    Q    .         V         .         .
 (PEAK DAY 1, HOUR  14.750)
110.833     79.7914    112.27  .    Q    .         V         .         .
 (PEAK DAY 1, HOUR  14.833)
110.917     80.5973    117.01  .    Q    .         V         .         .
 (PEAK DAY 1, HOUR  14.917)
111.000     81.4383    122.11  .     Q   .         .V        .         .
 (PEAK DAY 1, HOUR  15.000)
111.083     82.3183    127.78  .     Q   .         .V        .         .
 (PEAK DAY 1, HOUR  15.083)
111.167     83.2408    133.95  .     Q   .         .V        .         .
 (PEAK DAY 1, HOUR  15.167)
111.250     84.2112    140.89  .      Q  .         .V        .         .
 (PEAK DAY 1, HOUR  15.250)
111.333     85.2343    148.56  .      Q  .         . V       .         .
 (PEAK DAY 1, HOUR  15.333)
111.417     86.3140    156.77  .      Q  .         . V       .         .
 (PEAK DAY 1, HOUR  15.417)
111.500     87.4461    164.38  .       Q .         . V       .         .
 (PEAK DAY 1, HOUR  15.500)
111.583     88.6237    170.99  .       Q .         . V       .         .
 (PEAK DAY 1, HOUR  15.583)
111.667     89.8487    177.87  .       Q .         .  V      .         .
 (PEAK DAY 1, HOUR  15.667)
111.750     91.1366    187.00  .        Q.         .  V      .         .
 (PEAK DAY 1, HOUR  15.750)
111.833     92.5291    202.19  .         Q         .  V      .         .
 (PEAK DAY 1, HOUR  15.833)
111.917     94.0982    227.84  .         .Q        .   V     .         .
 (PEAK DAY 1, HOUR  15.917)
112.000     95.9486    268.68  .         .  Q      .   V     .         .
 (PEAK DAY 1, HOUR  16.000)
112.083     98.3970    355.50  .         .     Q   .    V    .         .
 (PEAK DAY 1, HOUR  16.083)
112.167    101.8439    500.50  .         .         .    QV   .         .
 (PEAK DAY 1, HOUR  16.167)
112.250    106.5117    677.76  .         .         .      V  .  Q      .
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 (PEAK DAY 1, HOUR  16.250)
112.333    111.8129    769.73  .         .         .       V .       Q .
 (PEAK DAY 1, HOUR  16.333)
112.417    117.2284    786.33  .         .         .         V        Q.
 (PEAK DAY 1, HOUR  16.417)
112.500    121.6811    646.54  .         .         .         .VQ       .
 (PEAK DAY 1, HOUR  16.500)
112.583    124.9948    481.15  .         .         .   Q     . V       .
 (PEAK DAY 1, HOUR  16.583)
112.667    127.4627    358.33  .         .      Q  .         . V       .
 (PEAK DAY 1, HOUR  16.667)
112.750    129.3967    280.83  .         .   Q     .         .  V      .
 (PEAK DAY 1, HOUR  16.750)
112.833    130.9455    224.88  .         .Q        .         .  V      .
 (PEAK DAY 1, HOUR  16.833)
112.917    132.2140    184.19  .        Q.         .         .   V     .
 (PEAK DAY 1, HOUR  16.917)
113.000    133.3513    165.13  .       Q .         .         .   V     .
 (PEAK DAY 1, HOUR  17.000)
113.083    134.3849    150.08  .      Q  .         .         .   V     .
 (PEAK DAY 1, HOUR  17.083)
113.167    135.3235    136.28  .     Q   .         .         .   V     .
 (PEAK DAY 1, HOUR  17.167)
113.250    136.1315    117.32  .    Q    .         .         .    V    .
 (PEAK DAY 1, HOUR  17.250)
113.333    136.8693    107.13  .    Q    .         .         .    V    .
 (PEAK DAY 1, HOUR  17.333)
113.417    137.5491     98.70  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  17.417)
113.500    138.1786     91.40  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  17.500)
113.583    138.7664     85.36  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  17.583)
113.667    139.3183     80.13  .   Q     .         .         .     V   .
 (PEAK DAY 1, HOUR  17.667)
113.750    139.8382     75.50  .  Q      .         .         .     V   .
 (PEAK DAY 1, HOUR  17.750)
113.833    140.3296     71.35  .  Q      .         .         .     V   .
 (PEAK DAY 1, HOUR  17.833)
113.917    140.7949     67.57  .  Q      .         .         .     V   .
 (PEAK DAY 1, HOUR  17.917)
114.000    141.2367     64.15  .  Q      .         .         .     V   .
 (PEAK DAY 1, HOUR  18.000)
114.083    141.6554     60.80  .  Q      .         .         .     V   .
 (PEAK DAY 1, HOUR  18.083)
114.167    142.0503     57.33  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.167)
114.250    142.4188     53.51  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.250)
114.333    142.7600     49.55  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.333)
114.417    143.0749     45.72  . Q       .         .         .     V   .
 (PEAK DAY 1, HOUR  18.417)
114.500    143.3691     42.72  . Q       .         .         .      V  .
 (PEAK DAY 1, HOUR  18.500)
114.583    143.6481     40.51  . Q       .         .         .      V  .
 (PEAK DAY 1, HOUR  18.583)
114.667    143.9151     38.78  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  18.667)
114.750    144.1721     37.31  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  18.750)
114.833    144.4216     36.23  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  18.833)
114.917    144.6648     35.31  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  18.917)
115.000    144.9020     34.45  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.000)
115.083    145.1332     33.56  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.083)
115.167    145.3579     32.63  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.167)
115.250    145.5779     31.94  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.250)
115.333    145.7936     31.32  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.333)
115.417    146.0053     30.74  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.417)
115.500    146.2132     30.18  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.500)
115.583    146.4174     29.65  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.583)
115.667    146.6181     29.15  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.667)
115.750    146.8156     28.67  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.750)
115.833    147.0098     28.20  .Q        .         .         .      V  .
 (PEAK DAY 1, HOUR  19.833)
115.917    147.2010     27.76  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  19.917)
116.000    147.3893     27.34  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.000)
116.083    147.5748     26.93  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.083)
116.167    147.7575     26.54  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.167)
116.250    147.9377     26.16  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.250)
116.333    148.1153     25.80  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.333)
116.417    148.2906     25.44  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.417)
116.500    148.4634     25.10  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.500)
116.583    148.6340     24.76  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.583)
116.667    148.8022     24.43  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.667)
116.750    148.9682     24.10  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.750)
116.833    149.1315     23.71  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.833)
116.917    149.2927     23.41  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  20.917)
117.000    149.4519     23.12  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.000)
117.083    149.6093     22.85  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.083)
117.167    149.7649     22.59  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.167)
117.250    149.9187     22.34  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.250)
117.333    150.0708     22.09  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.333)
117.417    150.2213     21.85  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.417)
117.500    150.3702     21.62  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.500)
117.583    150.5176     21.40  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.583)
117.667    150.6634     21.18  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.667)
117.750    150.8078     20.96  .Q        .         .         .       V .
 (PEAK DAY 1, HOUR  21.750)
117.833    150.9508     20.76  .Q        .         .         .        V.
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(PEAK DAY 1, HOUR 21.833)
117.917 151.0923 20.56 .Q . . . V.
(PEAK DAY 1, HOUR 21.917)
118.000 151.2325 20.36 .Q . . . V.
(PEAK DAY 1, HOUR 22.000)
118.083 151.3714 20.17 .Q . . . V.
(PEAK DAY 1, HOUR 22.083)
118.167 151.5090 19.98 Q . . . V.
(PEAK DAY 1, HOUR 22.167)
118.250 151.6454 19.80 Q . . . V.
(PEAK DAY 1, HOUR 22.250)
118.333 151.7805 19.62 Q . . . V.
(PEAK DAY 1, HOUR 22.333)
118.417 151.9144 19.45 Q . . . V.
(PEAK DAY 1, HOUR 22.417)
118.500 152.0472 19.28 Q . . . V.
(PEAK DAY 1, HOUR 22.500)
118.583 152.1788 19.11 Q . . . V.
(PEAK DAY 1, HOUR 22.583)
118.667 152.3093 18.95 Q . . . V.
(PEAK DAY 1, HOUR 22.667)
118.750 152.4387 18.79 Q . . . V.
(PEAK DAY 1, HOUR 22.750)
118.833 152.5670 18.63 Q . . . V.
(PEAK DAY 1, HOUR 22.833)
118.917 152.6943 18.48 Q . . . V.
(PEAK DAY 1, HOUR 22.917)
119.000 152.8205 18.33 Q . . . V.
(PEAK DAY 1, HOUR 23.000)
119.083 152.9458 18.19 Q . . . V.
(PEAK DAY 1, HOUR 23.083)
119.167 153.0701 18.05 Q . . . V.
(PEAK DAY 1, HOUR 23.167)
119.250 153.1934 17.91 Q . . . V.
(PEAK DAY 1, HOUR 23.250)
119.333 153.3158 17.77 Q . . . V.
(PEAK DAY 1, HOUR 23.333)
119.417 153.4372 17.64 Q . . . V.
(PEAK DAY 1, HOUR 23.417)
119.500 153.5578 17.50 Q . . . V.
(PEAK DAY 1, HOUR 23.500)
119.583 153.6774 17.38 Q . . . V.
(PEAK DAY 1, HOUR 23.583)
119.667 153.7962 17.25 Q . . . V.
(PEAK DAY 1, HOUR 23.667)
119.750 153.9142 17.12 Q . . . V.
(PEAK DAY 1, HOUR 23.750)
119.833 154.0313 17.00 Q . . . V.
(PEAK DAY 1, HOUR 23.833)
119.917 154.1475 16.88 Q . . . V.
(PEAK DAY 1, HOUR 23.917)
120.000 154.2630 16.77 Q . . . V.
(PEAK DAY 1, HOUR 24.000)
120.083 154.3759 16.39 Q . . . V.
(PEAK DAY 1, HOUR 24.083)
120.167 154.4811 15.28 Q . . . V.
(PEAK DAY 1, HOUR 24.167)
120.250 154.5705 12.98 Q . . . V.
(PEAK DAY 1, HOUR 24.250)
120.333 154.6393 9.99 Q . . . V.
(PEAK DAY 1, HOUR 24.333)
120.417 154.6846 6.58 Q . . . V.
(PEAK DAY 1, HOUR 24.417)
120.500 154.7121 3.98 Q . . . V.
(PEAK DAY 1, HOUR 24.500)
120.583 154.7285 2.38 Q . . . V.
(PEAK DAY 1, HOUR 24.583)
120.667 154.7386 1.47 Q . . . V.
(PEAK DAY 1, HOUR 24.667)
120.750 154.7450 0.92 Q . . . V.
(PEAK DAY 1, HOUR 24.750)
120.833 154.7493 0.63 Q . . . V.
(PEAK DAY 1, HOUR 24.833)
120.917 154.7528 0.50 Q . . . V.
(PEAK DAY 1, HOUR 24.917)
121.000 154.7555 0.40 Q . . . V.
(PEAK DAY 1, HOUR 25.000)
121.083 154.7576 0.30 Q . . . V.
(PEAK DAY 1, HOUR 25.083)
121.167 154.7589 0.20 Q . . . V.
(PEAK DAY 1, HOUR 25.167)
121.250 154.7602 0.18 Q . . . V.
(PEAK DAY 1, HOUR 25.250)
121.333 154.7613 0.16 Q . . . V.
(PEAK DAY 1, HOUR 25.333)
121.417 154.7623 0.14 Q . . . V.
(PEAK DAY 1, HOUR 25.417)
121.500 154.7632 0.13 Q . . . V.
(PEAK DAY 1, HOUR 25.500)
121.583 154.7640 0.12 Q . . . V.
(PEAK DAY 1, HOUR 25.583)
121.667 154.7648 0.11 Q . . . V.
(PEAK DAY 1, HOUR 25.667)
121.750 154.7655 0.11 Q . . . V.
(PEAK DAY 1, HOUR 25.750)
121.833 154.7662 0.10 Q . . . V.
(PEAK DAY 1, HOUR 25.833)
121.917 154.7668 0.09 Q . . . V.
(PEAK DAY 1, HOUR 25.917)
122.000 154.7674 0.08 Q . . . V.
(PEAK DAY 1, HOUR 26.000)
122.083 154.7679 0.07 Q . . . V.
(PEAK DAY 1, HOUR 26.083)
122.167 154.7683 0.07 Q . . . V.
(PEAK DAY 1, HOUR 26.167)
122.250 154.7688 0.06 Q . . . V.
(PEAK DAY 1, HOUR 26.250)
122.333 154.7691 0.05 Q . . . V.
(PEAK DAY 1, HOUR 26.333)
122.417 154.7695 0.05 Q . . . V.
(PEAK DAY 1, HOUR 26.417)
122.500 154.7697 0.04 Q . . . V.
(PEAK DAY 1, HOUR 26.500)
122.583 154.7700 0.04 Q . . . V.
(PEAK DAY 1, HOUR 26.583)
122.667 154.7702 0.03 Q . . . V.
(PEAK DAY 1, HOUR 26.667)
122.750 154.7704 0.03 Q . . . V.
(PEAK DAY 1, HOUR 26.750)
122.833 154.7706 0.03 Q . . . V.
(PEAK DAY 1, HOUR 26.833)
122.917 154.7708 0.02 Q . . . V.
(PEAK DAY 1, HOUR 26.917)
123.000 154.7709 0.02 Q . . . V.
(PEAK DAY 1, HOUR 27.000)
123.083 154.7710 0.02 Q . . . V.
(PEAK DAY 1, HOUR 27.083)
123.167 154.7711 0.02 Q . . . V.
(PEAK DAY 1, HOUR 27.167)
123.250 154.7712 0.02 Q . . . V.
(PEAK DAY 1, HOUR 27.250)
123.333 154.7713 0.01 Q . . . V.
(PEAK DAY 1, HOUR 27.333)
123.417 154.7714 0.01 Q . . . V.

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 (PEAK DAY 1, HOUR  27.417)
 123.500    154.7715      0.01  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.500)
 123.583    154.7716      0.01  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.583)
 123.667    154.7717      0.01  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.667)
 123.750    154.7718      0.01  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.750)
 123.833    154.7718      0.01  Q         .         .         .        V.
 (PEAK DAY 1, HOUR  27.833)
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  END OF FLOODSCx ROUTING ANALYSIS



********************************************************************************
  FLOW PROCESS FROM NODE   6395.00 TO NODE   6395.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  7291.1 Ac. ***
================================================================================

  END OF FLOODSCx ROUTING ANALYSIS



********************************************************************************
  FLOW PROCESS FROM NODE   6395.00 TO NODE   6395.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  7291.1 Ac. ***

           STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
        (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.     1375.0    2750.0    4125.0    5500.0
--------------------------------------------------------------------------------
  96.000    847.7621     93.14  Q         V         .         .         .
 (PEAK DAY 2, HOUR  24.000)
  96.083    848.4042     93.22  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.083)
  96.167    849.0695     96.61  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.167)
  96.250    849.7926    104.99  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.250)
  96.333    850.6028    117.64  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.333)
  96.417    851.5078    131.40  Q         V         .         .         .
 (PEAK DAY 1, HOUR   0.417)
  96.500    852.5042    144.68  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.500)
  96.583    853.5919    157.94  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.583)
  96.667    854.7686    170.85  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.667)
  96.750    856.0334    183.65  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.750)
  96.833    857.3990    198.28  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.833)
  96.917    858.8920    216.78  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   0.917)
  97.000    860.5327    238.22  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   1.000)
  97.083    862.3155    258.87  .Q        V         .         .         .
 (PEAK DAY 1, HOUR   1.083)
  97.167    864.2156    275.89  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.167)
  97.250    866.2058    288.98  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.250)
  97.333    868.2660    299.14  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.333)
  97.417    870.3824    307.30  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.417)
  97.500    872.5458    314.14  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.500)
  97.583    874.7499    320.03  . Q       V         .         .         .
 (PEAK DAY 1, HOUR   1.583)
  97.667    876.9896    325.20  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   1.667)
  97.750    879.2610    329.82  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   1.750)
  97.833    881.5612    333.99  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   1.833)
  97.917    883.8877    337.80  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   1.917)
  98.000    886.2382    341.30  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.000)
  98.083    888.6108    344.50  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.083)
  98.167    891.0035    347.42  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.167)
  98.250    893.4146    350.08  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.250)
  98.333    895.8425    352.55  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.333)
  98.417    898.2863    354.83  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.417)
  98.500    900.7445    356.93  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.500)
  98.583    903.2156    358.81  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.583)
  98.667    905.6985    360.52  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.667)
  98.750    908.1925    362.13  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.750)
  98.833    910.6973    363.69  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.833)
  98.917    913.2127    365.24  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   2.917)
  99.000    915.7388    366.79  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.000)
  99.083    918.2756    368.34  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.083)
  99.167    920.8232    369.90  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.167)
  99.250    923.3815    371.47  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.250)
  99.333    925.9507    373.05  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.333)
  99.417    928.5309    374.64  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.417)
  99.500    931.1222    376.25  . Q       .V        .         .         .
 (PEAK DAY 1, HOUR   3.500)
  99.583    933.7247    377.88  . Q       .V        .         .         .
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(PEAK DAY 1, HOUR   3.583)
 99.667    936.3384    379.52  . Q       .V        .         .         .
(PEAK DAY 1, HOUR   3.667)
 99.750    938.9636    381.17  . Q       .V        .         .         .
(PEAK DAY 1, HOUR   3.750)
 99.833    941.6003    382.84  . Q       .V        .         .         .
(PEAK DAY 1, HOUR   3.833)
 99.917    944.2485    384.53  . Q       .V        .         .         .
(PEAK DAY 1, HOUR   3.917)
100.000    946.9085    386.23  . Q       .V        .         .         .
(PEAK DAY 1, HOUR   4.000)
100.083    949.5803    387.95  . Q       .V        .         .         .
(PEAK DAY 1, HOUR   4.083)
100.167    952.2640    389.68  . Q       .V        .         .         .
(PEAK DAY 1, HOUR   4.167)
100.250    954.9598    391.42  . Q       .V        .         .         .
(PEAK DAY 1, HOUR   4.250)
100.333    957.6675    393.16  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   4.333)
100.417    960.3870    394.87  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   4.417)
100.500    963.1182    396.57  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   4.500)
100.583    965.8610    398.26  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   4.583)
100.667    968.6155    399.96  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   4.667)
100.750    971.3818    401.67  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   4.750)
100.833    974.1600    403.39  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   4.833)
100.917    976.9503    405.14  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   4.917)
101.000    979.7526    406.90  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   5.000)
101.083    982.5673    408.68  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   5.083)
101.167    985.3943    410.49  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   5.167)
101.250    988.2339    412.31  . Q       . V       .         .         .
(PEAK DAY 1, HOUR   5.250)
101.333    991.0862    414.16  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   5.333)
101.417    993.9514    416.03  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   5.417)
101.500    996.8297    417.92  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   5.500)
101.583    999.7210    419.83  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   5.583)
101.667   1002.6257    421.76  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   5.667)
101.750   1005.5439    423.72  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   5.750)
101.833   1008.4757    425.70  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   5.833)
101.917   1011.4214    427.71  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   5.917)
102.000   1014.3810    429.74  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   6.000)
102.083   1017.3549    431.80  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   6.083)
102.167   1020.3430    433.88  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   6.167)
102.250   1023.3457    435.99  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   6.250)
102.333   1026.3630    438.12  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   6.333)
102.417   1029.3953    440.29  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   6.417)
102.500   1032.4426    442.48  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   6.500)
102.583   1035.5052    444.70  .  Q      . V       .         .         .
(PEAK DAY 1, HOUR   6.583)
102.667   1038.5834    446.95  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   6.667)
102.750   1041.6772    449.23  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   6.750)
102.833   1044.7870    451.54  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   6.833)
102.917   1047.9128    453.87  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   6.917)
103.000   1051.0548    456.21  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.000)
103.083   1054.2122    458.44  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.083)
103.167   1057.3833    460.45  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.167)
103.250   1060.5665    462.20  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.250)
103.333   1063.7610    463.84  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.333)
103.417   1066.9668    465.49  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.417)
103.500   1070.1847    467.23  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.500)
103.583   1073.4154    469.10  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.583)
103.667   1076.6598    471.08  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.667)
103.750   1079.9186    473.18  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.750)
103.833   1083.1926    475.39  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.833)
103.917   1086.4825    477.69  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   7.917)
104.000   1089.7889    480.08  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   8.000)
104.083   1093.1123    482.55  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   8.083)
104.167   1096.4532    485.11  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   8.167)
104.250   1099.8123    487.74  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   8.250)
104.333   1103.1899    490.43  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   8.333)
104.417   1106.5867    493.20  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   8.417)
104.500   1110.0028    496.03  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   8.500)
104.583   1113.4390    498.92  .  Q      .  V      .         .         .
(PEAK DAY 1, HOUR   8.583)
104.667   1116.8955    501.88  .  Q      .   V     .         .         .
(PEAK DAY 1, HOUR   8.667)
104.750   1120.3728    504.90  .  Q      .   V     .         .         .
(PEAK DAY 1, HOUR   8.750)
104.833   1123.8713    507.98  .  Q      .   V     .         .         .
(PEAK DAY 1, HOUR   8.833)
104.917   1127.3915    511.12  .  Q      .   V     .         .         .
(PEAK DAY 1, HOUR   8.917)
105.000   1130.9336    514.32  .  Q      .   V     .         .         .
(PEAK DAY 1, HOUR   9.000)
105.083   1134.4983    517.59  .  Q      .   V     .         .         .
(PEAK DAY 1, HOUR   9.083)
105.167   1138.0858    520.91  .  Q      .   V     .         .         .
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 (PEAK DAY 1, HOUR   9.167)
105.250   1141.6967    524.30  .  Q      .   V     .         .         .
 (PEAK DAY 1, HOUR   9.250)
105.333   1145.3311    527.72  .  Q      .   V     .         .         .
 (PEAK DAY 1, HOUR   9.333)
105.417   1148.9888    531.10  .  Q      .   V     .         .         .
 (PEAK DAY 1, HOUR   9.417)
105.500   1152.6683    534.28  .  Q      .   V     .         .         .
 (PEAK DAY 1, HOUR   9.500)
105.583   1156.3683    537.23  .  Q      .   V     .         .         .
 (PEAK DAY 1, HOUR   9.583)
105.667   1160.0874    540.02  .  Q      .   V     .         .         .
 (PEAK DAY 1, HOUR   9.667)
105.750   1163.8257    542.79  .  Q      .   V     .         .         .
 (PEAK DAY 1, HOUR   9.750)
105.833   1167.5834    545.62  .  Q      .   V     .         .         .
 (PEAK DAY 1, HOUR   9.833)
105.917   1171.3612    548.54  .  Q      .   V     .         .         .
 (PEAK DAY 1, HOUR   9.917)
106.000   1175.1599    551.57  .   Q     .   V     .         .         .
 (PEAK DAY 1, HOUR  10.000)
106.083   1178.9802    554.70  .   Q     .   V     .         .         .
 (PEAK DAY 1, HOUR  10.083)
106.167   1182.8229    557.95  .   Q     .   V     .         .         .
 (PEAK DAY 1, HOUR  10.167)
106.250   1186.6887    561.31  .   Q     .   V     .         .         .
 (PEAK DAY 1, HOUR  10.250)
106.333   1190.5785    564.79  .   Q     .   V     .         .         .
 (PEAK DAY 1, HOUR  10.333)
106.417   1194.4929    568.38  .   Q     .   V     .         .         .
 (PEAK DAY 1, HOUR  10.417)
106.500   1198.4329    572.08  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  10.500)
106.583   1202.3990    575.90  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  10.583)
106.667   1206.3923    579.83  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  10.667)
106.750   1210.4136    583.88  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  10.750)
106.833   1214.4635    588.06  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  10.833)
106.917   1218.5430    592.35  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  10.917)
107.000   1222.6530    596.76  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  11.000)
107.083   1226.7941    601.29  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  11.083)
107.167   1230.9668    605.88  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  11.167)
107.250   1235.1705    610.38  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  11.250)
107.333   1239.4042    614.72  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  11.333)
107.417   1243.6670    618.96  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  11.417)
107.500   1247.9591    623.22  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  11.500)
107.583   1252.2811    627.56  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  11.583)
107.667   1256.6340    632.04  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  11.667)
107.750   1261.0187    636.66  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  11.750)
107.833   1265.4363    641.44  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  11.833)
107.917   1269.8881    646.39  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  11.917)
108.000   1274.3751    651.51  .   Q     .    V    .         .         .
 (PEAK DAY 1, HOUR  12.000)
108.083   1278.9064    657.94  .   Q     .     V   .         .         .
 (PEAK DAY 1, HOUR  12.083)
108.167   1283.5166    669.41  .   Q     .     V   .         .         .
 (PEAK DAY 1, HOUR  12.167)
108.250   1288.2560    688.16  .    Q    .     V   .         .         .
 (PEAK DAY 1, HOUR  12.250)
108.333   1293.1648    712.76  .    Q    .     V   .         .         .
 (PEAK DAY 1, HOUR  12.333)
108.417   1298.2438    737.47  .    Q    .     V   .         .         .
 (PEAK DAY 1, HOUR  12.417)
108.500   1303.4740    759.42  .    Q    .     V   .         .         .
 (PEAK DAY 1, HOUR  12.500)
108.583   1308.8392    779.04  .    Q    .     V   .         .         .
 (PEAK DAY 1, HOUR  12.583)
108.667   1314.3217    796.05  .    Q    .     V   .         .         .
 (PEAK DAY 1, HOUR  12.667)
108.750   1319.9039    810.54  .    Q    .     V   .         .         .
 (PEAK DAY 1, HOUR  12.750)
108.833   1325.5750    823.43  .    Q    .     V   .         .         .
 (PEAK DAY 1, HOUR  12.833)
108.917   1331.3293    835.53  .     Q   .     V   .         .         .
 (PEAK DAY 1, HOUR  12.917)
109.000   1337.1658    847.44  .     Q   .     V   .         .         .
 (PEAK DAY 1, HOUR  13.000)
109.083   1343.0851    859.49  .     Q   .     V   .         .         .
 (PEAK DAY 1, HOUR  13.083)
109.167   1349.0898    871.89  .     Q   .     V   .         .         .
 (PEAK DAY 1, HOUR  13.167)
109.250   1355.1827    884.68  .     Q   .      V  .         .         .
 (PEAK DAY 1, HOUR  13.250)
109.333   1361.3668    897.93  .     Q   .      V  .         .         .
 (PEAK DAY 1, HOUR  13.333)
109.417   1367.6451    911.61  .     Q   .      V  .         .         .
 (PEAK DAY 1, HOUR  13.417)
109.500   1374.0211    925.78  .     Q   .      V  .         .         .
 (PEAK DAY 1, HOUR  13.500)
109.583   1380.4982    940.46  .     Q   .      V  .         .         .
 (PEAK DAY 1, HOUR  13.583)
109.667   1387.0802    955.72  .     Q   .      V  .         .         .
 (PEAK DAY 1, HOUR  13.667)
109.750   1393.7716    971.58  .      Q  .      V  .         .         .
 (PEAK DAY 1, HOUR  13.750)
109.833   1400.5768    988.11  .      Q  .      V  .         .         .
 (PEAK DAY 1, HOUR  13.833)
109.917   1407.4996   1005.20  .      Q  .      V  .         .         .
 (PEAK DAY 1, HOUR  13.917)
110.000   1414.5432   1022.73  .      Q  .      V  .         .         .
 (PEAK DAY 1, HOUR  14.000)
110.083   1421.7130   1041.06  .      Q  .      V  .         .         .
 (PEAK DAY 1, HOUR  14.083)
110.167   1429.0262   1061.87  .      Q  .      V  .         .         .
 (PEAK DAY 1, HOUR  14.167)
110.250   1436.5068   1086.19  .      Q  .       V .         .         .
 (PEAK DAY 1, HOUR  14.250)
110.333   1444.1757   1113.52  .       Q .       V .         .         .
 (PEAK DAY 1, HOUR  14.333)
110.417   1452.0371   1141.48  .       Q .       V .         .         .
 (PEAK DAY 1, HOUR  14.417)
110.500   1460.0892   1169.18  .       Q .       V .         .         .
 (PEAK DAY 1, HOUR  14.500)
110.583   1468.3352   1197.31  .       Q .       V .         .         .
 (PEAK DAY 1, HOUR  14.583)
110.667   1476.7833   1226.68  .       Q .       V .         .         .
 (PEAK DAY 1, HOUR  14.667)
110.750   1485.4467   1257.91  .        Q.       V .         .         .
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 (PEAK DAY 1, HOUR  14.750)
110.833   1494.3434   1291.80  .        Q.       V .         .         .
 (PEAK DAY 1, HOUR  14.833)
110.917   1503.4945   1328.75  .        Q.       V .         .         .
 (PEAK DAY 1, HOUR  14.917)
111.000   1512.9248   1369.27  .        Q.       V .         .         .
 (PEAK DAY 1, HOUR  15.000)
111.083   1522.6615   1413.77  .         Q        V.         .         .
 (PEAK DAY 1, HOUR  15.083)
111.167   1532.7358   1462.79  .         Q        V.         .         .
 (PEAK DAY 1, HOUR  15.167)
111.250   1543.1794   1516.41  .         .Q       V.         .         .
 (PEAK DAY 1, HOUR  15.250)
111.333   1554.0271   1575.09  .         .Q       V.         .         .
 (PEAK DAY 1, HOUR  15.333)
111.417   1565.2999   1636.81  .         .Q       V.         .         .
 (PEAK DAY 1, HOUR  15.417)
111.500   1576.9690   1694.34  .         . Q      V.         .         .
 (PEAK DAY 1, HOUR  15.500)
111.583   1588.9791   1743.87  .         . Q      V.         .         .
 (PEAK DAY 1, HOUR  15.583)
111.667   1601.3203   1791.94  .         .  Q      V         .         .
 (PEAK DAY 1, HOUR  15.667)
111.750   1614.1051   1856.36  .         .  Q      V         .         .
 (PEAK DAY 1, HOUR  15.750)
111.833   1627.5607   1953.74  .         .   Q     V         .         .
 (PEAK DAY 1, HOUR  15.833)
111.917   1642.0214   2099.69  .         .    Q    V         .         .
 (PEAK DAY 1, HOUR  15.917)
112.000   1658.0869   2332.72  .         .     Q   V         .         .
 (PEAK DAY 1, HOUR  16.000)
112.083   1677.2804   2786.89  .         .         QV        .         .
 (PEAK DAY 1, HOUR  16.083)
112.167   1702.3569   3641.11  .         .         .V    Q   .         .
 (PEAK DAY 1, HOUR  16.167)
112.250   1734.4481   4659.63  .         .         .V        .  Q      .
 (PEAK DAY 1, HOUR  16.250)
112.333   1771.5573   5388.25  .         .         . V       .        Q.
 (PEAK DAY 1, HOUR  16.333)
112.417   1809.2753   5476.65  .         .         . V       .        Q.
 (PEAK DAY 1, HOUR  16.417)
112.500   1844.7489   5150.77  .         .         .  V      .      Q  .
 (PEAK DAY 1, HOUR  16.500)
112.583   1877.2103   4713.41  .         .         .  V      .   Q     .
 (PEAK DAY 1, HOUR  16.583)
112.667   1905.6206   4125.16  .         .         .  V     Q        .
 (PEAK DAY 1, HOUR  16.667)
112.750   1929.6925   3495.23  .         .         .   VQ    .         .
 (PEAK DAY 1, HOUR  16.750)
112.833   1950.1908   2976.35  .         .         .Q  V     .         .
 (PEAK DAY 1, HOUR  16.833)
112.917   1968.0515   2593.38  .         .       Q .   V     .         .
 (PEAK DAY 1, HOUR  16.917)
113.000   1984.0458   2322.36  .         .     Q   .   V     .         .
 (PEAK DAY 1, HOUR  17.000)
113.083   1998.6793   2124.80  .         .    Q    .    V    .         .
 (PEAK DAY 1, HOUR  17.083)
113.167   2012.3068   1978.70  .         .   Q     .    V    .         .
 (PEAK DAY 1, HOUR  17.167)
113.250   2025.0970   1857.15  .         .  Q      .    V    .         .
 (PEAK DAY 1, HOUR  17.250)
113.333   2037.2064   1758.27  .         . Q       .    V    .         .
 (PEAK DAY 1, HOUR  17.333)
113.417   2048.7283   1672.99  .         . Q       .    V    .         .
 (PEAK DAY 1, HOUR  17.417)
113.500   2059.7671   1602.84  .         .Q        .    V    .         .
 (PEAK DAY 1, HOUR  17.500)
113.583   2070.4224   1547.14  .         .Q        .    V    .         .
 (PEAK DAY 1, HOUR  17.583)
113.667   2080.7734   1502.98  .         Q         .    V    .         .
 (PEAK DAY 1, HOUR  17.667)
113.750   2090.8789   1467.31  .         Q         .    V    .         .
 (PEAK DAY 1, HOUR  17.750)
113.833   2100.7761   1437.08  .         Q         .    V    .         .
 (PEAK DAY 1, HOUR  17.833)
113.917   2110.4900   1410.47  .         Q         .    V    .         .
 (PEAK DAY 1, HOUR  17.917)
114.000   2120.0378   1386.36  .         Q         .    V    .         .
 (PEAK DAY 1, HOUR  18.000)
114.083   2129.4211   1362.47  .        Q.         .    V    .         .
 (PEAK DAY 1, HOUR  18.083)
114.167   2138.6189   1335.52  .        Q.         .    V    .         .
 (PEAK DAY 1, HOUR  18.167)
114.250   2147.5984   1303.83  .        Q.         .    V    .         .
 (PEAK DAY 1, HOUR  18.250)
114.333   2156.3340   1268.41  .        Q.         .     V   .         .
 (PEAK DAY 1, HOUR  18.333)
114.417   2164.8386   1234.87  .       Q .         .     V   .         .
 (PEAK DAY 1, HOUR  18.417)
114.500   2173.1504   1206.88  .       Q .         .     V   .         .
 (PEAK DAY 1, HOUR  18.500)
114.583   2181.2993   1183.22  .       Q .         .     V   .         .
 (PEAK DAY 1, HOUR  18.583)
114.667   2189.3059   1162.57  .       Q .         .     V   .         .
 (PEAK DAY 1, HOUR  18.667)
114.750   2197.1897   1144.73  .       Q .         .     V   .         .
 (PEAK DAY 1, HOUR  18.750)
114.833   2204.9717   1129.94  .       Q .         .     V   .         .
 (PEAK DAY 1, HOUR  18.833)
114.917   2212.6689   1117.66  .       Q .         .     V   .         .
 (PEAK DAY 1, HOUR  18.917)
115.000   2220.2910   1106.71  .       Q .         .     V   .         .
 (PEAK DAY 1, HOUR  19.000)
115.083   2227.8420   1096.41  .     Q   .         .     V   .         .
 (PEAK DAY 1, HOUR  19.083)
115.167   2235.3286   1087.04  .     Q   .         .      V  .         .
 (PEAK DAY 1, HOUR  19.167)
115.250   2242.7600   1079.05  .     Q   .         .      V  .         .
 (PEAK DAY 1, HOUR  19.250)
115.333   2250.1418   1071.86  .     Q   .         .      V  .         .
 (PEAK DAY 1, HOUR  19.333)
115.417   2257.4785   1065.27  .     Q   .         .      V  .         .
 (PEAK DAY 1, HOUR  19.417)
115.500   2264.7734   1059.22  .     Q   .         .      V  .         .
 (PEAK DAY 1, HOUR  19.500)
115.583   2272.0291   1053.52  .     Q   .         .      V  .         .
 (PEAK DAY 1, HOUR  19.583)
115.667   2279.2461   1047.93  .     Q   .         .      V  .         .
 (PEAK DAY 1, HOUR  19.667)
115.750   2286.4263   1042.56  .     Q   .         .      V  .         .
 (PEAK DAY 1, HOUR  19.750)
115.833   2293.5710   1037.43  .     Q   .         .      V  .         .
 (PEAK DAY 1, HOUR  19.833)
115.917   2300.6804   1032.29  .     Q   .         .      V  .         .
 (PEAK DAY 1, HOUR  19.917)
116.000   2307.7537   1027.02  .     Q   .         .      V  .         .
 (PEAK DAY 1, HOUR  20.000)
116.083   2314.7913   1021.85  .     Q   .         .       V.         .
 (PEAK DAY 1, HOUR  20.083)
116.167   2321.7957   1017.02  .     Q   .         .       V.         .
 (PEAK DAY 1, HOUR  20.167)
116.250   2328.7690   1012.53  .     Q   .         .       V.         .
 (PEAK DAY 1, HOUR  20.250)
116.333   2335.7129   1008.24  .     Q   .         .       V.         .
```

```
 (PEAK DAY 1, HOUR  20.333)
116.417   2342.6277   1004.04  .     Q  .        .       V.        .
 (PEAK DAY 1, HOUR  20.417)
116.500   2349.5122    999.64  .     Q  .        .       V.        .
 (PEAK DAY 1, HOUR  20.500)
116.583   2356.3660    995.15  .     Q  .        .       V.        .
 (PEAK DAY 1, HOUR  20.583)
116.667   2363.1907    990.95  .     Q  .        .       V.        .
 (PEAK DAY 1, HOUR  20.667)
116.750   2369.9890    987.10  .     Q  .        .       V.        .
 (PEAK DAY 1, HOUR  20.750)
116.833   2376.7620    983.42  .     Q  .        .       V.        .
 (PEAK DAY 1, HOUR  20.833)
116.917   2383.5110    979.97  .     Q  .        .       V.        .
 (PEAK DAY 1, HOUR  20.917)
117.000   2390.2371    976.61  .     Q  .        .       V.        .
 (PEAK DAY 1, HOUR  21.000)
117.083   2396.9402    973.30  .     Q  .        .        V        .
 (PEAK DAY 1, HOUR  21.083)
117.167   2403.6211    970.08  .     Q  .        .        V        .
 (PEAK DAY 1, HOUR  21.167)
117.250   2410.2808    966.99  .     Q  .        .        V        .
 (PEAK DAY 1, HOUR  21.250)
117.333   2416.9199    963.99  .     Q  .        .        V        .
 (PEAK DAY 1, HOUR  21.333)
117.417   2423.5388    961.06  .    Q   .        .        V        .
 (PEAK DAY 1, HOUR  21.417)
117.500   2430.1379    958.19  .    Q   .        .        V        .
 (PEAK DAY 1, HOUR  21.500)
117.583   2436.7175    955.37  .    Q   .        .        V        .
 (PEAK DAY 1, HOUR  21.583)
117.667   2443.2781    952.60  .    Q   .        .        V        .
 (PEAK DAY 1, HOUR  21.667)
117.750   2449.8201    949.89  .    Q   .        .        V        .
 (PEAK DAY 1, HOUR  21.750)
117.833   2456.3438    947.24  .    Q   .        .        V        .
 (PEAK DAY 1, HOUR  21.833)
117.917   2462.8496    944.64  .    Q   .        .        V        .
 (PEAK DAY 1, HOUR  21.917)
118.000   2469.3379    942.12  .    Q   .        .        V        .
 (PEAK DAY 1, HOUR  22.000)
118.083   2475.8093    939.64  .    Q   .        .        .V       .
 (PEAK DAY 1, HOUR  22.083)
118.167   2482.2639    937.21  .    Q   .        .        .V       .
 (PEAK DAY 1, HOUR  22.167)
118.250   2488.7019    934.81  .    Q   .        .        .V       .
 (PEAK DAY 1, HOUR  22.250)
118.333   2495.1238    932.45  .    Q   .        .        .V       .
 (PEAK DAY 1, HOUR  22.333)
118.417   2501.5295    930.13  .    Q   .        .        .V       .
 (PEAK DAY 1, HOUR  22.417)
118.500   2507.9197    927.84  .    Q   .        .        .V       .
 (PEAK DAY 1, HOUR  22.500)
118.583   2514.2942    925.58  .    Q   .        .        .V       .
 (PEAK DAY 1, HOUR  22.583)
118.667   2520.6533    923.35  .    Q   .        .        .V       .
 (PEAK DAY 1, HOUR  22.667)
118.750   2526.9973    921.16  .    Q   .        .        .V       .
 (PEAK DAY 1, HOUR  22.750)
118.833   2533.3264    918.99  .    Q   .        .        .V       .
 (PEAK DAY 1, HOUR  22.833)
118.917   2539.6409    916.84  .    Q   .        .        .V       .
 (PEAK DAY 1, HOUR  22.917)
119.000   2545.9407    914.73  .    Q   .        .        .V       .
 (PEAK DAY 1, HOUR  23.000)
119.083   2552.2261    912.63  .    Q   .        .        . V      .
 (PEAK DAY 1, HOUR  23.083)
119.167   2558.4971    910.56  .    Q   .        .        .  V     .
 (PEAK DAY 1, HOUR  23.167)
119.250   2564.7542    908.52  .    Q   .        .        .  V     .
 (PEAK DAY 1, HOUR  23.250)
119.333   2570.9973    906.49  .    Q   .        .        .  V     .
 (PEAK DAY 1, HOUR  23.333)
119.417   2577.2266    904.49  .    Q   .        .        .  V     .
 (PEAK DAY 1, HOUR  23.417)
119.500   2583.4421    902.50  .    Q   .        .        .  V     .
 (PEAK DAY 1, HOUR  23.500)
119.583   2589.6443    900.54  .    Q   .        .        .  V     .
 (PEAK DAY 1, HOUR  23.583)
119.667   2595.8330    898.60  .    Q   .        .        .  V     .
 (PEAK DAY 1, HOUR  23.667)
119.750   2602.0085    896.67  .    Q   .        .        .  V     .
 (PEAK DAY 1, HOUR  23.750)
119.833   2608.1709    894.78  .    Q   .        .        .  V     .
 (PEAK DAY 1, HOUR  23.833)
119.917   2614.3206    892.92  .    Q   .        .        .  V     .
 (PEAK DAY 1, HOUR  23.917)
120.000   2620.4575    891.10  .    Q   .        .        .  V     .
 (PEAK DAY 1, HOUR  24.000)
120.083   2626.5752    888.30  .    Q   .        .        .  V     .
 (PEAK DAY 1, HOUR  24.083)
120.167   2632.6445    881.28  .    Q   .        .        .   V    .
 (PEAK DAY 1, HOUR  24.167)
120.250   2638.6216    867.88  .    Q   .        .        .   V    .
 (PEAK DAY 1, HOUR  24.250)
120.333   2644.4692    849.08  .    Q   .        .        .   V    .
 (PEAK DAY 1, HOUR  24.333)
120.417   2650.1797    829.15  .    Q   .        .        .   V    .
 (PEAK DAY 1, HOUR  24.417)
120.500   2655.7632    810.72  .   Q    .        .        .   V    .
 (PEAK DAY 1, HOUR  24.500)
120.583   2661.2327    794.15  .   Q    .        .        .   V    .
 (PEAK DAY 1, HOUR  24.583)
120.667   2666.6099    780.77  .   Q    .        .        .   V    .
 (PEAK DAY 1, HOUR  24.667)
120.750   2671.9207    771.11  .   Q    .        .        .   V    .
 (PEAK DAY 1, HOUR  24.750)
120.833   2677.1848    764.35  .   Q    .        .        .   V    .
 (PEAK DAY 1, HOUR  24.833)
120.917   2682.4160    759.56  .   Q    .        .        .   V    .
 (PEAK DAY 1, HOUR  24.917)
121.000   2687.6226    755.97  .   Q    .        .        .   V    .
 (PEAK DAY 1, HOUR  25.000)
121.083   2692.8093    753.13  .   Q    .        .        .   V    .
 (PEAK DAY 1, HOUR  25.083)
121.167   2697.9792    750.68  .   Q    .        .        .   V    .
 (PEAK DAY 1, HOUR  25.167)
121.250   2703.1343    748.51  .   Q    .        .        .   V    .
 (PEAK DAY 1, HOUR  25.250)
121.333   2708.2756    746.52  .   Q    .        .        .   V    .
 (PEAK DAY 1, HOUR  25.333)
121.417   2713.4041    744.64  .   Q    .        .        .    V   .
 (PEAK DAY 1, HOUR  25.417)
121.500   2718.5195    742.76  .   Q    .        .        .    V   .
 (PEAK DAY 1, HOUR  25.500)
121.583   2723.6208    740.69  .   Q    .        .        .    V   .
 (PEAK DAY 1, HOUR  25.583)
121.667   2728.7063    738.41  .   Q    .        .        .    V   .
 (PEAK DAY 1, HOUR  25.667)
121.750   2733.7751    735.98  .   Q    .        .        .    V   .
 (PEAK DAY 1, HOUR  25.750)
121.833   2738.8267    733.47  .   Q    .        .        .    V   .
 (PEAK DAY 1, HOUR  25.833)
121.917   2743.8608    730.95  .   Q    .        .        .    V   .
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 (PEAK DAY 1, HOUR  25.917)
122.000   2748.8774    728.43  .    Q    .         .         .   V     .
 (PEAK DAY 1, HOUR  26.000)
122.083   2753.8770    725.92  .    Q    .         .         .   V     .
 (PEAK DAY 1, HOUR  26.083)
122.167   2758.8594    723.44  .    Q    .         .         .   V     .
 (PEAK DAY 1, HOUR  26.167)
122.250   2763.8247    720.97  .    Q    .         .         .   V     .
 (PEAK DAY 1, HOUR  26.250)
122.333   2768.7732    718.53  .    Q    .         .         .   V     .
 (PEAK DAY 1, HOUR  26.333)
122.417   2773.7051    716.11  .    Q    .         .         .   V     .
 (PEAK DAY 1, HOUR  26.417)
122.500   2778.6204    713.71  .    Q    .         .         .   V     .
 (PEAK DAY 1, HOUR  26.500)
122.583   2783.5193    711.33  .    Q    .         .         .   V     .
 (PEAK DAY 1, HOUR  26.583)
122.667   2788.4021    708.98  .    Q    .         .         .   V     .
 (PEAK DAY 1, HOUR  26.667)
122.750   2793.2688    706.65  .    Q    .         .         .    V    .
 (PEAK DAY 1, HOUR  26.750)
122.833   2798.1196    704.33  .    Q    .         .         .    V    .
 (PEAK DAY 1, HOUR  26.833)
122.917   2802.9543    702.00  .    Q    .         .         .    V    .
 (PEAK DAY 1, HOUR  26.917)
123.000   2807.7729    699.66  .    Q    .         .         .    V    .
 (PEAK DAY 1, HOUR  27.000)
123.083   2812.5754    697.32  .    Q    .         .         .    V    .
 (PEAK DAY 1, HOUR  27.083)
123.167   2817.3618    694.99  .    Q    .         .         .    V    .
 (PEAK DAY 1, HOUR  27.167)
123.250   2822.1323    692.67  .    Q    .         .         .    V    .
 (PEAK DAY 1, HOUR  27.250)
123.333   2826.8870    690.36  .    Q    .         .         .    V    .
 (PEAK DAY 1, HOUR  27.333)
123.417   2831.6257    688.06  .    Q    .         .         .    V    .
 (PEAK DAY 1, HOUR  27.417)
123.500   2836.3486    685.76  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  27.500)
123.583   2841.0557    683.47  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  27.583)
123.667   2845.7471    681.19  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  27.667)
123.750   2850.4229    678.92  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  27.750)
123.833   2855.0830    676.66  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  27.833)
123.917   2859.7275    674.40  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  27.917)
124.000   2864.3567    672.16  .   Q     .         .         .    V    .
 (PEAK DAY 1, HOUR  28.000)
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
================================================================================

  END OF FLOODSCx ROUTING ANALYSIS
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             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
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             Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                         Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

 ************************ DESCRIPTION OF STUDY ************************
*                                                                        *
*                                                                        *
*                                                                        *
 **************************************************************************

  FILE NAME: CP63CHO5.FLD
  TIME/DATE OF STUDY: 13:24 04/01/2004


**************************************************************************
  FLOW PROCESS FROM NODE    100.00 TO NODE    780.00 IS CODE =   1
--------------------------------------------------------------------------

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  4741.3 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    4741.300 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.480 HOURS
          CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
          THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
          MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  1.000
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:
         +------------------+--------+--------+--------+--------+--------+
         | RAINFALL DEPTHS & |        |        |        |        |        |
         |    LOSS RATES     |  DAY 1 |  DAY 2 |  DAY 3 |  DAY 4 |  DAY 5 |
         |==================+========+========+========+========+========|
         | 5-MINUTE (INCHES) |    0.58|    0.27|    0.12|    0.06|    0.04|
         |30-MINUTE (INCHES) |    1.22|    0.56|    0.24|    0.13|    0.09|
         |   1-HOUR (INCHES) |    1.62|    0.75|    0.33|    0.17|    0.12|
         |   3-HOUR (INCHES) |    2.71|    1.25|    0.54|    0.28|    0.21|
         |   6-HOUR (INCHES) |    3.75|    1.73|    0.75|    0.39|    0.29|
         |  24-HOUR (INCHES) |    6.28|    2.89|    1.26|    0.66|    0.48|
         |==================+========+========+========+========+========|
         | LOSS RATE(IN/HR)  |   0.190|   0.190|   0.190|   0.190|   0.190|
         | LOW LOSS FRACTION |   0.550|   0.750|   0.900|   0.970|   0.990|
         +------------------+--------+--------+--------+--------+--------+
           5-MINUTE FACTOR = 0.793
          30-MINUTE FACTOR = 0.793
           1-HOUR FACTOR = 0.793
           3-HOUR FACTOR = 0.969
           6-HOUR FACTOR = 0.984
          24-HOUR FACTOR = 0.990

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  17.361


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  96.00
         MODEL TIME(HOURS) FOR END OF RESULTS = 124.00


==========================================================================
                      UNIT HYDROGRAPH DETERMINATION

--------------------------------------------------------------------------
     INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
      NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------
```

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.137	652.130
2	4.082	1688.625
3	8.525	2547.514
4	14.577	3470.279
5	24.203	5519.575
6	43.203	10894.611
7	57.937	8448.228
8	65.484	4327.674
9	70.911	3111.621
10	75.443	2599.076
11	78.982	2029.171
12	82.133	1806.516
13	84.749	1499.854
14	87.075	1334.078
15	88.974	1088.566
16	90.645	958.165
17	92.163	870.854
18	93.467	747.418
19	94.550	621.273
20	95.489	538.119
21	96.255	439.106
22	96.815	321.374
23	97.375	321.055
24	97.900	301.316
25	98.079	102.631
26	98.169	51.477
27	98.259	51.411
28	98.349	51.608
29	98.439	51.604
30	98.528	51.219
31	98.618	51.477
32	98.708	51.477
33	98.798	51.608
34	98.887	51.346
35	98.977	51.608
36	99.067	51.604
37	99.157	51.604
38	99.247	51.604
39	99.337	51.604
40	99.427	51.604
41	99.517	51.604
42	99.607	51.604
43	99.697	51.604
44	99.787	51.604
45	99.877	51.604
46	99.967	51.604
47	100.000	18.785

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    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =    2535.6968
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =    1991.0461
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5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	2025.0	4050.0	6075.0	8100.0
96.000	524.3721	57.05	Q	V	.	.	.
(PEAK DAY 2, HOUR 24.000)							
96.083	524.7745	58.43	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.083)							
96.167	525.2059	62.64	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.167)							
96.250	525.6828	69.24	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.250)							
96.333	526.2228	78.41	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.333)							
96.417	526.8649	93.23	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.417)							
96.500	527.7108	122.82	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.500)							
96.583	528.7158	145.93	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.583)							
96.667	529.8037	157.97	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.667)							
96.750	530.9523	166.77	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.750)							
96.833	532.1523	174.25	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.833)							
96.917	533.3935	180.21	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.917)							
97.000	534.6719	185.62	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.000)							
97.083	535.9819	190.22	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.083)							
97.167	537.3209	194.42	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.167)							
97.250	538.6843	197.97	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.250)							
97.333	540.0699	201.20	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.333)							
97.417	541.4763	204.20	.Q	V	.	.	.
(PEAK DAY 1, HOUR 1.417)							
97.500	542.9012	206.90	.Q	V	.	.	.
(PEAK DAY 1, HOUR 1.500)							
97.583	544.3423	209.26	.Q	V	.	.	.
(PEAK DAY 1, HOUR 1.583)							
97.667	545.7985	211.43	.Q	V	.	.	.
(PEAK DAY 1, HOUR 1.667)							
97.750	547.2676	213.33	.Q	V	.	.	.
(PEAK DAY 1, HOUR 1.750)							
97.833	548.7479	214.94	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.833)							
97.917	550.2393	216.54	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.917)							
98.000	551.7415	218.12	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.000)							
98.083	553.2509	219.16	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.083)							
98.167	554.7665	220.08	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.167)							
98.250	556.2885	220.99	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.250)							
98.333	557.8170	221.93	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.333)							
98.417	559.3518	222.86	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.417)							
98.500	560.8932	223.82	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.500)							
98.583	562.4412	224.77	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.583)							
98.667	563.9959	225.74	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.667)							
98.750	565.5573	226.71	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.750)							
98.833	567.1254	227.70	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.833)							
98.917	568.7004	228.68	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.917)							
99.000	570.2823	229.69	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.000)							
99.083	571.8711	230.70	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.083)							
99.167	573.4670	231.73	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.167)							
99.250	575.0699	232.75	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.250)							
99.333	576.6802	233.80	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.333)							
99.417	578.2975	234.84	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.417)							
99.500	579.9223	235.92	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.500)							
99.583	581.5544	236.98	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.583)							
99.667	583.1940	238.07	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.667)							
99.750	584.8411	239.16	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.750)							
99.833	586.4959	240.27	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.833)							
99.917	588.1577	241.29	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.917)							
100.000	589.8264	242.29	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.000)							
100.083	591.5018	243.27	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.083)							
100.167	593.1842	244.29	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.167)							
100.250	594.8736	245.30	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.250)							
100.333	596.5702	246.34	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.333)							
100.417	598.2739	247.37	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.417)							
100.500	599.9849	248.44	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.500)							
100.583	601.7031	249.49	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.583)							
100.667	603.4288	250.58	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.667)							
100.750	605.1620	251.66	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.750)							
100.833	606.9028	252.77	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.833)							
100.917	608.6512	253.87	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.917)							
101.000	610.4075	255.01	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 5.000)							
101.083	612.1716	256.14	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 5.083)							

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101.167    613.9436    257.30  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.167)
101.250    615.7236    258.46  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.250)
101.333    617.5119    259.65  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.333)
101.417    619.3083    260.84  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.417)
101.500    621.1131    262.06  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.500)
101.583    622.9263    263.27  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.583)
101.667    624.7480    264.52  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.667)
101.750    626.5784    265.76  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.750)
101.833    628.4175    267.05  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.833)
101.917    630.2655    268.32  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.917)
102.000    632.1225    269.64  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   6.000)
102.083    633.9885    270.94  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   6.083)
102.167    635.8638    272.29  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   6.167)
102.250    637.7483    273.63  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   6.250)
102.333    639.6423    275.02  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   6.333)
102.417    641.5458    276.39  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   6.417)
102.500    643.4592    277.81  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   6.500)
102.583    645.3822    279.23  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   6.583)
102.667    647.3153    280.69  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.667)
102.750    649.2584    282.14  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.750)
102.833    651.2119    283.64  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.833)
102.917    653.1755    285.13  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.917)
103.000    655.1499    286.67  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.000)
103.083    657.1348    288.21  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.083)
103.167    659.1306    289.79  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.167)
103.250    661.1373    291.37  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.250)
103.333    663.1552    293.00  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.333)
103.417    665.1843    294.63  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.417)
103.500    667.2250    296.31  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.500)
103.583    669.2772    297.98  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.583)
103.667    671.3414    299.71  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.667)
103.750    673.4174    301.43  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.750)
103.833    675.5057    303.22  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.833)
103.917    677.6062    305.00  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.917)
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104.000    679.7194    306.84  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   8.000)
104.083    681.8453    308.67  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   8.083)
104.167    683.9842    310.57  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   8.167)
104.250    686.1362    312.46  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   8.250)
104.333    688.3016    314.43  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   8.333)
104.417    690.4805    316.38  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   8.417)
104.500    692.6734    318.41  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   8.500)
104.583    694.8802    320.42  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   8.583)
104.667    697.1014    322.52  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.667)
104.750    699.3370    324.61  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.750)
104.833    701.5876    326.78  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.833)
104.917    703.8530    328.94  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.917)
105.000    706.1339    331.18  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.000)
105.083    708.4301    333.42  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.083)
105.167    710.7424    335.75  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.167)
105.250    713.0707    338.07  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.250)
105.333    715.4156    340.48  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.333)
105.417    717.7772    342.89  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.417)
105.500    720.1559    345.39  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.500)
105.583    722.5518    347.89  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.583)
105.667    724.9657    350.49  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.667)
105.750    727.3975    353.09  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.750)
105.833    729.8478    355.80  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.833)
105.917    732.3168    358.50  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.917)
106.000    734.8052    361.31  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR  10.000)
106.083    737.3130    364.13  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR  10.083)
106.167    739.8409    367.06  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR  10.167)
106.250    742.3892    370.00  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR  10.250)
106.333    744.9584    373.06  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR  10.333)
106.417    747.5488    376.12  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.417)
106.500    750.1611    379.32  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.500)
106.583    752.7955    382.51  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.583)
106.667    755.4529    385.85  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.667)
106.750    758.1334    389.20  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.750)
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106.833    760.8378    392.69  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.833)
106.917    763.5665    396.19  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.917)
107.000    766.3203    399.86  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  11.000)
107.083    769.0995    403.53  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  11.083)
107.167    771.9052    407.38  . Q       .    V    .         .         .
(PEAK DAY 1, HOUR  11.167)
107.250    774.7374    411.24  . Q       .    V    .         .         .
(PEAK DAY 1, HOUR  11.250)
107.333    777.5974    415.28  . Q       .    V    .         .         .
(PEAK DAY 1, HOUR  11.333)
107.417    780.4854    419.34  . Q       .    V    .         .         .
(PEAK DAY 1, HOUR  11.417)
107.500    783.4028    423.60  . Q       .    V    .         .         .
(PEAK DAY 1, HOUR  11.500)
107.583    786.3495    427.88  . Q       .    V    .         .         .
(PEAK DAY 1, HOUR  11.583)
107.667    789.3273    432.36  . Q       .    V    .         .         .
(PEAK DAY 1, HOUR  11.667)
107.750    792.3361    436.88  . Q       .    V    .         .         .
(PEAK DAY 1, HOUR  11.750)
107.833    795.3776    441.62  . Q       .    V    .         .         .
(PEAK DAY 1, HOUR  11.833)
107.917    798.4520    446.40  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  11.917)
108.000    801.5609    451.42  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.000)
108.083    804.7167    458.21  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.083)
108.167    807.9401    468.03  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.167)
108.250    811.2471    480.19  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.250)
108.333    814.6569    495.10  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.333)
108.417    818.2075    515.54  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.417)
108.500    821.9995    550.61  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.500)
108.583    825.9893    579.32  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.583)
108.667    830.1044    597.50  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.667)
108.750    834.3231    612.56  .  Q      .     V   .         .         .
(PEAK DAY 1, HOUR  12.750)
108.833    838.6390    626.67  .  Q      .     V   .         .         .
(PEAK DAY 1, HOUR  12.833)
108.917    843.0424    639.37  .  Q      .     V   .         .         .
(PEAK DAY 1, HOUR  12.917)
109.000    847.5322    651.92  .  Q      .      V  .         .         .
(PEAK DAY 1, HOUR  13.000)
109.083    852.1049    663.96  .  Q      .      V  .         .         .
(PEAK DAY 1, HOUR  13.083)
109.167    856.7635    676.43  .  Q      .      V  .         .         .
(PEAK DAY 1, HOUR  13.167)
109.250    861.5088    689.01  .  Q      .      V  .         .         .
(PEAK DAY 1, HOUR  13.250)
109.333    866.3477    702.61  .  Q      .      V  .         .         .
(PEAK DAY 1, HOUR  13.333)
109.417    871.2896    717.55  .  Q      .      V  .         .         .
(PEAK DAY 1, HOUR  13.417)
109.500    876.3552    735.54  .  Q      .      V  .         .         .
(PEAK DAY 1, HOUR  13.500)
109.583    881.5556    755.09  .  Q      .      V  .         .         .
(PEAK DAY 1, HOUR  13.583)
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109.667    886.9045    776.66  .  Q      .      V  .         .         .
(PEAK DAY 1, HOUR  13.667)
109.750    892.4076    799.06  .  Q      .      V  .         .         .
(PEAK DAY 1, HOUR  13.750)
109.833    898.0772    823.23  .   Q     .       V .         .         .
(PEAK DAY 1, HOUR  13.833)
109.917    903.9202    848.40  .   Q     .       V .         .         .
(PEAK DAY 1, HOUR  13.917)
110.000    909.9514    875.72  .   Q     .       V .         .         .
(PEAK DAY 1, HOUR  14.000)
110.083    916.2261    911.09  .   Q     .       V .         .         .
(PEAK DAY 1, HOUR  14.083)
110.167    922.8422    960.67  .   Q     .       V .         .         .
(PEAK DAY 1, HOUR  14.167)
110.250    929.8752   1021.19  .    Q    .       V .         .         .
(PEAK DAY 1, HOUR  14.250)
110.333    937.4159   1094.90  .    Q    .       V .         .         .
(PEAK DAY 1, HOUR  14.333)
110.417    945.6345   1193.34  .    Q    .       V .         .         .
(PEAK DAY 1, HOUR  14.417)
110.500    954.9769   1356.53  .     Q   .        V.         .         .
(PEAK DAY 1, HOUR  14.500)
110.583    965.2540   1492.23  .      Q  .        V.         .         .
(PEAK DAY 1, HOUR  14.583)
110.667    976.1564   1583.02  .      Q  .        V.         .         .
(PEAK DAY 1, HOUR  14.667)
110.750    987.5969   1661.17  .       Q .        V.         .         .
(PEAK DAY 1, HOUR  14.750)
110.833    999.5599   1737.02  .       Q .         V         .         .
(PEAK DAY 1, HOUR  14.833)
110.917   1012.0135   1808.27  .       Q .         V         .         .
(PEAK DAY 1, HOUR  14.917)
111.000   1024.9714   1881.49  .        Q.         V         .         .
(PEAK DAY 1, HOUR  15.000)
111.083   1038.4275   1953.82  .        Q.         V         .         .
(PEAK DAY 1, HOUR  15.083)
111.167   1052.4082   2029.99  .         Q         .V        .         .
(PEAK DAY 1, HOUR  15.167)
111.250   1066.9198   2107.09  .         Q         .V        .         .
(PEAK DAY 1, HOUR  15.250)
111.333   1082.0043   2190.26  .         Q         .V        .         .
(PEAK DAY 1, HOUR  15.333)
111.417   1097.5770   2261.16  .         .Q        . V       .         .
(PEAK DAY 1, HOUR  15.417)
111.500   1113.5178   2314.61  .         .Q        . V       .         .
(PEAK DAY 1, HOUR  15.500)
111.583   1129.7285   2353.79  .         .Q        . V       .         .
(PEAK DAY 1, HOUR  15.583)
111.667   1146.1561   2385.29  .         .Q        .  V      .         .
(PEAK DAY 1, HOUR  15.667)
111.750   1162.5571   2381.42  .         .Q        .  V      .         .
(PEAK DAY 1, HOUR  15.750)
111.833   1178.1958   2270.74  .         .Q        .  V      .         .
(PEAK DAY 1, HOUR  15.833)
111.917   1193.8363   2271.00  .         .Q        .  V      .         .
(PEAK DAY 1, HOUR  15.917)
112.000   1210.8542   2471.00  .         . Q       .   V     .         .
(PEAK DAY 1, HOUR  16.000)
112.083   1231.4600   2991.95  .         .   Q     .   V     .         .
(PEAK DAY 1, HOUR  16.083)
112.167   1257.0110   3710.00  .         .       Q .    V    .         .
(PEAK DAY 1, HOUR  16.167)
112.250   1287.2900   4396.52  .         .         .Q   V    .         .
(PEAK DAY 1, HOUR  16.250)
112.333   1323.0471   5191.94  .         .         .    QV   .         .
(PEAK DAY 1, HOUR  16.333)
112.417   1366.6873   6336.55  .         .         .      V  .Q        .
(PEAK DAY 1, HOUR  16.417)
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 112.500   1422.4481   8096.49  .          .          .       V .        Q.
(PEAK DAY 1, HOUR  16.500)
 112.583   1469.5847   6844.24  .          .          .       V.  Q      .
(PEAK DAY 1, HOUR  16.583)
 112.667   1503.8654   4977.55  .          .          .   Q     V          .
(PEAK DAY 1, HOUR  16.667)
 112.750   1533.0299   4234.69  .          .          Q         V          .
(PEAK DAY 1, HOUR  16.750)
 112.833   1560.4061   3975.03  .          .         Q.         .V         .
(PEAK DAY 1, HOUR  16.833)
 112.917   1585.9252   3705.36  .          .        Q .         .V         .
(PEAK DAY 1, HOUR  16.917)
 113.000   1609.9448   3487.65  .          .       Q  .         . V        .
(PEAK DAY 1, HOUR  17.000)
 113.083   1632.2296   3235.76  .          .     Q    .         . V        .
(PEAK DAY 1, HOUR  17.083)
 113.167   1653.0839   3028.04  .          .    Q     .         .  V       .
(PEAK DAY 1, HOUR  17.167)
 113.250   1672.3000   2790.18  .          .  Q       .         .  V       .
(PEAK DAY 1, HOUR  17.250)
 113.333   1690.1511   2591.97  .          . Q        .         .  V       .
(PEAK DAY 1, HOUR  17.333)
 113.417   1706.6302   2392.77  .          .Q         .         .   V      .
(PEAK DAY 1, HOUR  17.417)
 113.500   1721.2643   2124.86  .          Q          .         .   V      .
(PEAK DAY 1, HOUR  17.500)
 113.583   1734.2581   1886.69  .         Q.          .         .   V      .
(PEAK DAY 1, HOUR  17.583)
 113.667   1746.0696   1715.04  .        Q .          .         .    V     .
(PEAK DAY 1, HOUR  17.667)
 113.750   1756.8064   1558.98  .       Q  .          .         .    V     .
(PEAK DAY 1, HOUR  17.750)
 113.833   1766.5392   1413.20  .      Q   .          .         .    V     .
(PEAK DAY 1, HOUR  17.833)
 113.917   1775.6035   1316.13  .      Q   .          .         .    V     .
(PEAK DAY 1, HOUR  17.917)
 114.000   1783.9698   1214.79  .     Q    .          .         .    V     .
(PEAK DAY 1, HOUR  18.000)
 114.083   1791.3156   1066.59  .     Q    .          .         .    V     .
(PEAK DAY 1, HOUR  18.083)
 114.167   1798.0677    980.42  .    Q     .          .         .     V    .
(PEAK DAY 1, HOUR  18.167)
 114.250   1804.4373    924.85  .    Q     .          .         .     V    .
(PEAK DAY 1, HOUR  18.250)
 114.333   1810.4688    875.77  .    Q     .          .         .     V    .
(PEAK DAY 1, HOUR  18.333)
 114.417   1816.1316    822.24  .    Q     .          .         .     V    .
(PEAK DAY 1, HOUR  18.417)
 114.500   1821.3540    758.30  .   Q      .          .         .     V    .
(PEAK DAY 1, HOUR  18.500)
 114.583   1826.2140    705.67  .   Q      .          .         .     V    .
(PEAK DAY 1, HOUR  18.583)
 114.667   1830.8105    667.42  .   Q      .          .         .     V    .
(PEAK DAY 1, HOUR  18.667)
 114.750   1835.1884    635.65  .   Q      .          .         .     V    .
(PEAK DAY 1, HOUR  18.750)
 114.833   1839.3772    608.22  .   Q      .          .         .     V    .
(PEAK DAY 1, HOUR  18.833)
 114.917   1843.3987    583.92  . Q        .          .         .      V   .
(PEAK DAY 1, HOUR  18.917)
 115.000   1847.2664    561.58  . Q        .          .         .      V   .
(PEAK DAY 1, HOUR  19.000)
 115.083   1851.0087    543.39  . Q        .          .         .      V   .
(PEAK DAY 1, HOUR  19.083)
 115.167   1854.6389    527.11  . Q        .          .         .      V   .
(PEAK DAY 1, HOUR  19.167)
 115.250   1858.1722    513.04  . Q        .          .         .      V   .
(PEAK DAY 1, HOUR  19.250)
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 115.333   1861.6184    500.38  . Q        .          .         .      V   .
(PEAK DAY 1, HOUR  19.333)
 115.417   1864.9816    488.33  . Q        .          .         .      V   .
(PEAK DAY 1, HOUR  19.417)
 115.500   1868.2661    476.91  . Q        .          .         .      V   .
(PEAK DAY 1, HOUR  19.500)
 115.583   1871.4744    465.84  . Q        .          .         .      V   .
(PEAK DAY 1, HOUR  19.583)
 115.667   1874.6071    454.86  . Q        .          .         .      V   .
(PEAK DAY 1, HOUR  19.667)
 115.750   1877.6595    443.22  . Q        .          .         .      V   .
(PEAK DAY 1, HOUR  19.750)
 115.833   1880.6226    430.23  . Q        .          .         .      V   .
(PEAK DAY 1, HOUR  19.833)
 115.917   1883.4233    406.68  . Q        .          .         .      V   .
(PEAK DAY 1, HOUR  19.917)
 116.000   1886.1075    389.75  .Q         .          .         .      V   .
(PEAK DAY 1, HOUR  20.000)
 116.083   1888.7346    381.46  .Q         .          .         .      V   .
(PEAK DAY 1, HOUR  20.083)
 116.167   1891.3137    374.48  .Q         .          .         .      V   .
(PEAK DAY 1, HOUR  20.167)
 116.250   1893.8436    367.34  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  20.250)
 116.333   1896.3243    360.20  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  20.333)
 116.417   1898.7587    353.47  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  20.417)
 116.500   1901.1489    347.07  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  20.500)
 116.583   1903.4972    340.98  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  20.583)
 116.667   1905.8054    335.15  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  20.667)
 116.750   1908.0751    329.56  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  20.750)
 116.833   1910.3079    324.20  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  20.833)
 116.917   1912.5077    319.41  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  20.917)
 117.000   1914.6774    315.04  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  21.000)
 117.083   1916.8182    310.85  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  21.083)
 117.167   1918.9313    306.82  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  21.167)
 117.250   1921.0177    302.95  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  21.250)
 117.333   1923.0785    299.22  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  21.333)
 117.417   1925.1145    295.63  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  21.417)
 117.500   1927.1267    292.16  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  21.500)
 117.583   1929.1157    288.80  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  21.583)
 117.667   1931.0822    285.53  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  21.667)
 117.750   1933.0267    282.35  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  21.750)
 117.833   1934.9500    279.25  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  21.833)
 117.917   1936.8530    276.33  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  21.917)
 118.000   1938.7368    273.53  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  22.000)
 118.083   1940.6019    270.81  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  22.083)
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118.167	1942.4487	268.16	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.167)								
118.250	1944.2778	265.58	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.250)								
118.333	1946.0896	263.06	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.333)								
118.417	1947.8844	260.61	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.417)								
118.500	1949.6627	258.22	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.500)								
118.583	1951.4249	255.88	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.583)								
118.667	1953.1715	253.60	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.667)								
118.750	1954.9027	251.37	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.750)								
118.833	1956.6189	249.19	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.833)								
118.917	1958.3204	247.06	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.917)								
119.000	1960.0077	244.98	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.000)								
119.083	1961.6809	242.95	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.083)								
119.167	1963.3403	240.95	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.167)								
119.250	1964.9863	239.01	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.250)								
119.333	1966.6193	237.10	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.333)								
119.417	1968.2393	235.23	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.417)								
119.500	1969.8467	233.40	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.500)								
119.583	1971.4418	231.61	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.583)								
119.667	1973.0248	229.85	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.667)								
119.750	1974.5959	228.13	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.750)								
119.833	1976.1555	226.44	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.833)								
119.917	1977.7036	224.79	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.917)								
120.000	1979.2406	223.16	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.000)								
120.083	1980.7501	219.19	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.083)								
120.167	1982.2065	211.46	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.167)								
120.250	1983.5886	200.67	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.250)								
120.333	1984.8737	186.59	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.333)								
120.417	1986.0109	165.13	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.417)								
120.500	1986.8660	124.17	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.500)								
120.583	1987.5026	92.43	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.583)								
120.667	1988.0258	75.96	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.667)								
120.750	1988.4669	64.06	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.750)								
120.833	1988.8396	54.11	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.833)								
120.917	1989.1586	46.31	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.917)								
121.000	1989.4298	39.39	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.000)								
121.083	1989.6614	33.63	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.083)								
121.167	1989.8578	28.51	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.167)								
121.250	1990.0254	24.33	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.250)								
121.333	1990.1677	20.66	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.333)								
121.417	1990.2871	17.33	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.417)								
121.500	1990.3868	14.48	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.500)								
121.583	1990.4702	12.10	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.583)								
121.667	1990.5394	10.05	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.667)								
121.750	1990.5970	8.37	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.750)								
121.833	1990.6462	7.14	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.833)								
121.917	1990.6870	5.91	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.917)								
122.000	1990.7198	4.77	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.000)								
122.083	1990.7499	4.36	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.083)								
122.167	1990.7784	4.14	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.167)								
122.250	1990.8054	3.92	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.250)								
122.333	1990.8309	3.70	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.333)								
122.417	1990.8550	3.49	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.417)								
122.500	1990.8776	3.28	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.500)								
122.583	1990.8987	3.07	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.583)								
122.667	1990.9183	2.86	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.667)								
122.750	1990.9365	2.65	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.750)								
122.833	1990.9534	2.44	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.833)								
122.917	1990.9688	2.24	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.917)								
123.000	1990.9828	2.03	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.000)								
123.083	1990.9954	1.83	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.083)								
123.167	1991.0066	1.63	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.167)								
123.250	1991.0165	1.43	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.250)								
123.333	1991.0249	1.23	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.333)								
123.417	1991.0320	1.03	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.417)								
123.500	1991.0377	0.84	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.500)								
123.583	1991.0421	0.64	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.583)								
123.667	1991.0452	0.45	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.667)								
123.750	1991.0470	0.26	Q	.	.	.	V	
(PEAK DAY 1, HOUR 27.750)								

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 123.833   1991.0475      0.07  Q         .         .         .         V
 (PEAK DAY 1, HOUR  27.833)
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********************************************************************************
  FLOW PROCESS FROM NODE    780.00 TO NODE    780.00 IS CODE = 3.1
--------------------------------------------------------------------------------
  >>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #1<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  4741.3 Ac. ***

                   INFLOW
                  (STREAM 1)
                       |
                       |
                       V                __effective depth
                   -----------          |   (and volume)
                  |           |    |    |
                  |           |    |....V........
                  | detention |<-->|           outflow
                  |   basin   |    |.........._______
                   -----------     |    ^    |  \
                       |           |  dead   |   basin outlet
                       V           | storage |
                    OUTFLOW         ---------
                  (STREAM 1)



        ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 1
        THROUGH A FLOW-THROUGH DETENTION BASIN
        SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
          DEAD STORAGE(AF) =      0.000
          SPECIFIED DEAD STORAGE(AF) FILLED =      0.000
          SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET =      0.000
          DETENTION BASIN CONSTANT LOSS RATE(CFS) =    0.00


        BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

         INTERVAL    DEPTH      OUTFLOW     STORAGE
          NUMBER      (FT)       (CFS)       (AF)
              1        0.00         0.00       0.000
              2        4.00       175.20       1.000
              3        5.00       199.20       3.100
              4        6.00       220.50       7.800
              5        7.00       240.40      15.800
              6        9.00       276.50      44.300
              7       11.00       308.80      83.700
              8       13.00       338.30     125.900
              9       15.00       365.70     202.000
             10       17.00       391.10     290.900
             11       19.00       415.40     382.300
             12       21.00       438.20     476.600
             13       23.00       460.70     573.700
             14       25.00       472.30     673.700
             15       27.00       485.40     777.000
             16       29.00       500.00     883.200
             17       31.00       515.60     992.200


================================================================================
 MODIFIED-PULS BASIN ROUTING MODEL RESULTS(5-MINUTE COMPUTATION INTERVALS):
 (Note: Computed EFFECTIVE DEPTH and VOLUME are estimated at the clock time;
        MEAN OUTFLOW is the average value during the unit interval.)
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PEAK DAY	TIME (HRS)	CLOCK TIME (HRS)	DEAD-STORAGE FILLED(AF)	INFLOW (CFS)	LOSS (CFS)	EFFECTIVE DEPTH(FT)	MEAN OUTFLOW (CFS)	EFFECTIVE VOLUME(AF)
1	0.001	96.001	0.000	57.05	0.00	9.83	290.6	60.746
1	0.084	96.084	0.000	58.43	0.00	9.75	289.3	59.156
1	0.167	96.167	0.000	62.64	0.00	9.68	288.0	57.604
1	0.251	96.251	0.000	69.24	0.00	9.60	286.8	56.105
1	0.334	96.334	0.000	78.41	0.00	9.53	285.6	54.678
1	0.417	96.417	0.000	93.23	0.00	9.46	284.5	53.361
1	0.501	96.501	0.000	122.82	0.00	9.40	283.5	52.255
1	0.584	96.584	0.000	145.93	0.00	9.36	282.6	51.314
1	0.667	96.667	0.000	157.97	0.00	9.31	281.9	50.460
1	0.751	96.751	0.000	166.77	0.00	9.27	281.2	49.672
1	0.834	96.834	0.000	174.25	0.00	9.24	280.6	48.939
1	0.917	96.917	0.000	180.21	0.00	9.20	280.0	48.252
1	1.001	97.001	0.000	185.62	0.00	9.17	279.5	47.605
1	1.084	97.084	0.000	190.22	0.00	9.14	279.0	46.994
1	1.167	97.167	0.000	194.42	0.00	9.11	278.5	46.416
1	1.251	97.251	0.000	197.97	0.00	9.08	278.0	45.864
1	1.334	97.334	0.000	201.20	0.00	9.05	277.6	45.338
1	1.417	97.417	0.000	204.20	0.00	9.03	277.1	44.836
1	1.501	97.501	0.000	206.90	0.00	9.00	276.7	44.355
1	1.584	97.584	0.000	209.26	0.00	8.97	276.3	43.893
1	1.667	97.667	0.000	211.43	0.00	8.94	275.7	43.451
1	1.751	97.751	0.000	213.33	0.00	8.91	275.2	43.025
1	1.834	97.834	0.000	214.94	0.00	8.88	274.6	42.614
1	1.917	97.917	0.000	216.54	0.00	8.85	274.1	42.217
1	2.001	98.001	0.000	218.12	0.00	8.83	273.6	41.835
1	2.084	98.084	0.000	219.16	0.00	8.80	273.1	41.463
1	2.167	98.167	0.000	220.08	0.00	8.78	272.7	41.101
1	2.251	98.251	0.000	220.99	0.00	8.75	272.2	40.748
1	2.334	98.334	0.000	221.93	0.00	8.73	271.8	40.405
1	2.417	98.417	0.000	222.86	0.00	8.70	271.4	40.071
1	2.501	98.501	0.000	223.82	0.00	8.68	270.9	39.746
1	2.584	98.584	0.000	224.77	0.00	8.66	270.5	39.431
1	2.667	98.667	0.000	225.74	0.00	8.64	270.1	39.126
1	2.751	98.751	0.000	226.71	0.00	8.62	269.8	38.829
1	2.834	98.834	0.000	227.70	0.00	8.60	269.4	38.542
1	2.917	98.917	0.000	228.68	0.00	8.58	269.0	38.264
1	3.001	99.001	0.000	229.69	0.00	8.56	268.7	37.995
1	3.084	99.084	0.000	230.70	0.00	8.54	268.3	37.736
1	3.167	99.167	0.000	231.73	0.00	8.52	268.0	37.486
1	3.251	99.251	0.000	232.75	0.00	8.50	267.7	37.245
1	3.334	99.334	0.000	233.80	0.00	8.49	267.4	37.014
1	3.417	99.417	0.000	234.84	0.00	8.47	267.1	36.791
1	3.501	99.501	0.000	235.92	0.00	8.46	266.9	36.578
1	3.584	99.584	0.000	236.98	0.00	8.44	266.6	36.374
1	3.667	99.667	0.000	238.07	0.00	8.43	266.3	36.180
1	3.751	99.751	0.000	239.16	0.00	8.42	266.1	35.994
1	3.834	99.834	0.000	240.27	0.00	8.40	265.9	35.818
1	3.917	99.917	0.000	241.29	0.00	8.39	265.6	35.650
1	4.001	100.001	0.000	242.29	0.00	8.38	265.4	35.491
1	4.084	100.084	0.000	243.27	0.00	8.37	265.2	35.339
1	4.167	100.167	0.000	244.29	0.00	8.36	265.1	35.196
1	4.251	100.251	0.000	245.30	0.00	8.35	264.9	35.062
1	4.334	100.334	0.000	246.34	0.00	8.34	264.7	34.935
1	4.417	100.417	0.000	247.37	0.00	8.33	264.6	34.817
1	4.501	100.501	0.000	248.44	0.00	8.33	264.4	34.707
1	4.584	100.584	0.000	249.49	0.00	8.32	264.3	34.605
1	4.667	100.667	0.000	250.58	0.00	8.31	264.2	34.511
1	4.751	100.751	0.000	251.66	0.00	8.31	264.0	34.426
1	4.834	100.834	0.000	252.77	0.00	8.30	263.9	34.349
1	4.917	100.917	0.000	253.87	0.00	8.30	263.9	34.280
1	5.001	101.001	0.000	255.01	0.00	8.29	263.8	34.220
1	5.084	101.084	0.000	256.14	0.00	8.29	263.7	34.168

1	5.167	101.167	0.000	257.30	0.00	8.29	263.6	34.124
1	5.251	101.251	0.000	258.46	0.00	8.28	263.6	34.089
1	5.334	101.334	0.000	259.65	0.00	8.28	263.5	34.062
1	5.417	101.417	0.000	260.84	0.00	8.28	263.5	34.043
1	5.501	101.501	0.000	262.06	0.00	8.28	263.5	34.033
1	5.584	101.584	0.000	263.27	0.00	8.28	263.5	34.032
1	5.667	101.667	0.000	264.52	0.00	8.28	263.5	34.039
1	5.751	101.751	0.000	265.76	0.00	8.28	263.5	34.055
1	5.834	101.834	0.000	267.05	0.00	8.28	263.5	34.079
1	5.917	101.917	0.000	268.32	0.00	8.29	263.6	34.111
1	6.001	102.001	0.000	269.64	0.00	8.29	263.6	34.153
1	6.084	102.084	0.000	270.94	0.00	8.29	263.7	34.203
1	6.167	102.167	0.000	272.29	0.00	8.30	263.7	34.262
1	6.251	102.251	0.000	273.63	0.00	8.30	263.8	34.329
1	6.334	102.334	0.000	275.02	0.00	8.31	263.9	34.406
1	6.417	102.417	0.000	276.39	0.00	8.31	264.0	34.491
1	6.501	102.501	0.000	277.81	0.00	8.32	264.1	34.585
1	6.584	102.584	0.000	279.23	0.00	8.33	264.3	34.688
1	6.667	102.667	0.000	280.69	0.00	8.33	264.4	34.800
1	6.751	102.751	0.000	282.14	0.00	8.34	264.5	34.921
1	6.834	102.834	0.000	283.64	0.00	8.35	264.7	35.052
1	6.917	102.917	0.000	285.13	0.00	8.36	264.9	35.191
1	7.001	103.001	0.000	286.67	0.00	8.37	265.1	35.340
1	7.084	103.084	0.000	288.21	0.00	8.38	265.3	35.498
1	7.167	103.167	0.000	289.79	0.00	8.39	265.5	35.666
1	7.251	103.251	0.000	291.37	0.00	8.41	265.7	35.843
1	7.334	103.334	0.000	293.00	0.00	8.42	265.9	36.030
1	7.417	103.417	0.000	294.63	0.00	8.43	266.1	36.226
1	7.501	103.501	0.000	296.31	0.00	8.45	266.4	36.432
1	7.584	103.584	0.000	297.98	0.00	8.46	266.7	36.647
1	7.667	103.667	0.000	299.71	0.00	8.48	266.9	36.873
1	7.751	103.751	0.000	301.43	0.00	8.50	267.2	37.108
1	7.834	103.834	0.000	303.22	0.00	8.51	267.5	37.354
1	7.917	103.917	0.000	305.00	0.00	8.53	267.9	37.610
1	8.001	104.001	0.000	306.84	0.00	8.55	268.2	37.876
1	8.084	104.084	0.000	308.67	0.00	8.57	268.5	38.152
1	8.167	104.167	0.000	310.57	0.00	8.59	268.9	38.439
1	8.251	104.251	0.000	312.46	0.00	8.61	269.3	38.737
1	8.334	104.334	0.000	314.43	0.00	8.63	269.6	39.045
1	8.418	104.418	0.000	316.38	0.00	8.65	270.0	39.364
1	8.501	104.501	0.000	318.41	0.00	8.68	270.5	39.695
1	8.584	104.584	0.000	320.42	0.00	8.70	270.9	40.036
1	8.668	104.668	0.000	322.52	0.00	8.73	271.3	40.388
1	8.751	104.751	0.000	324.61	0.00	8.75	271.8	40.752
1	8.834	104.834	0.000	326.78	0.00	8.78	272.2	41.128
1	8.918	104.918	0.000	328.94	0.00	8.80	272.7	41.515
1	9.001	105.001	0.000	331.18	0.00	8.83	273.2	41.914
1	9.084	105.084	0.000	333.42	0.00	8.86	273.7	42.325
1	9.168	105.168	0.000	335.75	0.00	8.89	274.3	42.749
1	9.251	105.251	0.000	338.07	0.00	8.92	274.8	43.184
1	9.334	105.334	0.000	340.48	0.00	8.95	275.4	43.633
1	9.418	105.418	0.000	342.89	0.00	8.99	275.9	44.094
1	9.501	105.501	0.000	345.39	0.00	9.01	276.5	44.568
1	9.584	105.584	0.000	347.89	0.00	9.04	276.9	45.057
1	9.668	105.668	0.000	350.49	0.00	9.06	277.3	45.561
1	9.751	105.751	0.000	353.09	0.00	9.09	277.7	46.080
1	9.834	105.834	0.000	355.80	0.00	9.12	278.2	46.614
1	9.918	105.918	0.000	358.50	0.00	9.15	278.6	47.165
1	10.001	106.001	0.000	361.31	0.00	9.17	279.1	47.731
1	10.084	106.084	0.000	364.13	0.00	9.20	279.6	48.313
1	10.168	106.168	0.000	367.06	0.00	9.23	280.0	48.913
1	10.251	106.251	0.000	370.00	0.00	9.27	280.5	49.529
1	10.334	106.334	0.000	373.06	0.00	9.30	281.0	50.163
1	10.418	106.418	0.000	376.12	0.00	9.33	281.6	50.814
1	10.501	106.501	0.000	379.32	0.00	9.36	282.1	51.483
1	10.584	106.584	0.000	382.51	0.00	9.40	282.7	52.171
1	10.668	106.668	0.000	385.85	0.00	9.44	283.2	52.877
1	10.751	106.751	0.000	389.20	0.00	9.47	283.8	53.603
1	10.834	106.834	0.000	392.69	0.00	9.51	284.4	54.349
1	10.918	106.918	0.000	396.19	0.00	9.55	285.1	55.114
1	11.001	107.001	0.000	399.86	0.00	9.59	285.7	55.900
1	11.084	107.084	0.000	403.53	0.00	9.63	286.3	56.708
1	11.168	107.168	0.000	407.38	0.00	9.67	287.0	57.537
1	11.251	107.251	0.000	411.24	0.00	9.72	287.7	58.387
1	11.334	107.334	0.000	415.28	0.00	9.76	288.4	59.261
1	11.418	107.418	0.000	419.34	0.00	9.80	289.1	60.158
1	11.501	107.501	0.000	423.60	0.00	9.85	289.9	61.079
1	11.584	107.584	0.000	427.88	0.00	9.90	290.6	62.024
1	11.668	107.668	0.000	432.36	0.00	9.95	291.4	62.995
1	11.751	107.751	0.000	436.88	0.00	10.00	292.2	63.991
1	11.834	107.834	0.000	441.62	0.00	10.05	293.1	65.014
1	11.918	107.918	0.000	446.40	0.00	10.10	293.9	66.064
1	12.001	108.001	0.000	451.42	0.00	10.16	294.8	67.143
1	12.084	108.084	0.000	458.21	0.00	10.22	295.7	68.262
1	12.168	108.168	0.000	468.03	0.00	10.28	296.6	69.443
1	12.251	108.251	0.000	480.19	0.00	10.34	297.6	70.700
1	12.334	108.334	0.000	495.10	0.00	10.41	298.7	72.053
1	12.418	108.418	0.000	515.54	0.00	10.48	299.9	73.538
1	12.501	108.501	0.000	550.61	0.00	10.57	301.2	75.256
1	12.584	108.584	0.000	579.32	0.00	10.67	302.7	77.161
1	12.668	108.668	0.000	597.50	0.00	10.77	304.3	79.181
1	12.751	108.751	0.000	612.56	0.00	10.88	306.0	81.292
1	12.834	108.834	0.000	626.67	0.00	10.99	307.7	83.489
1	12.918	108.918	0.000	639.37	0.00	11.10	309.4	85.761
1	13.001	109.001	0.000	651.92	0.00	11.21	311.1	88.109
1	13.084	109.084	0.000	663.96	0.00	11.32	312.7	90.528
1	13.168	109.168	0.000	676.43	0.00	11.44	314.4	93.021
1	13.251	109.251	0.000	689.01	0.00	11.56	316.2	95.588
1	13.334	109.334	0.000	702.61	0.00	11.69	318.0	98.237
1	13.418	109.418	0.000	717.55	0.00	11.82	319.9	100.975
1	13.501	109.501	0.000	735.54	0.00	11.95	321.9	103.824
1	13.584	109.584	0.000	755.09	0.00	12.09	323.9	106.794
1	13.668	109.668	0.000	776.66	0.00	12.24	326.0	109.897
1	13.751	109.751	0.000	799.06	0.00	12.40	328.2	113.140
1	13.834	109.834	0.000	823.23	0.00	12.56	330.6	116.533
1	13.918	109.918	0.000	848.40	0.00	12.72	333.0	120.083
1	14.001	110.001	0.000	875.72	0.00	12.90	335.5	123.803
1	14.084	110.084	0.000	911.09	0.00	13.05	337.9	127.750
1	14.168	110.168	0.000	960.67	0.00	13.16	339.7	132.027
1	14.251	110.251	0.000	1021.19	0.00	13.28	341.3	136.709
1	14.334	110.334	0.000	1094.90	0.00	13.42	343.1	141.886
1	14.418	110.418	0.000	1193.34	0.00	13.57	345.1	147.728
1	14.501	110.501	0.000	1356.53	0.00	13.76	347.4	154.678
1	14.584	110.584	0.000	1492.23	0.00	13.96	350.1	162.544
1	14.668	110.668	0.000	1583.02	0.00	14.19	353.0	171.015
1	14.751	110.751	0.000	1661.17	0.00	14.42	356.2	180.003
1	14.834	110.834	0.000	1737.02	0.00	14.67	359.5	189.490
1	14.918	110.918	0.000	1808.27	0.00	14.93	363.0	199.444
1	15.001	111.001	0.000	1881.49	0.00	15.18	366.4	209.879
1	15.084	111.084	0.000	1953.82	0.00	15.42	369.5	220.790
1	15.168	111.168	0.000	2029.99	0.00	15.68	372.7	232.204
1	15.251	111.251	0.000	2107.09	0.00	15.95	376.0	244.126
1	15.334	111.334	0.000	2190.26	0.00	16.23	379.5	256.596
1	15.418	111.418	0.000	2261.16	0.00	16.52	383.1	269.530
1	15.501	111.501	0.000	2314.61	0.00	16.82	386.9	282.806
1	15.584	111.584	0.000	2353.79	0.00	17.12	390.7	296.327
1	15.668	111.668	0.000	2385.29	0.00	17.42	394.4	310.038
1	15.751	111.751	0.000	2381.42	0.00	17.72	398.0	323.698
1	15.834	111.834	0.000	2270.74	0.00	18.00	401.5	336.571
1	15.918	111.918	0.000	2271.00	0.00	18.28	405.0	349.423
1	16.001	112.001	0.000	2471.00	0.00	18.59	408.5	363.627
1	16.084	112.084	0.000	2991.95	0.00	18.98	412.8	381.390
1	16.168	112.168	0.000	3710.00	0.00	19.46	417.9	404.063
1	16.251	112.251	0.000	4396.52	0.00	20.04	424.0	431.422
1	16.334	112.334	0.000	5191.94	0.00	20.74	431.2	464.209
1	16.418	112.418	0.000	6336.55	0.00	21.58	440.0	504.819

1	16.501	112.501	0.000	8096.49	0.00	22.67	450.8	557.475
1	16.584	112.584	0.000	6844.24	0.00	23.55	460.4	601.441
1	16.668	112.668	0.000	4977.55	0.00	24.18	465.7	632.514
1	16.751	112.751	0.000	4234.69	0.00	24.69	469.0	658.448
1	16.834	112.834	0.000	3975.03	0.00	25.17	472.0	682.574
1	16.918	112.918	0.000	3705.36	0.00	25.60	474.8	704.823
1	17.001	113.001	0.000	3487.65	0.00	26.00	477.6	725.553
1	17.084	113.084	0.000	3235.76	0.00	26.37	480.1	744.532
1	17.168	113.168	0.000	3028.04	0.00	26.71	482.4	762.064
1	17.251	113.251	0.000	2790.18	0.00	27.02	484.5	777.943
1	17.334	113.334	0.000	2591.97	0.00	27.29	486.5	792.443
1	17.418	113.418	0.000	2392.77	0.00	27.54	488.4	805.558
1	17.501	113.501	0.000	2124.86	0.00	27.75	490.1	816.817
1	17.584	113.584	0.000	1886.69	0.00	27.93	491.5	826.426
1	17.668	113.668	0.000	1715.04	0.00	28.09	492.8	834.844
1	17.751	113.751	0.000	1558.98	0.00	28.23	493.9	842.179
1	17.834	113.834	0.000	1413.20	0.00	28.35	494.8	848.504
1	17.918	113.918	0.000	1316.13	0.00	28.45	495.6	854.155
1	18.001	114.001	0.000	1214.79	0.00	28.55	496.3	859.103
1	18.084	114.084	0.000	1066.59	0.00	28.62	497.0	863.026
1	18.168	114.168	0.000	980.42	0.00	28.68	497.5	866.353
1	18.251	114.251	0.000	924.85	0.00	28.74	497.9	869.293
1	18.334	114.334	0.000	875.77	0.00	28.79	498.3	871.893
1	18.418	114.418	0.000	822.24	0.00	28.83	498.6	874.122
1	18.501	114.501	0.000	758.30	0.00	28.86	498.9	875.909
1	18.584	114.584	0.000	705.67	0.00	28.89	499.1	877.331
1	18.668	114.668	0.000	667.42	0.00	28.91	499.3	878.489
1	18.751	114.751	0.000	635.65	0.00	28.93	499.4	879.428
1	18.834	114.834	0.000	608.22	0.00	28.94	499.5	880.176
1	18.918	114.918	0.000	583.92	0.00	28.95	499.6	880.757
1	19.001	115.001	0.000	561.58	0.00	28.96	499.7	881.183
1	19.084	115.084	0.000	543.39	0.00	28.97	499.7	881.484
1	19.168	115.168	0.000	527.11	0.00	28.97	499.8	881.672
1	19.251	115.251	0.000	513.04	0.00	28.97	499.8	881.763
1	19.335	115.335	0.000	500.38	0.00	28.97	499.8	881.767
1	19.418	115.418	0.000	488.33	0.00	28.97	499.8	881.688
1	19.501	115.501	0.000	476.91	0.00	28.97	499.8	881.531
1	19.585	115.585	0.000	465.84	0.00	28.96	499.8	881.297
1	19.668	115.668	0.000	454.86	0.00	28.96	499.7	880.988
1	19.751	115.751	0.000	443.22	0.00	28.95	499.7	880.599
1	19.835	115.835	0.000	430.23	0.00	28.94	499.6	880.122
1	19.918	115.918	0.000	406.68	0.00	28.93	499.5	879.482
1	20.001	116.001	0.000	389.75	0.00	28.92	499.4	878.727
1	20.085	116.085	0.000	381.46	0.00	28.90	499.3	877.915
1	20.168	116.168	0.000	374.48	0.00	28.88	499.2	877.056
1	20.251	116.251	0.000	367.34	0.00	28.87	499.1	876.149
1	20.335	116.335	0.000	360.20	0.00	28.85	499.0	875.193
1	20.418	116.418	0.000	353.47	0.00	28.83	498.8	874.192
1	20.501	116.501	0.000	347.07	0.00	28.81	498.7	873.148
1	20.585	116.585	0.000	340.98	0.00	28.79	498.5	872.063
1	20.668	116.668	0.000	335.15	0.00	28.77	498.4	870.938
1	20.751	116.751	0.000	329.56	0.00	28.75	498.2	869.777
1	20.835	116.835	0.000	324.20	0.00	28.72	498.1	868.579
1	20.918	116.918	0.000	319.41	0.00	28.70	497.9	867.350
1	21.001	117.001	0.000	315.04	0.00	28.68	497.7	866.092
1	21.085	117.085	0.000	310.85	0.00	28.65	497.6	864.806
1	21.168	117.168	0.000	306.82	0.00	28.63	497.4	863.494
1	21.251	117.251	0.000	302.95	0.00	28.60	497.2	862.156
1	21.335	117.335	0.000	299.22	0.00	28.58	497.0	860.794
1	21.418	117.418	0.000	295.63	0.00	28.55	496.8	859.408
1	21.501	117.501	0.000	292.16	0.00	28.53	496.6	858.000
1	21.585	117.585	0.000	288.80	0.00	28.50	496.4	856.570
1	21.668	117.668	0.000	285.53	0.00	28.47	496.2	855.118
1	21.751	117.751	0.000	282.35	0.00	28.44	496.0	853.647
1	21.835	117.835	0.000	279.25	0.00	28.42	495.8	852.155
1	21.918	117.918	0.000	276.33	0.00	28.39	495.6	850.645
1	22.001	118.001	0.000	273.53	0.00	28.36	495.4	849.117
1	22.085	118.085	0.000	270.81	0.00	28.33	495.2	847.571

1	22.168	118.168	0.000	268.16	0.00	28.30	495.0	846.009
1	22.251	118.251	0.000	265.58	0.00	28.27	494.8	844.430
1	22.335	118.335	0.000	263.06	0.00	28.24	494.6	842.836
1	22.418	118.418	0.000	260.61	0.00	28.21	494.3	841.226
1	22.501	118.501	0.000	258.22	0.00	28.18	494.1	839.602
1	22.585	118.585	0.000	255.88	0.00	28.15	493.9	837.963
1	22.668	118.668	0.000	253.60	0.00	28.12	493.7	836.309
1	22.751	118.751	0.000	251.37	0.00	28.09	493.4	834.642
1	22.835	118.835	0.000	249.19	0.00	28.05	493.2	832.961
1	22.918	118.918	0.000	247.06	0.00	28.02	493.0	831.268
1	23.001	119.001	0.000	244.98	0.00	27.99	492.7	829.561
1	23.085	119.085	0.000	242.95	0.00	27.96	492.5	827.843
1	23.168	119.168	0.000	240.95	0.00	27.92	492.3	826.112
1	23.251	119.251	0.000	239.01	0.00	27.89	492.0	824.369
1	23.335	119.335	0.000	237.10	0.00	27.86	491.8	822.615
1	23.418	119.418	0.000	235.23	0.00	27.83	491.5	820.850
1	23.501	119.501	0.000	233.40	0.00	27.79	491.3	819.074
1	23.585	119.585	0.000	231.61	0.00	27.76	491.1	817.287
1	23.668	119.668	0.000	229.85	0.00	27.72	490.8	815.490
1	23.751	119.751	0.000	228.13	0.00	27.69	490.6	813.682
1	23.835	119.835	0.000	226.44	0.00	27.66	490.3	811.865
1	23.918	119.918	0.000	224.79	0.00	27.62	490.1	810.038
1	24.001	120.001	0.000	223.16	0.00	27.59	489.8	808.201
1	24.085	120.085	0.000	219.19	0.00	27.55	489.6	806.339
1	24.168	120.168	0.000	211.46	0.00	27.52	489.3	804.426
1	24.251	120.251	0.000	200.67	0.00	27.48	489.0	802.440
1	24.335	120.335	0.000	186.59	0.00	27.44	488.8	800.359
1	24.418	120.418	0.000	165.13	0.00	27.40	488.5	798.132
1	24.501	120.501	0.000	124.17	0.00	27.35	488.1	795.625
1	24.585	120.585	0.000	92.43	0.00	27.30	487.8	792.902
1	24.668	120.668	0.000	75.96	0.00	27.25	487.4	790.069
1	24.751	120.751	0.000	64.06	0.00	27.19	487.0	787.156
1	24.835	120.835	0.000	54.11	0.00	27.14	486.6	784.178
1	24.918	120.918	0.000	46.31	0.00	27.08	486.2	781.148
1	25.001	121.001	0.000	39.39	0.00	27.02	485.8	778.074
1	25.085	121.085	0.000	33.63	0.00	26.96	485.3	774.963
1	25.168	121.168	0.000	28.51	0.00	26.90	484.9	771.820
1	25.251	121.251	0.000	24.33	0.00	26.84	484.5	768.650
1	25.335	121.335	0.000	20.66	0.00	26.78	484.1	765.458
1	25.418	121.418	0.000	17.33	0.00	26.71	483.7	762.246
1	25.501	121.501	0.000	14.48	0.00	26.65	483.3	759.017
1	25.585	121.585	0.000	12.10	0.00	26.59	482.9	755.774
1	25.668	121.668	0.000	10.05	0.00	26.53	482.5	752.521
1	25.751	121.751	0.000	8.37	0.00	26.46	482.1	749.258
1	25.835	121.835	0.000	7.14	0.00	26.40	481.7	745.990
1	25.918	121.918	0.000	5.91	0.00	26.34	481.3	742.716
1	26.001	122.001	0.000	4.77	0.00	26.27	480.8	739.437
1	26.085	122.085	0.000	4.36	0.00	26.21	480.4	736.159
1	26.168	122.168	0.000	4.14	0.00	26.15	480.0	732.881
1	26.251	122.251	0.000	3.92	0.00	26.08	479.6	729.605
1	26.335	122.335	0.000	3.70	0.00	26.02	479.2	726.331
1	26.418	122.418	0.000	3.49	0.00	25.96	478.8	723.057
1	26.501	122.501	0.000	3.28	0.00	25.89	478.4	719.785
1	26.585	122.585	0.000	3.07	0.00	25.83	477.9	716.515
1	26.668	122.668	0.000	2.86	0.00	25.77	477.5	713.246
1	26.751	122.751	0.000	2.65	0.00	25.70	477.1	709.978
1	26.835	122.835	0.000	2.44	0.00	25.64	476.7	706.712
1	26.918	122.918	0.000	2.24	0.00	25.58	476.3	703.447
1	27.001	123.001	0.000	2.03	0.00	25.51	475.9	700.184
1	27.085	123.085	0.000	1.83	0.00	25.45	475.5	696.922
1	27.168	123.168	0.000	1.63	0.00	25.39	475.0	693.661
1	27.251	123.251	0.000	1.43	0.00	25.32	474.6	690.403
1	27.335	123.335	0.000	1.23	0.00	25.26	474.2	687.145
1	27.418	123.418	0.000	1.03	0.00	25.20	473.8	683.889
1	27.501	123.501	0.000	0.84	0.00	25.13	473.4	680.635
1	27.585	123.585	0.000	0.64	0.00	25.07	473.0	677.382
1	27.668	123.668	0.000	0.45	0.00	25.01	472.6	674.130
1	27.751	123.751	0.000	0.26	0.00	24.94	472.2	670.880

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 1  27.835 123.835        0.000     0.07     0.00     24.88    471.8    667.631
 1  27.918 123.918        0.000     0.00     0.00     24.81    471.4    664.385
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
--------------------------------------------------------------------------------
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   1991.048 AF
    BASIN  STORAGE =      0.000 AF (WITH      0.000 AF INITIALLY FILLED)
    OUTFLOW VOLUME =   1991.047 AF
    LOSS    VOLUME =      0.000 AF
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE    780.00 TO NODE    780.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  4741.3 Ac. ***

            STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
        (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      125.0     250.0     375.0     500.0
--------------------------------------------------------------------------------
  96.000    463.6258    290.64  .        V.          .  Q      .         .
 (PEAK DAY 2, HOUR  24.000)
  96.083    465.6184    289.33  .        V.          .  Q      .         .
 (PEAK DAY 1, HOUR   0.083)
  96.167    467.6022    288.04  .        V.          .  Q      .         .
 (PEAK DAY 1, HOUR   0.167)
  96.250    469.5773    286.79  .        V.          . Q       .         .
 (PEAK DAY 1, HOUR   0.250)
  96.333    471.5442    285.59  .        V.          . Q       .         .
 (PEAK DAY 1, HOUR   0.333)
  96.417    473.5034    284.47  .        V.          . Q       .         .
 (PEAK DAY 1, HOUR   0.417)
  96.500    475.4557    283.48  .        V.          . Q       .         .
 (PEAK DAY 1, HOUR   0.500)
  96.583    477.4022    282.64  .        V.          . Q       .         .
 (PEAK DAY 1, HOUR   0.583)
  96.667    479.3437    281.90  .        V.          . Q       .         .
 (PEAK DAY 1, HOUR   0.667)
  96.750    481.2805    281.23  .        V.          . Q       .         .
 (PEAK DAY 1, HOUR   0.750)
  96.833    483.2130    280.60  .        V.          . Q       .         .
 (PEAK DAY 1, HOUR   0.833)
  96.917    485.1415    280.02  .        V.          . Q       .         .
 (PEAK DAY 1, HOUR   0.917)
  97.000    487.0663    279.47  .        V.          . Q       .         .
 (PEAK DAY 1, HOUR   1.000)
  97.083    488.9875    278.96  .        V.          . Q       .         .
 (PEAK DAY 1, HOUR   1.083)
  97.167    490.9053    278.47  .        V.          . Q       .         .
 (PEAK DAY 1, HOUR   1.167)
  97.250    492.8200    278.01  .        V.          . Q       .         .
 (PEAK DAY 1, HOUR   1.250)
  97.333    494.7316    277.57  .        V.          . Q       .         .
 (PEAK DAY 1, HOUR   1.333)
  97.417    496.6404    277.15  .        V.          . Q       .         .
 (PEAK DAY 1, HOUR   1.417)
  97.500    498.5463    276.74  .         V          . Q       .         .
 (PEAK DAY 1, HOUR   1.500)
  97.583    500.4489    276.26  .         V          . Q       .         .
 (PEAK DAY 1, HOUR   1.583)
  97.667    502.3477    275.70  .         V          . Q       .         .
 (PEAK DAY 1, HOUR   1.667)
  97.750    504.2427    275.15  .         V          . Q       .         .
 (PEAK DAY 1, HOUR   1.750)
  97.833    506.1341    274.62  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   1.833)
  97.917    508.0219    274.11  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   1.917)
  98.000    509.9063    273.62  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   2.000)
  98.083    511.7875    273.14  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   2.083)
  98.167    513.6654    272.68  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   2.167)
  98.250    515.5402    272.22  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   2.250)
  98.333    517.4120    271.78  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   2.333)
  98.417    519.2808    271.35  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   2.417)
  98.500    521.1468    270.94  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   2.500)
  98.583    523.0099    270.53  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   2.583)
  98.667    524.8704    270.14  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   2.667)
  98.750    526.7283    269.76  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   2.750)
  98.833    528.5836    269.39  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   2.833)
  98.917    530.4364    269.03  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   2.917)
  99.000    532.2869    268.68  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   3.000)
  99.083    534.1350    268.35  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   3.083)
  99.167    535.9810    268.03  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   3.167)
  99.250    537.8247    267.72  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   3.250)
  99.333    539.6664    267.42  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   3.333)
  99.417    541.5062    267.13  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   3.417)
  99.500    543.3440    266.85  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   3.500)
  99.583    545.1800    266.59  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   3.583)
  99.667    547.0143    266.34  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   3.667)
  99.750    548.8469    266.10  .         .V         .Q        .         .
 (PEAK DAY 1, HOUR   3.750)
  99.833    550.6780    265.87  .         .V         .Q        .         .
 (PEAK DAY 1, HOUR   3.833)
  99.917    552.5075    265.65  .         .V         .Q        .         .
 (PEAK DAY 1, HOUR   3.917)
 100.000    554.3356    265.44  .         .V         .Q        .         .
 (PEAK DAY 1, HOUR   4.000)
 100.083    556.1624    265.25  .         .V         .Q        .         .
 (PEAK DAY 1, HOUR   4.083)
 100.167    557.9879    265.06  .         .V         .Q        .         .
 (PEAK DAY 1, HOUR   4.167)
 100.250    559.8122    264.88  .         .V         .Q        .         .
 (PEAK DAY 1, HOUR   4.250)
 100.333    561.6353    264.72  .         .V         .Q        .         .
 (PEAK DAY 1, HOUR   4.333)
 100.417    563.4574    264.56  .         .V         .Q        .         .
 (PEAK DAY 1, HOUR   4.417)
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100.500    565.2784    264.42  .         .V        .Q        .         .
(PEAK DAY 1, HOUR   4.500)
100.583    567.0986    264.28  .         .V        .Q        .         .
(PEAK DAY 1, HOUR   4.583)
100.667    568.9178    264.16  .         .V        .Q        .         .
(PEAK DAY 1, HOUR   4.667)
100.750    570.7363    264.05  .         .V        .Q        .         .
(PEAK DAY 1, HOUR   4.750)
100.833    572.5541    263.94  .         .V        .Q        .         .
(PEAK DAY 1, HOUR   4.833)
100.917    574.3713    263.85  .         .V        .Q        .         .
(PEAK DAY 1, HOUR   4.917)
101.000    576.1879    263.77  .         .V        .Q        .         .
(PEAK DAY 1, HOUR   5.000)
101.083    578.0040    263.70  .         .V        .Q        .         .
(PEAK DAY 1, HOUR   5.083)
101.167    579.8196    263.64  .         .V        .Q        .         .
(PEAK DAY 1, HOUR   5.167)
101.250    581.6350    263.59  .         .V        .Q        .         .
(PEAK DAY 1, HOUR   5.250)
101.333    583.4501    263.55  .         .V        .Q        .         .
(PEAK DAY 1, HOUR   5.333)
101.417    585.2650    263.52  .         .V        .Q        .         .
(PEAK DAY 1, HOUR   5.417)
101.500    587.0797    263.50  .         .V        .Q        .         .
(PEAK DAY 1, HOUR   5.500)
101.583    588.8944    263.49  .         .V        .Q        .         .
(PEAK DAY 1, HOUR   5.583)
101.667    590.7091    263.50  .         .V        .Q        .         .
(PEAK DAY 1, HOUR   5.667)
101.750    592.5239    263.51  .         .V        .Q        .         .
(PEAK DAY 1, HOUR   5.750)
101.833    594.3389    263.54  .         .V        .Q        .         .
(PEAK DAY 1, HOUR   5.833)
101.917    596.1542    263.57  .         .V        .Q        .         .
(PEAK DAY 1, HOUR   5.917)
102.000    597.9697    263.62  .         . V       .Q        .         .
(PEAK DAY 1, HOUR   6.000)
102.083    599.7857    263.68  .         . V       .Q        .         .
(PEAK DAY 1, HOUR   6.083)
102.167    601.6022    263.75  .         . V       .Q        .         .
(PEAK DAY 1, HOUR   6.167)
102.250    603.4192    263.83  .         . V       .Q        .         .
(PEAK DAY 1, HOUR   6.250)
102.333    605.2368    263.92  .         . V       .Q        .         .
(PEAK DAY 1, HOUR   6.333)
102.417    607.0551    264.02  .         . V       .Q        .         .
(PEAK DAY 1, HOUR   6.417)
102.500    608.8742    264.13  .         . V       .Q        .         .
(PEAK DAY 1, HOUR   6.500)
102.583    610.6942    264.26  .         . V       .Q        .         .
(PEAK DAY 1, HOUR   6.583)
102.667    612.5151    264.40  .         . V       .Q        .         .
(PEAK DAY 1, HOUR   6.667)
102.750    614.3370    264.54  .         . V       .Q        .         .
(PEAK DAY 1, HOUR   6.750)
102.833    616.1600    264.70  .         . V       .Q        .         .
(PEAK DAY 1, HOUR   6.833)
102.917    617.9842    264.87  .         . V       .Q        .         .
(PEAK DAY 1, HOUR   6.917)
103.000    619.8096    265.06  .         . V       .Q        .         .
(PEAK DAY 1, HOUR   7.000)
103.083    621.6364    265.25  .         . V       .Q        .         .
(PEAK DAY 1, HOUR   7.083)
103.167    623.4647    265.46  .         . V       .Q        .         .
(PEAK DAY 1, HOUR   7.167)
103.250    625.2944    265.68  .         . V       .Q        .         .
(PEAK DAY 1, HOUR   7.250)
103.333    627.1257    265.91  .         . V       .Q        .         .
(PEAK DAY 1, HOUR   7.333)
103.417    628.9587    266.15  .         . V       .Q        .         .
(PEAK DAY 1, HOUR   7.417)
103.500    630.7934    266.40  .         . V       .Q        .         .
(PEAK DAY 1, HOUR   7.500)
103.583    632.6299    266.67  .         . V       .Q        .         .
(PEAK DAY 1, HOUR   7.583)
103.667    634.4684    266.95  .         . V       .Q        .         .
(PEAK DAY 1, HOUR   7.667)
103.750    636.3090    267.24  .         . V       .Q        .         .
(PEAK DAY 1, HOUR   7.750)
103.833    638.1516    267.55  .         . V       .Q        .         .
(PEAK DAY 1, HOUR   7.833)
103.917    639.9963    267.86  .         . V       .Q        .         .
(PEAK DAY 1, HOUR   7.917)
104.000    641.8434    268.19  .         . V       .Q        .         .
(PEAK DAY 1, HOUR   8.000)
104.083    643.6928    268.54  .         . V       .Q        .         .
(PEAK DAY 1, HOUR   8.083)
104.167    645.5447    268.89  .         . V       .Q        .         .
(PEAK DAY 1, HOUR   8.167)
104.250    647.3991    269.27  .         .  V      .Q        .         .
(PEAK DAY 1, HOUR   8.250)
104.333    649.2562    269.65  .         .  V      .Q        .         .
(PEAK DAY 1, HOUR   8.333)
104.417    651.1160    270.05  .         .  V      .Q        .         .
(PEAK DAY 1, HOUR   8.417)
104.500    652.9786    270.46  .         .  V      .Q        .         .
(PEAK DAY 1, HOUR   8.500)
104.583    654.8442    270.88  .         .  V      .Q        .         .
(PEAK DAY 1, HOUR   8.583)
104.667    656.7128    271.32  .         .  V      .Q        .         .
(PEAK DAY 1, HOUR   8.667)
104.750    658.5845    271.78  .         .  V      .Q        .         .
(PEAK DAY 1, HOUR   8.750)
104.833    660.4595    272.24  .         .  V      .Q        .         .
(PEAK DAY 1, HOUR   8.833)
104.917    662.3378    272.73  .         .  V      .Q        .         .
(PEAK DAY 1, HOUR   8.917)
105.000    664.2195    273.23  .         .  V      .Q        .         .
(PEAK DAY 1, HOUR   9.000)
105.083    666.1047    273.74  .         .  V      .Q        .         .
(PEAK DAY 1, HOUR   9.083)
105.167    667.9937    274.27  .         .  V      .Q        .         .
(PEAK DAY 1, HOUR   9.167)
105.250    669.8863    274.81  .         .  V      .Q        .         .
(PEAK DAY 1, HOUR   9.250)
105.333    671.7828    275.37  .         .  V      . Q       .         .
(PEAK DAY 1, HOUR   9.333)
105.417    673.6832    275.95  .         .  V      . Q       .         .
(PEAK DAY 1, HOUR   9.417)
105.500    675.5873    276.48  .         .  V      . Q       .         .
(PEAK DAY 1, HOUR   9.500)
105.583    677.4945    276.92  .         .  V      . Q       .         .
(PEAK DAY 1, HOUR   9.583)
105.667    679.4045    277.33  .         .  V      . Q       .         .
(PEAK DAY 1, HOUR   9.667)
105.750    681.3173    277.75  .         .  V      . Q       .         .
(PEAK DAY 1, HOUR   9.750)
105.833    683.2332    278.18  .         .  V      . Q       .         .
(PEAK DAY 1, HOUR   9.833)
105.917    685.1520    278.62  .         .  V      . Q       .         .
(PEAK DAY 1, HOUR   9.917)
106.000    687.0741    279.08  .         .  V      . Q       .         .
(PEAK DAY 1, HOUR  10.000)
106.083    688.9994    279.55  .         .  V      . Q       .         .
(PEAK DAY 1, HOUR  10.083)
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 106.167    690.9280    280.04  .         .  V      . Q       .         .
(PEAK DAY 1, HOUR  10.167)
 106.250    692.8601    280.53  .         .  V      . Q       .         .
(PEAK DAY 1, HOUR  10.250)
 106.333    694.7957    281.05  .         .  V      . Q       .         .
(PEAK DAY 1, HOUR  10.333)
 106.417    696.7349    281.57  .         .  V      . Q       .         .
(PEAK DAY 1, HOUR  10.417)
 106.500    698.6779    282.11  .         .   V     . Q       .         .
(PEAK DAY 1, HOUR  10.500)
 106.583    700.6246    282.67  .         .   V     . Q       .         .
(PEAK DAY 1, HOUR  10.583)
 106.667    702.5753    283.24  .         .   V     . Q       .         .
(PEAK DAY 1, HOUR  10.667)
 106.750    704.5301    283.83  .         .   V     . Q       .         .
(PEAK DAY 1, HOUR  10.750)
 106.833    706.4890    284.43  .         .   V     . Q       .         .
(PEAK DAY 1, HOUR  10.833)
 106.917    708.4522    285.05  .         .   V     . Q       .         .
(PEAK DAY 1, HOUR  10.917)
 107.000    710.4197    285.69  .         .   V     . Q       .         .
(PEAK DAY 1, HOUR  11.000)
 107.083    712.3918    286.34  .         .   V     . Q       .         .
(PEAK DAY 1, HOUR  11.083)
 107.167    714.3685    287.01  .         .   V     . Q       .         .
(PEAK DAY 1, HOUR  11.167)
 107.250    716.3499    287.70  .         .   V     .  Q      .         .
(PEAK DAY 1, HOUR  11.250)
 107.333    718.3361    288.41  .         .   V     .  Q      .         .
(PEAK DAY 1, HOUR  11.333)
 107.417    720.3274    289.13  .         .   V     .  Q      .         .
(PEAK DAY 1, HOUR  11.417)
 107.500    722.3238    289.88  .         .   V     .  Q      .         .
(PEAK DAY 1, HOUR  11.500)
 107.583    724.3254    290.64  .         .   V     .  Q      .         .
(PEAK DAY 1, HOUR  11.583)
 107.667    726.3325    291.43  .         .   V     .  Q      .         .
(PEAK DAY 1, HOUR  11.667)
 107.750    728.3452    292.23  .         .   V     .  Q      .         .
(PEAK DAY 1, HOUR  11.750)
 107.833    730.3635    293.06  .         .   V     .  Q      .         .
(PEAK DAY 1, HOUR  11.833)
 107.917    732.3876    293.91  .         .   V     .  Q      .         .
(PEAK DAY 1, HOUR  11.917)
 108.000    734.4178    294.78  .         .   V     .  Q      .         .
(PEAK DAY 1, HOUR  12.000)
 108.083    736.4542    295.69  .         .   V     .  Q      .         .
(PEAK DAY 1, HOUR  12.083)
 108.167    738.4971    296.63  .         .   V     .  Q      .         .
(PEAK DAY 1, HOUR  12.167)
 108.250    740.5469    297.63  .         .   V     .  Q      .         .
(PEAK DAY 1, HOUR  12.250)
 108.333    742.6041    298.70  .         .   V     .  Q      .         .
(PEAK DAY 1, HOUR  12.333)
 108.417    744.6692    299.86  .         .   V     .  Q      .         .
(PEAK DAY 1, HOUR  12.417)
 108.500    746.7434    301.17  .         .    V    .   Q     .         .
(PEAK DAY 1, HOUR  12.500)
 108.583    748.8278    302.66  .         .    V    .   Q     .         .
(PEAK DAY 1, HOUR  12.583)
 108.667    750.9233    304.27  .         .    V    .   Q     .         .
(PEAK DAY 1, HOUR  12.667)
 108.750    753.0305    305.96  .         .    V    .   Q     .         .
(PEAK DAY 1, HOUR  12.750)
 108.833    755.1498    307.73  .         .    V    .   Q     .         .
(PEAK DAY 1, HOUR  12.833)
 108.917    757.2809    309.43  .         .    V    .   Q     .         .
(PEAK DAY 1, HOUR  12.917)
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 109.000    759.4232    311.06  .         .    V    .   Q     .         .
(PEAK DAY 1, HOUR  13.000)
 109.083    761.5770    312.73  .         .    V    .    Q    .         .
(PEAK DAY 1, HOUR  13.083)
 109.167    763.7426    314.44  .         .    V    .    Q    .         .
(PEAK DAY 1, HOUR  13.167)
 109.250    765.9203    316.21  .         .    V    .    Q    .         .
(PEAK DAY 1, HOUR  13.250)
 109.333    768.1107    318.04  .         .    V    .    Q    .         .
(PEAK DAY 1, HOUR  13.333)
 109.417    770.3140    319.92  .         .    V    .    Q    .         .
(PEAK DAY 1, HOUR  13.417)
 109.500    772.5307    321.87  .         .    V    .    Q    .         .
(PEAK DAY 1, HOUR  13.500)
 109.583    774.7615    323.91  .         .    V    .    Q    .         .
(PEAK DAY 1, HOUR  13.583)
 109.667    777.0068    326.03  .         .    V    .     Q   .         .
(PEAK DAY 1, HOUR  13.667)
 109.750    779.2675    328.25  .         .    V    .     Q   .         .
(PEAK DAY 1, HOUR  13.750)
 109.833    781.5441    330.57  .         .    V    .     Q   .         .
(PEAK DAY 1, HOUR  13.833)
 109.917    783.8375    332.99  .         .    V    .     Q   .         .
(PEAK DAY 1, HOUR  13.917)
 110.000    786.1483    335.53  .         .    V    .     Q   .         .
(PEAK DAY 1, HOUR  14.000)
 110.083    788.4755    337.90  .         .    V    .      Q  .         .
(PEAK DAY 1, HOUR  14.083)
 110.167    790.8152    339.74  .         .    V    .      Q  .         .
(PEAK DAY 1, HOUR  14.167)
 110.250    793.1661    341.35  .         .    V    .      Q  .         .
(PEAK DAY 1, HOUR  14.250)
 110.333    795.5292    343.12  .         .    V    .      Q  .         .
(PEAK DAY 1, HOUR  14.333)
 110.417    797.9060    345.11  .         .     V   .      Q  .         .
(PEAK DAY 1, HOUR  14.417)
 110.500    800.2986    347.41  .         .     V   .      Q  .         .
(PEAK DAY 1, HOUR  14.500)
 110.583    802.7097    350.08  .         .     V   .       Q .         .
(PEAK DAY 1, HOUR  14.583)
 110.667    805.1409    353.02  .         .     V   .       Q .         .
(PEAK DAY 1, HOUR  14.667)
 110.750    807.5938    356.16  .         .     V   .       Q .         .
(PEAK DAY 1, HOUR  14.750)
 110.833    810.0696    359.49  .         .     V   .       Q .         .
(PEAK DAY 1, HOUR  14.833)
 110.917    812.5696    362.99  .         .     V   .        Q.         .
(PEAK DAY 1, HOUR  14.917)
 111.000    815.0928    366.37  .         .     V   .        Q.         .
(PEAK DAY 1, HOUR  15.000)
 111.083    817.6376    369.51  .         .     V   .        Q.         .
(PEAK DAY 1, HOUR  15.083)
 111.167    820.2044    372.70  .         .     V   .        Q.         .
(PEAK DAY 1, HOUR  15.167)
 111.250    822.7942    376.03  .         .     V   .         Q         .
(PEAK DAY 1, HOUR  15.250)
 111.333    825.4080    379.52  .         .     V   .         Q         .
(PEAK DAY 1, HOUR  15.333)
 111.417    828.0467    383.15  .         .     V   .         Q         .
(PEAK DAY 1, HOUR  15.417)
 111.500    830.7112    386.89  .         .     V   .         Q         .
(PEAK DAY 1, HOUR  15.500)
 111.583    833.4018    390.67  .         .     V   .         .Q        .
(PEAK DAY 1, HOUR  15.583)
 111.667    836.1178    394.37  .         .     V   .         .Q        .
(PEAK DAY 1, HOUR  15.667)
 111.750    838.8589    398.00  .         .     V   .         .Q        .
(PEAK DAY 1, HOUR  15.750)
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 111.833    841.6243    401.53  .          .     V   .          . Q        .
(PEAK DAY 1, HOUR  15.833)
 111.917    844.4132    404.95  .          .     V   .          . Q        .
(PEAK DAY 1, HOUR  15.917)
 112.000    847.2269    408.55  .          .      V  .          . Q        .
(PEAK DAY 1, HOUR  16.000)
 112.083    850.0698    412.80  .          .      V  .          .  Q       .
(PEAK DAY 1, HOUR  16.083)
 112.167    852.9480    417.91  .          .      V  .          .  Q       .
(PEAK DAY 1, HOUR  16.167)
 112.250    855.8679    423.97  .          .      V  .          .  Q       .
(PEAK DAY 1, HOUR  16.250)
 112.333    858.8379    431.24  .          .      V  .          .   Q      .
(PEAK DAY 1, HOUR  16.333)
 112.417    861.8680    439.97  .          .      V  .          .    Q     .
(PEAK DAY 1, HOUR  16.417)
 112.500    864.9730    450.84  .          .      V  .          .     Q    .
(PEAK DAY 1, HOUR  16.500)
 112.583    868.1440    460.43  .          .      V  .          .     Q    .
(PEAK DAY 1, HOUR  16.583)
 112.667    871.3514    465.72  .          .      V  .          .      Q   .
(PEAK DAY 1, HOUR  16.667)
 112.750    874.5817    469.03  .          .      V  .          .      Q   .
(PEAK DAY 1, HOUR  16.750)
 112.833    877.8322    471.98  .          .      V  .          .      Q   .
(PEAK DAY 1, HOUR  16.833)
 112.917    881.1024    474.84  .          .      V  .          .      Q   .
(PEAK DAY 1, HOUR  16.917)
 113.000    884.3914    477.56  .          .      V  .          .       Q  .
(PEAK DAY 1, HOUR  17.000)
 113.083    887.6978    480.08  .          .      V  .          .       Q  .
(PEAK DAY 1, HOUR  17.083)
 113.167    891.0200    482.39  .          .      V  .          .       Q  .
(PEAK DAY 1, HOUR  17.167)
 113.250    894.3569    484.52  .          .      V  .          .       Q  .
(PEAK DAY 1, HOUR  17.250)
 113.333    897.7076    486.53  .          .       V .          .       Q  .
(PEAK DAY 1, HOUR  17.333)
 113.417    901.0715    488.42  .          .       V .          .        Q.
(PEAK DAY 1, HOUR  17.417)
 113.500    904.4468    490.10  .          .       V .          .        Q.
(PEAK DAY 1, HOUR  17.500)
 113.583    907.8320    491.53  .          .       V .          .        Q.
(PEAK DAY 1, HOUR  17.583)
 113.667    911.2258    492.77  .          .       V .          .        Q.
(PEAK DAY 1, HOUR  17.667)
 113.750    914.6270    493.86  .          .       V .          .        Q.
(PEAK DAY 1, HOUR  17.750)
 113.833    918.0346    494.80  .          .       V .          .        Q.
(PEAK DAY 1, HOUR  17.833)
 113.917    921.4479    495.62  .          .       V .          .        Q.
(PEAK DAY 1, HOUR  17.917)
 114.000    924.8663    496.35  .          .       V .          .        Q.
(PEAK DAY 1, HOUR  18.000)
 114.083    928.2889    496.96  .          .       V .          .        Q.
(PEAK DAY 1, HOUR  18.083)
 114.167    931.7149    497.46  .          .       V .          .        Q.
(PEAK DAY 1, HOUR  18.167)
 114.250    935.1439    497.89  .          .       V .          .        Q.
(PEAK DAY 1, HOUR  18.250)
 114.333    938.5754    498.27  .          .       V .          .        Q.
(PEAK DAY 1, HOUR  18.333)
 114.417    942.0093    498.60  .          .       V .          .        Q.
(PEAK DAY 1, HOUR  18.417)
 114.500    945.4451    498.87  .          .       V .          .        Q.
(PEAK DAY 1, HOUR  18.500)
 114.583    948.8824    499.10  .          .        V.          .        Q.
(PEAK DAY 1, HOUR  18.583)
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 114.667    952.3210    499.27  .          .        V.          .        Q.
(PEAK DAY 1, HOUR  18.667)
 114.750    955.7605    499.42  .          .        V.          .        Q.
(PEAK DAY 1, HOUR  18.750)
 114.833    959.2008    499.53  .          .        V.          .        Q.
(PEAK DAY 1, HOUR  18.833)
 114.917    962.6417    499.62  .          .        V.          .        Q.
(PEAK DAY 1, HOUR  18.917)
 115.000    966.0831    499.69  .          .        V.          .        Q.
(PEAK DAY 1, HOUR  19.000)
 115.083    969.5249    499.74  .          .        V.          .        Q.
(PEAK DAY 1, HOUR  19.083)
 115.167    972.9669    499.78  .          .        V.          .        Q.
(PEAK DAY 1, HOUR  19.167)
 115.250    976.4091    499.80  .          .        V.          .        Q.
(PEAK DAY 1, HOUR  19.250)
 115.333    979.8512    499.80  .          .        V.          .        Q.
(PEAK DAY 1, HOUR  19.333)
 115.417    983.2933    499.80  .          .        V.          .        Q.
(PEAK DAY 1, HOUR  19.417)
 115.500    986.7354    499.78  .          .        V.          .        Q.
(PEAK DAY 1, HOUR  19.500)
 115.583    990.1772    499.75  .          .        V.          .        Q.
(PEAK DAY 1, HOUR  19.583)
 115.667    993.6188    499.72  .          .        V.          .        Q.
(PEAK DAY 1, HOUR  19.667)
 115.750    997.0600    499.67  .          .         V          .        Q.
(PEAK DAY 1, HOUR  19.750)
 115.833   1000.5009    499.61  .          .         V          .        Q.
(PEAK DAY 1, HOUR  19.833)
 115.917   1003.9412    499.53  .          .         V          .        Q.
(PEAK DAY 1, HOUR  19.917)
 116.000   1007.3808    499.44  .          .         V          .        Q.
(PEAK DAY 1, HOUR  20.000)
 116.083   1010.8197    499.33  .          .         V          .        Q.
(PEAK DAY 1, HOUR  20.083)
 116.167   1014.2578    499.21  .          .         V          .        Q.
(PEAK DAY 1, HOUR  20.167)
 116.250   1017.6951    499.09  .          .         V          .        Q.
(PEAK DAY 1, HOUR  20.250)
 116.333   1021.1315    498.96  .          .         V          .        Q.
(PEAK DAY 1, HOUR  20.333)
 116.417   1024.5669    498.83  .          .         V          .        Q.
(PEAK DAY 1, HOUR  20.417)
 116.500   1028.0013    498.69  .          .         V          .        Q.
(PEAK DAY 1, HOUR  20.500)
 116.583   1031.4348    498.54  .          .         V          .        Q.
(PEAK DAY 1, HOUR  20.583)
 116.667   1034.8673    498.39  .          .         V          .        Q.
(PEAK DAY 1, HOUR  20.667)
 116.750   1038.2987    498.23  .          .         V          .        Q.
(PEAK DAY 1, HOUR  20.750)
 116.833   1041.7290    498.07  .          .         V          .        Q.
(PEAK DAY 1, HOUR  20.833)
 116.917   1045.1581    497.91  .          .         V          .        Q.
(PEAK DAY 1, HOUR  20.917)
 117.000   1048.5861    497.73  .          .         .V         .        Q.
(PEAK DAY 1, HOUR  21.000)
 117.083   1052.0128    497.56  .          .         .V         .        Q.
(PEAK DAY 1, HOUR  21.083)
 117.167   1055.4384    497.38  .          .         .V         .        Q.
(PEAK DAY 1, HOUR  21.167)
 117.250   1058.8625    497.20  .          .         .V         .        Q.
(PEAK DAY 1, HOUR  21.250)
 117.333   1062.2855    497.01  .          .         .V         .        Q.
(PEAK DAY 1, HOUR  21.333)
 117.417   1065.7072    496.82  .          .         .V         .        Q.
(PEAK DAY 1, HOUR  21.417)
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 117.500   1069.1274    496.63  .         .         .V        .         Q.
(PEAK DAY 1, HOUR  21.500)
 117.583   1072.5464    496.44  .         .         .V        .         Q.
(PEAK DAY 1, HOUR  21.583)
 117.667   1075.9640    496.24  .         .         .V        .         Q.
(PEAK DAY 1, HOUR  21.667)
 117.750   1079.3802    496.04  .         .         .V        .         Q.
(PEAK DAY 1, HOUR  21.750)
 117.833   1082.7950    495.83  .         .         .V        .         Q.
(PEAK DAY 1, HOUR  21.833)
 117.917   1086.2085    495.63  .         .         .V        .         Q.
(PEAK DAY 1, HOUR  21.917)
 118.000   1089.6205    495.42  .         .         .V        .         Q.
(PEAK DAY 1, HOUR  22.000)
 118.083   1093.0310    495.21  .         .         .V        .         Q.
(PEAK DAY 1, HOUR  22.083)
 118.167   1096.4401    494.99  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  22.167)
 118.250   1099.8477    494.78  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  22.250)
 118.333   1103.2537    494.56  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  22.333)
 118.417   1106.6582    494.34  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  22.417)
 118.500   1110.0613    494.12  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  22.500)
 118.583   1113.4628    493.89  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  22.583)
 118.667   1116.8627    493.67  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  22.667)
 118.750   1120.2610    493.44  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  22.750)
 118.833   1123.6577    493.21  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  22.833)
 118.917   1127.0529    492.98  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  22.917)
 119.000   1130.4464    492.74  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  23.000)
 119.083   1133.8384    492.51  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  23.083)
 119.167   1137.2286    492.27  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  23.167)
 119.250   1140.6173    492.03  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  23.250)
 119.333   1144.0043    491.79  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  23.333)
 119.417   1147.3896    491.55  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  23.417)
 119.500   1150.7733    491.31  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  23.500)
 119.583   1154.1553    491.06  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  23.583)
 119.667   1157.5355    490.81  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  23.667)
 119.750   1160.9141    490.57  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  23.750)
 119.833   1164.2909    490.32  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  23.833)
 119.917   1167.6660    490.07  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  23.917)
 120.000   1171.0394    489.82  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  24.000)
 120.083   1174.4110    489.56  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  24.083)
 120.167   1177.7809    489.30  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  24.167)
 120.250   1181.1489    489.03  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  24.250)
 120.333   1184.5150    488.75  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  24.333)
 120.417   1187.8790    488.46  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  24.417)
 120.500   1191.2408    488.13  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  24.500)
 120.583   1194.6002    487.77  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  24.583)
 120.667   1197.9569    487.39  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  24.667)
 120.750   1201.3109    487.00  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  24.750)
 120.833   1204.6621    486.59  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  24.833)
 120.917   1208.0105    486.18  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  24.917)
 121.000   1211.3560    485.76  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  25.000)
 121.083   1214.6986    485.34  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  25.083)
 121.167   1218.0385    484.94  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  25.167)
 121.250   1221.3755    484.54  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  25.250)
 121.333   1224.7097    484.14  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  25.333)
 121.417   1228.0413    483.73  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  25.417)
 121.500   1231.3700    483.32  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  25.500)
 121.583   1234.6958    482.91  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  25.583)
 121.667   1238.0188    482.50  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  25.667)
 121.750   1241.3390    482.09  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  25.750)
 121.833   1244.6562    481.67  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  25.833)
 121.917   1247.9707    481.26  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  25.917)
 122.000   1251.2823    480.84  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  26.000)
 122.083   1254.5911    480.43  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  26.083)
 122.167   1257.8970    480.01  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  26.167)
 122.250   1261.2000    479.60  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  26.250)
 122.333   1264.5001    479.18  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  26.333)
 122.417   1267.7974    478.77  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  26.417)
 122.500   1271.0918    478.35  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  26.500)
 122.583   1274.3834    477.94  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  26.583)
 122.667   1277.6721    477.52  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  26.667)
 122.750   1280.9580    477.11  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  26.750)
 122.833   1284.2410    476.69  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  26.833)
 122.917   1287.5211    476.28  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  26.917)
 123.000   1290.7985    475.87  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  27.000)
 123.083   1294.0729    475.45  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  27.083)
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 123.167   1297.3445    475.04  .         .         .     V   .       Q .
 (PEAK DAY 1, HOUR  27.167)
 123.250   1300.6133    474.62  .         .         .     V   .      Q  .
 (PEAK DAY 1, HOUR  27.250)
 123.333   1303.8792    474.21  .         .         .     V   .      Q  .
 (PEAK DAY 1, HOUR  27.333)
 123.417   1307.1422    473.80  .         .         .     V   .      Q  .
 (PEAK DAY 1, HOUR  27.417)
 123.500   1310.4025    473.39  .         .         .     V   .      Q  .
 (PEAK DAY 1, HOUR  27.500)
 123.583   1313.6599    472.97  .         .         .     V   .      Q  .
 (PEAK DAY 1, HOUR  27.583)
 123.667   1316.9144    472.56  .         .         .     V   .      Q  .
 (PEAK DAY 1, HOUR  27.667)
 123.750   1320.1663    472.16  .         .         .     V   .      Q  .
 (PEAK DAY 1, HOUR  27.750)
 123.833   1323.4154    471.78  .         .         .     V   .      Q  .
 (PEAK DAY 1, HOUR  27.833)
 123.917   1326.6620    471.41  .         .         .     V   .      Q  .
 (PEAK DAY 1, HOUR  27.917)
 124.000   1329.9060    471.03  .         .         .     V   .      Q  .
 (PEAK DAY 1, HOUR  28.000)
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE    780.00 TO NODE   6311.00 IS CODE = 5.2
--------------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  4741.3 Ac. ***

         THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
         TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
         INTERVALS(Reference: the National Engineering Handbook,
         Hydrology, Chapter 17, page 17-52, August,1972,
         U.S. Department of Commerce).


         ASSUMED REGULAR CHANNEL INFORMATION:
           BASEWIDTH(FT) =   20.00     CHANNEL Z =  1.00
           UPSTREAM ELEVATION(FT) =     408.00
           DOWNSTREAM ELEVATION(FT) =     382.00
           CHANNEL LENGTH(FT) =    2533.00     MANNING'S FACTOR = 0.040
           CONSTANT LOSS RATE(CFS) =    0.00


         CHANNEL ROUTING COEFFICIENT ESTIMATED:
           MAXIMUM INFLOW(CFS) =   499.80
           AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =   371.92
           CHANNEL NORMAL VELOCITY FOR Q =   371.92 CFS =   6.28 FPS
           ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.787

         MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
         UNIT INTERVALS IS CSTAR = 0.775


         CONVEX METHOD CHANNEL ROUTING RESULTS:
                                              OUTFLOW LESS
               CLOCK        INFLOW     ROUTED      LOSS
PEAK    TIME   TIME       (STREAM 1)    FLOW     (STREAM 1)
 DAY   (HRS)   (HRS)         (CFS)       (CFS)      (CFS)
  2   24.000  96.000       290.64      292.43      292.43
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1	0.083	96.083	289.33	291.10	291.10
1	0.167	96.167	288.04	289.79	289.79
1	0.250	96.250	286.79	288.49	288.49
1	0.333	96.333	285.59	287.23	287.23
1	0.417	96.417	284.47	286.02	286.02
1	0.500	96.500	283.48	284.87	284.87
1	0.583	96.583	282.64	283.83	283.83
1	0.667	96.667	281.90	282.94	282.94
1	0.750	96.750	281.23	282.17	282.17
1	0.833	96.833	280.60	281.47	281.47
1	0.917	96.917	280.02	280.83	280.83
1	1.000	97.000	279.47	280.23	280.23
1	1.083	97.083	278.96	279.67	279.67
1	1.167	97.167	278.47	279.14	279.14
1	1.250	97.250	278.01	278.64	278.64
1	1.333	97.333	277.57	278.17	278.17
1	1.417	97.417	277.15	277.72	277.72
1	1.500	97.500	276.74	277.29	277.29
1	1.583	97.583	276.26	276.88	276.88
1	1.667	97.667	275.70	276.43	276.43
1	1.750	97.750	275.15	275.89	275.89
1	1.833	97.833	274.62	275.35	275.35
1	1.917	97.917	274.11	274.81	274.81
1	2.000	98.000	273.62	274.29	274.29
1	2.083	98.083	273.14	273.79	273.79
1	2.167	98.167	272.68	273.31	273.31
1	2.250	98.250	272.22	272.84	272.84
1	2.333	98.333	271.78	272.38	272.38
1	2.417	98.417	271.35	271.94	271.94
1	2.500	98.500	270.94	271.51	271.51
1	2.583	98.583	270.53	271.08	271.08
1	2.667	98.667	270.14	270.67	270.67
1	2.750	98.750	269.76	270.28	270.28
1	2.833	98.833	269.39	269.89	269.89
1	2.917	98.917	269.03	269.52	269.52
1	3.000	99.000	268.68	269.16	269.16
1	3.083	99.083	268.35	268.81	268.81
1	3.167	99.167	268.03	268.47	268.47
1	3.250	99.250	267.72	268.14	268.14
1	3.333	99.333	267.42	267.83	267.83
1	3.417	99.417	267.13	267.52	267.52
1	3.500	99.500	266.85	267.23	267.23
1	3.583	99.583	266.59	266.95	266.95
1	3.667	99.667	266.34	266.68	266.68
1	3.750	99.750	266.10	266.43	266.43
1	3.833	99.833	265.87	266.18	266.18
1	3.917	99.917	265.65	265.95	265.95
1	4.000	100.000	265.44	265.73	265.73
1	4.083	100.083	265.25	265.52	265.52
1	4.167	100.167	265.06	265.32	265.32
1	4.250	100.250	264.88	265.13	265.13
1	4.333	100.333	264.72	264.95	264.95
1	4.417	100.417	264.56	264.78	264.78
1	4.500	100.500	264.42	264.62	264.62
1	4.583	100.583	264.28	264.47	264.47
1	4.667	100.667	264.16	264.33	264.33
1	4.750	100.750	264.05	264.20	264.20
1	4.833	100.833	263.94	264.09	264.09
1	4.917	100.917	263.85	263.98	263.98
1	5.000	101.000	263.77	263.88	263.88
1	5.083	101.083	263.70	263.80	263.80
1	5.167	101.167	263.64	263.72	263.72
1	5.250	101.250	263.59	263.66	263.66
1	5.333	101.333	263.55	263.61	263.61
1	5.417	101.417	263.52	263.56	263.56
1	5.500	101.500	263.50	263.53	263.53
1	5.583	101.583	263.49	263.51	263.51
1	5.667	101.667	263.50	263.50	263.50

1	5.750	101.750	263.51	263.50	263.50
1	5.833	101.833	263.54	263.51	263.51
1	5.917	101.917	263.57	263.53	263.53
1	6.000	102.000	263.62	263.56	263.56
1	6.083	102.083	263.68	263.61	263.61
1	6.167	102.167	263.75	263.66	263.66
1	6.250	102.250	263.83	263.72	263.72
1	6.333	102.333	263.92	263.80	263.80
1	6.417	102.417	264.02	263.89	263.89
1	6.500	102.500	264.13	263.99	263.99
1	6.583	102.583	264.26	264.10	264.10
1	6.667	102.667	264.40	264.22	264.22
1	6.750	102.750	264.54	264.35	264.35
1	6.833	102.833	264.70	264.49	264.49
1	6.917	102.917	264.87	264.65	264.65
1	7.000	103.000	265.06	264.82	264.82
1	7.083	103.083	265.25	264.99	264.99
1	7.167	103.167	265.46	265.18	265.18
1	7.250	103.250	265.68	265.39	265.39
1	7.333	103.333	265.91	265.60	265.60
1	7.417	103.417	266.15	265.83	265.83
1	7.500	103.500	266.40	266.07	266.07
1	7.583	103.583	266.67	266.32	266.32
1	7.667	103.667	266.95	266.58	266.58
1	7.750	103.750	267.24	266.85	266.85
1	7.833	103.833	267.55	267.14	267.14
1	7.917	103.917	267.86	267.44	267.44
1	8.000	104.000	268.19	267.75	267.75
1	8.083	104.083	268.54	268.08	268.08
1	8.167	104.167	268.89	268.42	268.42
1	8.250	104.250	269.27	268.77	268.77
1	8.333	104.333	269.65	269.14	269.14
1	8.417	104.417	270.05	269.52	269.52
1	8.500	104.500	270.46	269.91	269.91
1	8.583	104.583	270.88	270.32	270.32
1	8.667	104.667	271.32	270.74	270.74
1	8.750	104.750	271.78	271.17	271.17
1	8.833	104.833	272.24	271.62	271.62
1	8.917	104.917	272.73	272.08	272.08
1	9.000	105.000	273.23	272.56	272.56
1	9.083	105.083	273.74	273.05	273.05
1	9.167	105.167	274.27	273.56	273.56
1	9.250	105.250	274.81	274.08	274.08
1	9.333	105.333	275.37	274.62	274.62
1	9.417	105.417	275.95	275.18	275.18
1	9.500	105.500	276.48	275.75	275.75
1	9.583	105.583	276.92	276.29	276.29
1	9.667	105.667	277.33	276.76	276.76
1	9.750	105.750	277.75	277.18	277.18
1	9.833	105.833	278.18	277.60	277.60
1	9.917	105.917	278.62	278.03	278.03
1	10.000	106.000	279.08	278.47	278.47
1	10.083	106.083	279.55	278.92	278.92
1	10.167	106.167	280.04	279.39	279.39
1	10.250	106.250	280.53	279.87	279.87
1	10.333	106.333	281.05	280.36	280.36
1	10.417	106.417	281.57	280.87	280.87
1	10.500	106.500	282.11	281.39	281.39
1	10.583	106.583	282.67	281.93	281.93
1	10.667	106.667	283.24	282.48	282.48
1	10.750	106.750	283.83	283.04	283.04
1	10.833	106.833	284.43	283.63	283.63
1	10.917	106.917	285.05	284.22	284.22
1	11.000	107.000	285.69	284.84	284.84
1	11.083	107.083	286.34	285.47	285.47
1	11.167	107.167	287.01	286.12	286.12
1	11.250	107.250	287.70	286.78	286.78
1	11.333	107.333	288.41	287.46	287.46
1	11.417	107.417	289.13	288.16	288.16
1	11.500	107.500	289.88	288.88	288.88
1	11.583	107.583	290.64	289.62	289.62
1	11.667	107.667	291.43	290.38	290.38
1	11.750	107.750	292.23	291.16	291.16
1	11.833	107.833	293.06	291.96	291.96
1	11.917	107.917	293.91	292.78	292.78
1	12.000	108.000	294.78	293.62	293.62
1	12.083	108.083	295.69	294.48	294.48
1	12.167	108.167	296.63	295.37	295.37
1	12.250	108.250	297.63	296.30	296.30
1	12.333	108.333	298.70	297.28	297.28
1	12.417	108.417	299.86	298.33	298.33
1	12.500	108.500	301.17	299.46	299.46
1	12.583	108.583	302.66	300.73	300.73
1	12.667	108.667	304.27	302.16	302.16
1	12.750	108.750	305.96	303.72	303.72
1	12.833	108.833	307.73	305.38	305.38
1	12.917	108.917	309.43	307.12	307.12
1	13.000	109.000	311.06	308.84	308.84
1	13.083	109.083	312.73	310.49	310.49
1	13.167	109.167	314.44	312.15	312.15
1	13.250	109.250	316.21	313.85	313.85
1	13.333	109.333	318.04	315.60	315.60
1	13.417	109.417	319.92	317.41	317.41
1	13.500	109.500	321.87	319.27	319.27
1	13.583	109.583	323.91	321.20	321.20
1	13.667	109.667	326.03	323.21	323.21
1	13.750	109.750	328.25	325.30	325.30
1	13.833	109.833	330.57	327.48	327.48
1	13.917	109.917	332.99	329.77	329.77
1	14.000	110.000	335.53	332.16	332.16
1	14.083	110.083	337.90	334.66	334.66
1	14.167	110.167	339.74	337.06	337.06
1	14.250	110.250	341.35	339.05	339.05
1	14.333	110.333	343.12	340.76	340.76
1	14.417	110.417	345.11	342.51	342.51
1	14.500	110.500	347.41	344.43	344.43
1	14.583	110.583	350.08	346.64	346.64
1	14.667	110.667	353.02	349.18	349.18
1	14.750	110.750	356.16	352.02	352.02
1	14.833	110.833	359.49	355.09	355.09
1	14.917	110.917	362.99	358.35	358.35
1	15.000	111.000	366.37	361.79	361.79
1	15.083	111.083	369.51	365.18	365.18
1	15.167	111.167	372.70	368.40	368.40
1	15.250	111.250	376.03	371.59	371.59
1	15.333	111.333	379.52	374.88	374.88
1	15.417	111.417	383.15	378.32	378.32
1	15.500	111.500	386.89	381.90	381.90
1	15.583	111.583	390.67	385.60	385.60
1	15.667	111.667	394.37	389.36	389.36
1	15.750	111.750	398.00	393.07	393.07
1	15.833	111.833	401.53	396.73	396.73
1	15.917	111.917	404.95	400.29	400.29
1	16.000	112.000	408.55	403.75	403.75
1	16.083	112.083	412.80	407.31	407.31
1	16.167	112.167	417.91	411.37	411.37
1	16.250	112.250	423.97	416.21	416.21
1	16.333	112.333	431.24	421.95	421.95
1	16.417	112.417	439.97	428.82	428.82
1	16.500	112.500	450.84	437.07	437.07
1	16.583	112.583	460.43	447.25	447.25
1	16.667	112.667	465.72	457.03	457.03
1	16.750	112.750	469.03	463.53	463.53
1	16.833	112.833	471.98	467.64	467.64
1	16.917	112.917	474.84	470.87	470.87
1	17.000	113.000	477.56	473.82	473.82

1	17.083	113.083	480.08	476.60	476.60
1	17.167	113.167	482.39	479.18	479.18
1	17.250	113.250	484.52	481.57	481.57
1	17.333	113.333	486.53	483.76	483.76
1	17.417	113.417	488.42	485.81	485.81
1	17.500	113.500	490.10	487.75	487.75
1	17.583	113.583	491.53	489.50	489.50
1	17.667	113.667	492.77	491.01	491.01
1	17.750	113.750	493.86	492.32	492.32
1	17.833	113.833	494.80	493.46	493.46
1	17.917	113.917	495.62	494.45	494.45
1	18.000	114.000	496.35	495.32	495.32
1	18.083	114.083	496.96	496.08	496.08
1	18.167	114.167	497.46	496.73	496.73
1	18.250	114.250	497.89	497.27	497.27
1	18.333	114.333	498.27	497.73	497.73
1	18.417	114.417	498.60	498.13	498.13
1	18.500	114.500	498.87	498.48	498.48
1	18.583	114.583	499.10	498.77	498.77
1	18.667	114.667	499.27	499.01	499.01
1	18.750	114.750	499.42	499.21	499.21
1	18.833	114.833	499.53	499.36	499.36
1	18.917	114.917	499.62	499.49	499.49
1	19.000	115.000	499.69	499.59	499.59
1	19.083	115.083	499.74	499.67	499.67
1	19.167	115.167	499.78	499.72	499.72
1	19.250	115.250	499.80	499.76	499.76
1	19.333	115.333	499.80	499.79	499.79
1	19.417	115.417	499.80	499.80	499.80
1	19.500	115.500	499.78	499.80	499.80
1	19.583	115.583	499.75	499.79	499.79
1	19.667	115.667	499.72	499.76	499.76
1	19.750	115.750	499.67	499.73	499.73
1	19.833	115.833	499.61	499.68	499.68
1	19.917	115.917	499.53	499.63	499.63
1	20.000	116.000	499.44	499.56	499.56
1	20.083	116.083	499.33	499.47	499.47
1	20.167	116.167	499.21	499.37	499.37
1	20.250	116.250	499.09	499.25	499.25
1	20.333	116.333	498.96	499.13	499.13
1	20.417	116.417	498.83	499.01	499.01
1	20.500	116.500	498.69	498.88	498.88
1	20.583	116.583	498.54	498.74	498.74
1	20.667	116.667	498.39	498.59	498.59
1	20.750	116.750	498.23	498.44	498.44
1	20.833	116.833	498.07	498.29	498.29
1	20.917	116.917	497.91	498.13	498.13
1	21.000	117.000	497.73	497.96	497.96
1	21.083	117.083	497.56	497.79	497.79
1	21.167	117.167	497.38	497.62	497.62
1	21.250	117.250	497.20	497.44	497.44
1	21.333	117.333	497.01	497.26	497.26
1	21.417	117.417	496.82	497.08	497.08
1	21.500	117.500	496.63	496.89	496.89
1	21.583	117.583	496.44	496.70	496.70
1	21.667	117.667	496.24	496.50	496.50
1	21.750	117.750	496.04	496.31	496.31
1	21.833	117.833	495.83	496.11	496.11
1	21.917	117.917	495.63	495.91	495.91
1	22.000	118.000	495.42	495.70	495.70
1	22.083	118.083	495.21	495.49	495.49
1	22.167	118.167	494.99	495.28	495.28
1	22.250	118.250	494.78	495.07	495.07
1	22.333	118.333	494.56	494.85	494.85
1	22.417	118.417	494.34	494.64	494.64
1	22.500	118.500	494.12	494.42	494.42
1	22.583	118.583	493.89	494.20	494.20
1	22.667	118.667	493.67	493.97	493.97
1	22.750	118.750	493.44	493.75	493.75
1	22.833	118.833	493.21	493.52	493.52
1	22.917	118.917	492.98	493.29	493.29
1	23.000	119.000	492.74	493.06	493.06
1	23.083	119.083	492.51	492.82	492.82
1	23.167	119.167	492.27	492.59	492.59
1	23.250	119.250	492.03	492.35	492.35
1	23.333	119.333	491.79	492.11	492.11
1	23.417	119.417	491.55	491.88	491.88
1	23.500	119.500	491.31	491.63	491.63
1	23.583	119.583	491.06	491.39	491.39
1	23.667	119.667	490.81	491.15	491.15
1	23.750	119.750	490.57	490.90	490.90
1	23.833	119.833	490.32	490.65	490.65
1	23.917	119.917	490.07	490.40	490.40
1	24.000	120.000	489.82	490.15	490.15
1	24.083	120.083	489.56	489.90	489.90
1	24.167	120.167	489.30	489.65	489.65
1	24.250	120.250	489.03	489.39	489.39
1	24.333	120.333	488.75	489.13	489.13
1	24.417	120.417	488.46	488.85	488.85
1	24.500	120.500	488.13	488.56	488.56
1	24.583	120.583	487.77	488.24	488.24
1	24.667	120.667	487.39	487.90	487.90
1	24.750	120.750	487.00	487.52	487.52
1	24.833	120.833	486.59	487.13	487.13
1	24.917	120.917	486.18	486.73	486.73
1	25.000	121.000	485.76	486.32	486.32
1	25.083	121.083	485.34	485.90	485.90
1	25.167	121.167	484.94	485.49	485.49
1	25.250	121.250	484.54	485.08	485.08
1	25.333	121.333	484.14	484.68	484.68
1	25.417	121.417	483.73	484.28	484.28
1	25.500	121.500	483.32	483.87	483.87
1	25.583	121.583	482.91	483.47	483.47
1	25.667	121.667	482.50	483.06	483.06
1	25.750	121.750	482.09	482.65	482.65
1	25.833	121.833	481.67	482.23	482.23
1	25.917	121.917	481.26	481.82	481.82
1	26.000	122.000	480.84	481.40	481.40
1	26.083	122.083	480.43	480.99	480.99
1	26.167	122.167	480.01	480.57	480.57
1	26.250	122.250	479.60	480.16	480.16
1	26.333	122.333	479.18	479.74	479.74
1	26.417	122.417	478.77	479.33	479.33
1	26.500	122.500	478.35	478.91	478.91
1	26.583	122.583	477.94	478.50	478.50
1	26.667	122.667	477.52	478.08	478.08
1	26.750	122.750	477.11	477.67	477.67
1	26.833	122.833	476.69	477.25	477.25
1	26.917	122.917	476.28	476.84	476.84
1	27.000	123.000	475.87	476.42	476.42
1	27.083	123.083	475.45	476.01	476.01
1	27.167	123.167	475.04	475.60	475.60
1	27.250	123.250	474.62	475.18	475.18
1	27.333	123.333	474.21	474.77	474.77
1	27.417	123.417	473.80	474.36	474.36
1	27.500	123.500	473.39	473.94	473.94
1	27.583	123.583	472.97	473.53	473.53
1	27.667	123.667	472.56	473.12	473.12
1	27.750	123.750	472.16	472.70	472.70
1	27.833	123.833	471.78	472.30	472.30
1	27.917	123.917	471.41	471.92	471.92
1	28.000	124.000	471.03	471.54	471.54

Note: Computed Hydrograph continues past two days after the peak day of the design storm.

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PROCESS SUMMARY OF STORAGE:

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    INFLOW  VOLUME =   1991.046 AF
    OUTFLOW VOLUME =   1991.045 AF
    LOSS    VOLUME =      0.000 AF
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6300.00 TO NODE   6311.00 IS CODE =   1
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        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of   299.3 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
================================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #2)

         WATERSHED AREA =     299.300 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.250 HOURS
          CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
          THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
          MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.250
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.750
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:
         +------------------+--------+--------+--------+--------+--------+
         | RAINFALL DEPTHS & |        |        |        |        |        |
         |    LOSS RATES     |  DAY 1 |  DAY 2 |  DAY 3 |  DAY 4 |  DAY 5 |
         |==================+========+========+========+========+========|
         | 5-MINUTE (INCHES) |    0.58|    0.27|    0.12|    0.06|    0.04|
         |30-MINUTE (INCHES) |    1.22|    0.56|    0.24|    0.13|    0.09|
         |   1-HOUR (INCHES) |    1.62|    0.75|    0.33|    0.17|    0.12|
         |   3-HOUR (INCHES) |    2.71|    1.25|    0.54|    0.28|    0.21|
         |   6-HOUR (INCHES) |    3.75|    1.73|    0.75|    0.39|    0.29|
         |  24-HOUR (INCHES) |    6.28|    2.89|    1.26|    0.66|    0.48|
         |==================+========+========+========+========+========|
         | LOSS RATE(IN/HR)  |   0.260|   0.260|   0.260|   0.260|   0.260|
         | LOW LOSS FRACTION |   0.500|   0.730|   0.930|   0.990|   0.990|
         +------------------+--------+--------+--------+--------+--------+
           5-MINUTE FACTOR = 0.987
          30-MINUTE FACTOR = 0.987
           1-HOUR FACTOR = 0.987
           3-HOUR FACTOR = 0.998
           6-HOUR FACTOR = 0.999
          24-HOUR FACTOR = 0.999

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  33.333


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  96.00
         MODEL TIME(HOURS) FOR END OF RESULTS = 124.00


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                      UNIT HYDROGRAPH DETERMINATION

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     INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
      NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------------
         1                3.852               139.411
         2               18.445               528.231
         3               39.624               766.604
         4               55.845               587.160
         5               64.124               299.680
         6               70.038               214.036
         7               74.639               166.538
         8               78.230               130.017
         9               81.158               105.957
        10               83.587                87.936
        11               85.638                74.235
        12               87.267                58.971
        13               88.619                48.932
        14               89.699                39.084
        15               90.702                36.306
        16               91.629                33.565
        17               92.506                31.749
        18               93.325                29.632
        19               94.080                27.335
        20               94.768                24.914
        21               95.424                23.727
        22               95.971                19.796
        23               96.509                19.477
        24               97.020                18.507
        25               97.406                13.985
        26               97.766                13.021
        27               98.126                13.018
        28               98.458                12.019
        29               98.594                 4.931
        30               98.692                 3.557
        31               98.791                 3.557
        32               98.889                 3.550
        33               98.987                 3.557
        34               99.085                 3.551
        35               99.183                 3.557
        36               99.281                 3.550
        37               99.380                 3.550
        38               99.478                 3.550
        39               99.576                 3.550
        40               99.674                 3.550
        41               99.772                 3.550
        42               99.870                 3.550
        43               99.968                 3.550
        44              100.000                 1.157


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    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =     162.2768
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =     126.0595
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5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 175.0 350.0 525.0 700.0
96.000	32.8756	3.82	Q V . . .
(PEAK DAY 2, HOUR 24.000)			
96.083	32.9046	4.22	Q V . . .
(PEAK DAY 1, HOUR 0.083)			
96.167	32.9446	5.81	Q V . . .
(PEAK DAY 1, HOUR 0.167)			
96.250	33.0007	8.14	Q V . . .
(PEAK DAY 1, HOUR 0.250)			
96.333	33.0691	9.93	Q V . . .
(PEAK DAY 1, HOUR 0.333)			
96.417	33.1439	10.86	Q V . . .
(PEAK DAY 1, HOUR 0.417)			
96.500	33.2233	11.53	Q V . . .
(PEAK DAY 1, HOUR 0.500)			
96.583	33.3064	12.07	Q V . . .
(PEAK DAY 1, HOUR 0.583)			
96.667	33.3925	12.50	Q V . . .
(PEAK DAY 1, HOUR 0.667)			
96.750	33.4810	12.85	Q V . . .
(PEAK DAY 1, HOUR 0.750)			
96.833	33.5716	13.16	Q V . . .
(PEAK DAY 1, HOUR 0.833)			
96.917	33.6640	13.42	Q V . . .
(PEAK DAY 1, HOUR 0.917)			
97.000	33.7579	13.64	Q V . . .
(PEAK DAY 1, HOUR 1.000)			
97.083	33.8532	13.83	Q V . . .
(PEAK DAY 1, HOUR 1.083)			
97.167	33.9496	13.99	Q V . . .
(PEAK DAY 1, HOUR 1.167)			
97.250	34.0470	14.15	Q V . . .
(PEAK DAY 1, HOUR 1.250)			
97.333	34.1455	14.30	Q V . . .
(PEAK DAY 1, HOUR 1.333)			
97.417	34.2449	14.44	Q V . . .
(PEAK DAY 1, HOUR 1.417)			
97.500	34.3453	14.58	Q V . . .
(PEAK DAY 1, HOUR 1.500)			
97.583	34.4466	14.71	Q V . . .
(PEAK DAY 1, HOUR 1.583)			
97.667	34.5487	14.83	Q V . . .
(PEAK DAY 1, HOUR 1.667)			
97.750	34.6517	14.96	Q V . . .
(PEAK DAY 1, HOUR 1.750)			
97.833	34.7555	15.07	Q .V . . .
(PEAK DAY 1, HOUR 1.833)			
97.917	34.8601	15.18	Q .V . . .
(PEAK DAY 1, HOUR 1.917)			
98.000	34.9654	15.29	Q .V . . .
(PEAK DAY 1, HOUR 2.000)			
98.083	35.0714	15.39	Q .V . . .
(PEAK DAY 1, HOUR 2.083)			
98.167	35.1780	15.48	Q .V . . .
(PEAK DAY 1, HOUR 2.167)			
98.250	35.2853	15.58	Q .V . . .
(PEAK DAY 1, HOUR 2.250)			
98.333	35.3933	15.67	Q .V . . .
(PEAK DAY 1, HOUR 2.333)			
98.417	35.5017	15.75	Q .V . . .
(PEAK DAY 1, HOUR 2.417)			
98.500	35.6106	15.81	Q .V . . .
(PEAK DAY 1, HOUR 2.500)			
98.583	35.7200	15.88	Q .V . . .
(PEAK DAY 1, HOUR 2.583)			
98.667	35.8299	15.95	Q .V . . .
(PEAK DAY 1, HOUR 2.667)			
98.750	35.9403	16.03	Q .V . . .
(PEAK DAY 1, HOUR 2.750)			
98.833	36.0511	16.10	Q .V . . .
(PEAK DAY 1, HOUR 2.833)			
98.917	36.1625	16.17	Q .V . . .
(PEAK DAY 1, HOUR 2.917)			
99.000	36.2744	16.24	Q .V . . .
(PEAK DAY 1, HOUR 3.000)			
99.083	36.3867	16.32	Q .V . . .
(PEAK DAY 1, HOUR 3.083)			
99.167	36.4996	16.39	Q .V . . .
(PEAK DAY 1, HOUR 3.167)			
99.250	36.6130	16.47	Q .V . . .
(PEAK DAY 1, HOUR 3.250)			
99.333	36.7270	16.54	Q .V . . .
(PEAK DAY 1, HOUR 3.333)			
99.417	36.8414	16.62	Q .V . . .
(PEAK DAY 1, HOUR 3.417)			
99.500	36.9564	16.70	Q .V . . .
(PEAK DAY 1, HOUR 3.500)			
99.583	37.0720	16.78	Q .V . . .
(PEAK DAY 1, HOUR 3.583)			
99.667	37.1880	16.85	Q .V . . .
(PEAK DAY 1, HOUR 3.667)			
99.750	37.3045	16.92	Q .V . . .
(PEAK DAY 1, HOUR 3.750)			
99.833	37.4215	16.99	Q .V . . .
(PEAK DAY 1, HOUR 3.833)			
99.917	37.5390	17.06	Q .V . . .
(PEAK DAY 1, HOUR 3.917)			
100.000	37.6569	17.13	Q .V . . .
(PEAK DAY 1, HOUR 4.000)			
100.083	37.7754	17.20	Q .V . . .
(PEAK DAY 1, HOUR 4.083)			
100.167	37.8943	17.27	Q . V . . .
(PEAK DAY 1, HOUR 4.167)			
100.250	38.0138	17.35	Q . V . . .
(PEAK DAY 1, HOUR 4.250)			
100.333	38.1338	17.42	Q . V . . .
(PEAK DAY 1, HOUR 4.333)			
100.417	38.2543	17.50	Q . V . . .
(PEAK DAY 1, HOUR 4.417)			
100.500	38.3753	17.57	.Q . V . . .
(PEAK DAY 1, HOUR 4.500)			
100.583	38.4969	17.65	.Q . V . . .
(PEAK DAY 1, HOUR 4.583)			
100.667	38.6190	17.73	.Q . V . . .
(PEAK DAY 1, HOUR 4.667)			
100.750	38.7416	17.81	.Q . V . . .
(PEAK DAY 1, HOUR 4.750)			
100.833	38.8648	17.89	.Q . V . . .
(PEAK DAY 1, HOUR 4.833)			
100.917	38.9885	17.97	.Q . V . . .
(PEAK DAY 1, HOUR 4.917)			
101.000	39.1128	18.05	.Q . V . . .
(PEAK DAY 1, HOUR 5.000)			
101.083	39.2377	18.13	.Q . V . . .
(PEAK DAY 1, HOUR 5.083)			

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101.167     39.3632     18.22  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.167)
101.250     39.4892     18.30  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.250)
101.333     39.6158     18.39  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.333)
101.417     39.7430     18.47  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.417)
101.500     39.8709     18.56  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.500)
101.583     39.9993     18.65  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.583)
101.667     40.1283     18.74  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.667)
101.750     40.2580     18.83  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.750)
101.833     40.3883     18.92  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.833)
101.917     40.5193     19.02  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.917)
102.000     40.6509     19.11  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   6.000)
102.083     40.7832     19.21  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   6.083)
102.167     40.9161     19.30  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   6.167)
102.250     41.0497     19.40  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.250)
102.333     41.1841     19.50  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.333)
102.417     41.3191     19.60  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.417)
102.500     41.4548     19.71  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.500)
102.583     41.5912     19.81  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.583)
102.667     41.7283     19.91  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.667)
102.750     41.8662     20.02  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.750)
102.833     42.0048     20.13  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.833)
102.917     42.1442     20.24  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.917)
103.000     42.2844     20.35  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.000)
103.083     42.4253     20.46  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.083)
103.167     42.5670     20.58  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.167)
103.250     42.7096     20.69  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.250)
103.333     42.8529     20.81  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.333)
103.417     42.9970     20.93  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.417)
103.500     43.1420     21.05  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.500)
103.583     43.2879     21.18  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.583)
103.667     43.4346     21.30  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.667)
103.750     43.5822     21.43  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.750)
103.833     43.7307     21.56  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.833)
103.917     43.8801     21.69  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.917)
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104.000     44.0304     21.82  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   8.000)
104.083     44.1816     21.96  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.083)
104.167     44.3338     22.10  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.167)
104.250     44.4869     22.24  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.250)
104.333     44.6411     22.38  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.333)
104.417     44.7962     22.52  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.417)
104.500     44.9523     22.67  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.500)
104.583     45.1095     22.82  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.583)
104.667     45.2677     22.97  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.667)
104.750     45.4270     23.13  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.750)
104.833     45.5874     23.29  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.833)
104.917     45.7489     23.45  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.917)
105.000     45.9115     23.61  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.000)
105.083     46.0752     23.78  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.083)
105.167     46.2402     23.95  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.167)
105.250     46.4063     24.12  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.250)
105.333     46.5736     24.30  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.333)
105.417     46.7422     24.48  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.417)
105.500     46.9120     24.66  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.500)
105.583     47.0831     24.85  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.583)
105.667     47.2556     25.04  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.667)
105.750     47.4293     25.23  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.750)
105.833     47.6045     25.43  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.833)
105.917     47.7810     25.63  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.917)
106.000     47.9590     25.84  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.000)
106.083     48.1383     26.05  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.083)
106.167     48.3192     26.26  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.167)
106.250     48.5016     26.48  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.250)
106.333     48.6856     26.71  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.333)
106.417     48.8711     26.94  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.417)
106.500     49.0583     27.18  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.500)
106.583     49.2471     27.42  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.583)
106.667     49.4376     27.66  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.667)
106.750     49.6299     27.91  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.750)
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106.833     49.8239     28.17  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.833)
106.917     50.0198     28.44  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.917)
107.000     50.2175     28.71  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  11.000)
107.083     50.4171     28.99  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  11.083)
107.167     50.6187     29.27  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.167)
107.250     50.8223     29.57  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.250)
107.333     51.0280     29.87  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.333)
107.417     51.2359     30.17  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.417)
107.500     51.4459     30.49  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.500)
107.583     51.6581     30.82  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.583)
107.667     51.8727     31.15  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.667)
107.750     52.0896     31.50  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.750)
107.833     52.3090     31.85  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.833)
107.917     52.5309     32.22  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.917)
108.000     52.7554     32.60  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  12.000)
108.083     52.9850     33.34  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  12.083)
108.167     53.2266     35.09  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.167)
108.250     53.4846     37.46  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.250)
108.333     53.7559     39.39  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.333)
108.417     54.0356     40.62  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.417)
108.500     54.3224     41.64  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.500)
108.583     54.6155     42.56  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.583)
108.667     54.9144     43.40  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.667)
108.750     55.2188     44.20  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.750)
108.833     55.5286     44.98  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.833)
108.917     55.8436     45.74  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.917)
109.000     56.1638     46.49  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  13.000)
109.083     56.4890     47.23  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  13.083)
109.167     56.8194     47.97  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  13.167)
109.250     57.1551     48.73  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  13.250)
109.333     57.4961     49.52  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  13.333)
109.417     57.8427     50.33  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  13.417)
109.500     58.1951     51.16  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  13.500)
109.583     58.5534     52.03  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  13.583)
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109.667     58.9178     52.92  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  13.667)
109.750     59.2887     53.85  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  13.750)
109.833     59.6663     54.82  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  13.833)
109.917     60.0508     55.83  . Q       .        V.         .         .
(PEAK DAY 1, HOUR  13.917)
110.000     60.4427     56.90  . Q       .        V.         .         .
(PEAK DAY 1, HOUR  14.000)
110.083     60.8424     58.05  . Q       .        V.         .         .
(PEAK DAY 1, HOUR  14.083)
110.167     61.2514     59.39  . Q       .        V.         .         .
(PEAK DAY 1, HOUR  14.167)
110.250     61.6706     60.87  . Q       .        V.         .         .
(PEAK DAY 1, HOUR  14.250)
110.333     62.1002     62.37  . Q       .        V.         .         .
(PEAK DAY 1, HOUR  14.333)
110.417     62.5398     63.84  . Q       .        V.         .         .
(PEAK DAY 1, HOUR  14.417)
110.500     62.9900     65.37  . Q       .        V.         .         .
(PEAK DAY 1, HOUR  14.500)
110.583     63.4513     66.98  . Q       .         V         .         .
(PEAK DAY 1, HOUR  14.583)
110.667     63.9245     68.71  . Q       .         V         .         .
(PEAK DAY 1, HOUR  14.667)
110.750     64.4112     70.66  .  Q       .         V         .         .
(PEAK DAY 1, HOUR  14.750)
110.833     64.9150     73.15  .  Q       .         V         .         .
(PEAK DAY 1, HOUR  14.833)
110.917     65.4407     76.34  .  Q       .         V         .         .
(PEAK DAY 1, HOUR  14.917)
111.000     65.9935     80.25  .  Q       .         V         .         .
(PEAK DAY 1, HOUR  15.000)
111.083     66.5774     84.78  .  Q       .         .V        .         .
(PEAK DAY 1, HOUR  15.083)
111.167     67.1973     90.01  .   Q       .         .V        .         .
(PEAK DAY 1, HOUR  15.167)
111.250     67.8580     95.94  .   Q       .         .V        .         .
(PEAK DAY 1, HOUR  15.250)
111.333     68.5659    102.79  .   Q       .         .V        .         .
(PEAK DAY 1, HOUR  15.333)
111.417     69.3190    109.35  .    Q       .         .V        .         .
(PEAK DAY 1, HOUR  15.417)
111.500     70.1017    113.65  .    Q       .         . V       .         .
(PEAK DAY 1, HOUR  15.500)
111.583     70.9099    117.35  .    Q       .         . V       .         .
(PEAK DAY 1, HOUR  15.583)
111.667     71.7709    125.02  .     Q       .         . V       .         .
(PEAK DAY 1, HOUR  15.667)
111.750     72.7266    138.77  .     Q       .         .  V      .         .
(PEAK DAY 1, HOUR  15.750)
111.833     73.8217    159.00  .       Q.        .         .  V      .         .
(PEAK DAY 1, HOUR  15.833)
111.917     75.1262    189.42  .        Q        .         .  V      .         .
(PEAK DAY 1, HOUR  15.917)
112.000     76.7812    240.31  .         .  Q      .         .   V     .         .
(PEAK DAY 1, HOUR  16.000)
112.083     79.3056    366.54  .         .        Q    V    .         .
(PEAK DAY 1, HOUR  16.083)
112.167     83.2784    576.85  .         .        .     V   . Q       .
(PEAK DAY 1, HOUR  16.167)
112.250     87.9056    671.87  .         .        .      V  .       Q .
(PEAK DAY 1, HOUR  16.250)
112.333     91.7172    553.44  .         .        .        V.Q       .
(PEAK DAY 1, HOUR  16.333)
112.417     94.3714    385.40  .         .        . Q      V.        .
(PEAK DAY 1, HOUR  16.417)
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112.500     96.5294    313.35  .          .      Q  .         V         .
(PEAK DAY 1, HOUR  16.500)
112.583     98.3808    268.82  .          .    Q    .         .V        .
(PEAK DAY 1, HOUR  16.583)
112.667     99.9869    233.20  .          .  Q      .         .V        .
(PEAK DAY 1, HOUR  16.667)
112.750    101.3946    204.39  .         .Q         .         . V       .
(PEAK DAY 1, HOUR  16.750)
112.833    102.6383    180.59  .         Q          .         . V       .
(PEAK DAY 1, HOUR  16.833)
112.917    103.7472    161.01  .        Q.          .         . V       .
(PEAK DAY 1, HOUR  16.917)
113.000    104.7342    143.32  .       Q .          .         .  V      .
(PEAK DAY 1, HOUR  17.000)
113.083    105.6298    130.03  .      Q  .          .         .  V      .
(PEAK DAY 1, HOUR  17.083)
113.167    106.4471    118.67  .     Q   .          .         .  V      .
(PEAK DAY 1, HOUR  17.167)
113.250    107.2151    111.51  .     Q   .          .         .   V     .
(PEAK DAY 1, HOUR  17.250)
113.333    107.9404    105.32  .     Q   .          .         .   V     .
(PEAK DAY 1, HOUR  17.333)
113.417    108.6304    100.18  .    Q    .          .         .   V     .
(PEAK DAY 1, HOUR  17.417)
113.500    109.2865     95.26  .    Q    .          .         .   V     .
(PEAK DAY 1, HOUR  17.500)
113.583    109.9104     90.59  .    Q    .          .         .   V     .
(PEAK DAY 1, HOUR  17.583)
113.667    110.5035     86.13  .   Q     .          .         .    V    .
(PEAK DAY 1, HOUR  17.667)
113.750    111.0709     82.38  .   Q     .          .         .    V    .
(PEAK DAY 1, HOUR  17.750)
113.833    111.6069     77.82  .   Q     .          .         .    V    .
(PEAK DAY 1, HOUR  17.833)
113.917    112.1224     74.86  .   Q     .          .         .    V    .
(PEAK DAY 1, HOUR  17.917)
114.000    112.6157     71.63  .   Q     .          .         .    V    .
(PEAK DAY 1, HOUR  18.000)
114.083    113.0756     66.78  .  Q      .          .         .    V    .
(PEAK DAY 1, HOUR  18.083)
114.167    113.5071     62.65  .  Q      .          .         .     V   .
(PEAK DAY 1, HOUR  18.167)
114.250    113.9085     58.29  .  Q      .          .         .     V   .
(PEAK DAY 1, HOUR  18.250)
114.333    114.2791     53.80  .  Q      .          .         .     V   .
(PEAK DAY 1, HOUR  18.333)
114.417    114.6084     47.83  . Q       .          .         .     V   .
(PEAK DAY 1, HOUR  18.417)
114.500    114.9178     44.92  . Q       .          .         .     V   .
(PEAK DAY 1, HOUR  18.500)
114.583    115.2148     43.12  . Q       .          .         .     V   .
(PEAK DAY 1, HOUR  18.583)
114.667    115.5015     41.63  . Q       .          .         .     V   .
(PEAK DAY 1, HOUR  18.667)
114.750    115.7791     40.30  . Q       .          .         .     V   .
(PEAK DAY 1, HOUR  18.750)
114.833    116.0483     39.09  . Q       .          .         .     V   .
(PEAK DAY 1, HOUR  18.833)
114.917    116.3100     38.00  . Q       .          .         .     V   .
(PEAK DAY 1, HOUR  18.917)
115.000    116.5650     37.02  . Q       .          .         .     V   .
(PEAK DAY 1, HOUR  19.000)
115.083    116.8138     36.13  . Q       .          .         .      V  .
(PEAK DAY 1, HOUR  19.083)
115.167    117.0569     35.29  . Q       .          .         .      V  .
(PEAK DAY 1, HOUR  19.167)
115.250    117.2943     34.47  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  19.250)
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115.333    117.5261     33.65  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  19.333)
115.417    117.7521     32.82  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  19.417)
115.500    117.9719     31.91  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  19.500)
115.583    118.1844     30.86  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  19.583)
115.667    118.3832     28.87  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  19.667)
115.750    118.5730     27.55  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  19.750)
115.833    118.7582     26.88  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  19.833)
115.917    118.9394     26.31  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  19.917)
116.000    119.1169     25.78  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  20.000)
116.083    119.2911     25.29  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  20.083)
116.167    119.4621     24.83  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  20.167)
116.250    119.6301     24.40  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  20.250)
116.333    119.7954     24.00  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  20.333)
116.417    119.9582     23.64  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  20.417)
116.500    120.1186     23.29  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  20.500)
116.583    120.2767     22.96  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  20.583)
116.667    120.4326     22.64  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  20.667)
116.750    120.5864     22.33  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  20.750)
116.833    120.7382     22.03  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  20.833)
116.917    120.8879     21.75  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  20.917)
117.000    121.0358     21.47  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.000)
117.083    121.1818     21.20  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.083)
117.167    121.3261     20.94  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.167)
117.250    121.4686     20.69  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.250)
117.333    121.6094     20.45  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.333)
117.417    121.7486     20.21  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.417)
117.500    121.8862     19.98  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.500)
117.583    122.0223     19.76  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.583)
117.667    122.1569     19.55  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.667)
117.750    122.2902     19.34  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.750)
117.833    122.4220     19.15  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.833)
117.917    122.5526     18.96  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.917)
118.000    122.6818     18.77  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  22.000)
118.083    122.8099     18.59  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  22.083)
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 118.167    122.9367     18.41  .Q         .         .         .         V.
 (PEAK DAY 1, HOUR  22.167)
 118.250    123.0623     18.24  .Q         .         .         .         V.
 (PEAK DAY 1, HOUR  22.250)
 118.333    123.1867     18.07  .Q         .         .         .         V.
 (PEAK DAY 1, HOUR  22.333)
 118.417    123.3100     17.90  .Q         .         .         .         V.
 (PEAK DAY 1, HOUR  22.417)
 118.500    123.4322     17.74  .Q         .         .         .         V.
 (PEAK DAY 1, HOUR  22.500)
 118.583    123.5533     17.59  .Q         .         .         .         V.
 (PEAK DAY 1, HOUR  22.583)
 118.667    123.6734     17.43  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  22.667)
 118.750    123.7924     17.28  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  22.750)
 118.833    123.9104     17.14  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  22.833)
 118.917    124.0275     16.99  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  22.917)
 119.000    124.1436     16.85  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  23.000)
 119.083    124.2587     16.72  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  23.083)
 119.167    124.3729     16.58  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  23.167)
 119.250    124.4862     16.45  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  23.250)
 119.333    124.5986     16.32  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  23.333)
 119.417    124.7101     16.20  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  23.417)
 119.500    124.8208     16.07  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  23.500)
 119.583    124.9307     15.95  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  23.583)
 119.667    125.0397     15.83  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  23.667)
 119.750    125.1480     15.72  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  23.750)
 119.833    125.2554     15.60  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  23.833)
 119.917    125.3621     15.49  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  23.917)
 120.000    125.4680     15.38  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  24.000)
 120.083    125.5693     14.71  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  24.083)
 120.167    125.6552     12.46  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  24.167)
 120.250    125.7190      9.27  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  24.250)
 120.333    125.7661      6.83  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  24.333)
 120.417    125.8044      5.57  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  24.417)
 120.500    125.8365      4.66  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  24.500)
 120.583    125.8637      3.95  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  24.583)
 120.667    125.8871      3.40  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  24.667)
 120.750    125.9073      2.94  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  24.750)
 120.833    125.9250      2.56  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  24.833)
 120.917    125.9405      2.25  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  24.917)
 121.000    125.9542      1.99  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  25.000)
 121.083    125.9664      1.78  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  25.083)
 121.167    125.9775      1.61  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  25.167)
 121.250    125.9874      1.45  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  25.250)
 121.333    125.9964      1.30  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  25.333)
 121.417    126.0044      1.16  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  25.417)
 121.500    126.0116      1.04  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  25.500)
 121.583    126.0179      0.92  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  25.583)
 121.667    126.0234      0.81  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  25.667)
 121.750    126.0283      0.71  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  25.750)
 121.833    126.0326      0.62  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  25.833)
 121.917    126.0363      0.54  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  25.917)
 122.000    126.0395      0.46  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  26.000)
 122.083    126.0423      0.40  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  26.083)
 122.167    126.0446      0.35  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  26.167)
 122.250    126.0466      0.29  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  26.250)
 122.333    126.0483      0.24  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  26.333)
 122.417    126.0498      0.22  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  26.417)
 122.500    126.0512      0.20  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  26.500)
 122.583    126.0524      0.19  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  26.583)
 122.667    126.0536      0.17  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  26.667)
 122.750    126.0547      0.15  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  26.750)
 122.833    126.0556      0.14  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  26.833)
 122.917    126.0565      0.12  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  26.917)
 123.000    126.0572      0.11  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  27.000)
 123.083    126.0579      0.09  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  27.083)
 123.167    126.0584      0.08  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  27.167)
 123.250    126.0588      0.06  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  27.250)
 123.333    126.0592      0.05  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  27.333)
 123.417    126.0594      0.03  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  27.417)
 123.500    126.0595      0.02  Q          .         .         .          V
 (PEAK DAY 1, HOUR  27.500)
 123.583    126.0596      0.00  Q          .         .         .          V
 (PEAK DAY 1, HOUR  27.583)
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  FLOW PROCESS FROM NODE   6311.00 TO NODE   6311.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  5040.6 Ac. ***
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE   6311.00 TO NODE   6311.00 IS CODE =  11
----------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
============================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  5040.6 Ac. ***

            STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
          (Note: Time indicated is at END of Each Unit Intervals)
----------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      275.0     550.0     825.0    1100.0
----------------------------------------------------------------------------
  96.000    493.7987    296.25  .        VQ         .         .         .
 (PEAK DAY 2, HOUR  24.000)
  96.083    495.8326    295.32  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   0.083)
  96.167    497.8684    295.60  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   0.167)
  96.250    499.9113    296.63  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   0.250)
  96.333    501.9579    297.16  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   0.333)
  96.417    504.0024    296.88  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   0.417)
  96.500    506.0438    296.40  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   0.500)
  96.583    508.0817    295.90  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   0.583)
  96.667    510.1164    295.44  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   0.667)
  96.750    512.1482    295.02  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   0.750)
  96.833    514.1773    294.62  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   0.833)
  96.917    516.2038    294.25  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   0.917)
  97.000    518.2277    293.87  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   1.000)
  97.083    520.2490    293.50  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   1.083)
  97.167    522.2679    293.13  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   1.167)
  97.250    524.2844    292.79  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   1.250)
  97.333    526.2986    292.47  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   1.333)
  97.417    528.3107    292.16  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   1.417)
  97.500    530.3209    291.87  .         Q         .         .         .
 (PEAK DAY 1, HOUR   1.500)
  97.583    532.3291    291.59  .         Q         .         .         .
 (PEAK DAY 1, HOUR   1.583)
  97.667    534.3350    291.26  .         Q         .         .         .
 (PEAK DAY 1, HOUR   1.667)
  97.750    536.3381    290.85  .         Q         .         .         .
 (PEAK DAY 1, HOUR   1.750)
  97.833    538.3383    290.41  .         Q         .         .         .
 (PEAK DAY 1, HOUR   1.833)
  97.917    540.3354    289.99  .         Q         .         .         .
 (PEAK DAY 1, HOUR   1.917)
  98.000    542.3298    289.58  .         Q         .         .         .
 (PEAK DAY 1, HOUR   2.000)
  98.083    544.3215    289.18  .         Q         .         .         .
 (PEAK DAY 1, HOUR   2.083)
  98.167    546.3104    288.79  .         Q         .         .         .
 (PEAK DAY 1, HOUR   2.167)
  98.250    548.2968    288.42  .         Q         .         .         .
 (PEAK DAY 1, HOUR   2.250)
  98.333    550.2807    288.06  .         Q         .         .         .
 (PEAK DAY 1, HOUR   2.333)
  98.417    552.2620    287.68  .         Q         .         .         .
 (PEAK DAY 1, HOUR   2.417)
  98.500    554.2408    287.32  .         Q         .         .         .
 (PEAK DAY 1, HOUR   2.500)
  98.583    556.2172    286.97  .         Q         .         .         .
 (PEAK DAY 1, HOUR   2.583)
  98.667    558.1912    286.63  .         Q         .         .         .
 (PEAK DAY 1, HOUR   2.667)
  98.750    560.1630    286.30  .         Q         .         .         .
 (PEAK DAY 1, HOUR   2.750)
  98.833    562.1326    285.99  .         Q         .         .         .
 (PEAK DAY 1, HOUR   2.833)
  98.917    564.1002    285.69  .         Q         .         .         .
 (PEAK DAY 1, HOUR   2.917)
  99.000    566.0657    285.40  .         Q         .         .         .
 (PEAK DAY 1, HOUR   3.000)
  99.083    568.0294    285.12  .         Q         .         .         .
 (PEAK DAY 1, HOUR   3.083)
  99.167    569.9913    284.86  .         Q         .         .         .
 (PEAK DAY 1, HOUR   3.167)
  99.250    571.9514    284.61  .         Q         .         .         .
 (PEAK DAY 1, HOUR   3.250)
  99.333    573.9099    284.37  .         Q         .         .         .
 (PEAK DAY 1, HOUR   3.333)
  99.417    575.8668    284.14  .         Q         .         .         .
 (PEAK DAY 1, HOUR   3.417)
  99.500    577.8222    283.93  .         Q         .         .         .
 (PEAK DAY 1, HOUR   3.500)
  99.583    579.7762    283.73  .         Q         .         .         .
 (PEAK DAY 1, HOUR   3.583)
  99.667    581.7289    283.53  .         Q         .         .         .
 (PEAK DAY 1, HOUR   3.667)
  99.750    583.6804    283.34  .         QV        .         .         .
 (PEAK DAY 1, HOUR   3.750)
  99.833    585.6306    283.17  .         QV        .         .         .
 (PEAK DAY 1, HOUR   3.833)
  99.917    587.5797    283.01  .         QV        .         .         .
 (PEAK DAY 1, HOUR   3.917)
 100.000    589.5277    282.86  .         QV        .         .         .
 (PEAK DAY 1, HOUR   4.000)
 100.083    591.4748    282.72  .         QV        .         .         .
 (PEAK DAY 1, HOUR   4.083)
 100.167    593.4210    282.59  .         QV        .         .         .
 (PEAK DAY 1, HOUR   4.167)
 100.250    595.3664    282.47  .         QV        .         .         .
 (PEAK DAY 1, HOUR   4.250)
 100.333    597.3111    282.37  .         QV        .         .         .
 (PEAK DAY 1, HOUR   4.333)
 100.417    599.2551    282.27  .         QV        .         .         .
 (PEAK DAY 1, HOUR   4.417)
 100.500    601.1986    282.19  .         QV        .         .         .
 (PEAK DAY 1, HOUR   4.500)
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100.583    603.1416    282.12  .         QV        .         .         .
(PEAK DAY 1, HOUR   4.583)
100.667    605.0842    282.06  .         QV        .         .         .
(PEAK DAY 1, HOUR   4.667)
100.750    607.0264    282.01  .         QV        .         .         .
(PEAK DAY 1, HOUR   4.750)
100.833    608.9683    281.97  .         QV        .         .         .
(PEAK DAY 1, HOUR   4.833)
100.917    610.9101    281.95  .         QV        .         .         .
(PEAK DAY 1, HOUR   4.917)
101.000    612.8518    281.93  .         QV        .         .         .
(PEAK DAY 1, HOUR   5.000)
101.083    614.7935    281.93  .         QV        .         .         .
(PEAK DAY 1, HOUR   5.083)
101.167    616.7352    281.94  .         QV        .         .         .
(PEAK DAY 1, HOUR   5.167)
101.250    618.6771    281.96  .         QV        .         .         .
(PEAK DAY 1, HOUR   5.250)
101.333    620.6191    281.99  .         QV        .         .         .
(PEAK DAY 1, HOUR   5.333)
101.417    622.5615    282.04  .         QV        .         .         .
(PEAK DAY 1, HOUR   5.417)
101.500    624.5043    282.09  .         QV        .         .         .
(PEAK DAY 1, HOUR   5.500)
101.583    626.4475    282.16  .         QV        .         .         .
(PEAK DAY 1, HOUR   5.583)
101.667    628.3913    282.24  .         QV        .         .         .
(PEAK DAY 1, HOUR   5.667)
101.750    630.3357    282.33  .         QV        .         .         .
(PEAK DAY 1, HOUR   5.750)
101.833    632.2808    282.43  .         QV        .         .         .
(PEAK DAY 1, HOUR   5.833)
101.917    634.2267    282.55  .         QV        .         .         .
(PEAK DAY 1, HOUR   5.917)
102.000    636.1735    282.67  .         Q V       .         .         .
(PEAK DAY 1, HOUR   6.000)
102.083    638.1213    282.81  .         Q V       .         .         .
(PEAK DAY 1, HOUR   6.083)
102.167    640.0701    282.96  .         Q V       .         .         .
(PEAK DAY 1, HOUR   6.167)
102.250    642.0200    283.13  .         Q V       .         .         .
(PEAK DAY 1, HOUR   6.250)
102.333    643.9711    283.30  .         Q V       .         .         .
(PEAK DAY 1, HOUR   6.333)
102.417    645.9235    283.49  .         Q V       .         .         .
(PEAK DAY 1, HOUR   6.417)
102.500    647.8773    283.69  .         Q V       .         .         .
(PEAK DAY 1, HOUR   6.500)
102.583    649.8325    283.90  .         Q V       .         .         .
(PEAK DAY 1, HOUR   6.583)
102.667    651.7894    284.13  .         Q V       .         .         .
(PEAK DAY 1, HOUR   6.667)
102.750    653.7479    284.37  .         Q V       .         .         .
(PEAK DAY 1, HOUR   6.750)
102.833    655.7081    284.62  .         Q V       .         .         .
(PEAK DAY 1, HOUR   6.833)
102.917    657.6701    284.89  .         Q V       .         .         .
(PEAK DAY 1, HOUR   6.917)
103.000    659.6340    285.17  .         Q V       .         .         .
(PEAK DAY 1, HOUR   7.000)
103.083    661.6000    285.46  .         Q V       .         .         .
(PEAK DAY 1, HOUR   7.083)
103.167    663.5681    285.76  .         Q V       .         .         .
(PEAK DAY 1, HOUR   7.167)
103.250    665.5383    286.08  .         Q V       .         .         .
(PEAK DAY 1, HOUR   7.250)
103.333    667.5109    286.41  .         Q V       .         .         .
(PEAK DAY 1, HOUR   7.333)
103.417    669.4858    286.76  .         Q V       .         .         .
(PEAK DAY 1, HOUR   7.417)
103.500    671.4632    287.12  .         Q V       .         .         .
(PEAK DAY 1, HOUR   7.500)
103.583    673.4432    287.49  .         Q V       .         .         .
(PEAK DAY 1, HOUR   7.583)
103.667    675.4258    287.88  .         Q V       .         .         .
(PEAK DAY 1, HOUR   7.667)
103.750    677.4113    288.28  .         Q V       .         .         .
(PEAK DAY 1, HOUR   7.750)
103.833    679.3995    288.70  .         Q V       .         .         .
(PEAK DAY 1, HOUR   7.833)
103.917    681.3908    289.13  .         Q V       .         .         .
(PEAK DAY 1, HOUR   7.917)
104.000    683.3851    289.58  .         Q V       .         .         .
(PEAK DAY 1, HOUR   8.000)
104.083    685.3826    290.04  .         Q V       .         .         .
(PEAK DAY 1, HOUR   8.083)
104.167    687.3834    290.52  .         Q V       .         .         .
(PEAK DAY 1, HOUR   8.167)
104.250    689.3876    291.01  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   8.250)
104.333    691.3953    291.52  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   8.333)
104.417    693.4066    292.04  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   8.417)
104.500    695.4216    292.58  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   8.500)
104.583    697.4405    293.14  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   8.583)
104.667    699.4633    293.71  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   8.667)
104.750    701.4902    294.30  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   8.750)
104.833    703.5212    294.91  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   8.833)
104.917    705.5565    295.53  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   8.917)
105.000    707.5963    296.17  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   9.000)
105.083    709.6406    296.83  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   9.083)
105.167    711.6895    297.51  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   9.167)
105.250    713.7433    298.20  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   9.250)
105.333    715.8019    298.92  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   9.333)
105.417    717.8657    299.65  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   9.417)
105.500    719.9346    300.41  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   9.500)
105.583    722.0085    301.14  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   9.583)
105.667    724.0870    301.80  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   9.667)
105.750    726.1697    302.41  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   9.750)
105.833    728.2567    303.03  .         .Q V      .         .         .
(PEAK DAY 1, HOUR   9.833)
105.917    730.3480    303.66  .         .Q V      .         .         .
(PEAK DAY 1, HOUR   9.917)
106.000    732.4437    304.31  .         .Q V      .         .         .
(PEAK DAY 1, HOUR  10.000)
106.083    734.5441    304.97  .         .Q V      .         .         .
(PEAK DAY 1, HOUR  10.083)
106.167    736.6491    305.65  .         .Q V      .         .         .
(PEAK DAY 1, HOUR  10.167)
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106.250    738.7590    306.35  .         .Q V      .         .         .
(PEAK DAY 1, HOUR  10.250)
106.333    740.8738    307.07  .         .Q V      .         .         .
(PEAK DAY 1, HOUR  10.333)
106.417    742.9937    307.81  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  10.417)
106.500    745.1188    308.57  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  10.500)
106.583    747.2493    309.34  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  10.583)
106.667    749.3853    310.14  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  10.667)
106.750    751.5269    310.96  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  10.750)
106.833    753.6743    311.80  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  10.833)
106.917    755.8276    312.66  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  10.917)
107.000    757.9870    313.55  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  11.000)
107.083    760.1526    314.46  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  11.083)
107.167    762.3248    315.39  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  11.167)
107.250    764.5035    316.35  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  11.250)
107.333    766.6890    317.33  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  11.333)
107.417    768.8813    318.34  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  11.417)
107.500    771.0809    319.37  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  11.500)
107.583    773.2877    320.44  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  11.583)
107.667    775.5021    321.53  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  11.667)
107.750    777.7243    322.65  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  11.750)
107.833    779.9544    323.81  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  11.833)
107.917    782.1927    324.99  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  11.917)
108.000    784.4393    326.21  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  12.000)
108.083    786.6971    327.82  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  12.083)
108.167    788.9730    330.46  .         . Q V     .         .         .
(PEAK DAY 1, HOUR  12.167)
108.250    791.2717    333.76  .         . Q V     .         .         .
(PEAK DAY 1, HOUR  12.250)
108.333    793.5904    336.68  .         . Q V     .         .         .
(PEAK DAY 1, HOUR  12.333)
108.417    795.9247    338.95  .         . Q  V    .         .         .
(PEAK DAY 1, HOUR  12.417)
108.500    798.2739    341.10  .         . Q  V    .         .         .
(PEAK DAY 1, HOUR  12.500)
108.583    800.6381    343.29  .         . Q  V    .         .         .
(PEAK DAY 1, HOUR  12.583)
108.667    803.0180    345.56  .         . Q  V    .         .         .
(PEAK DAY 1, HOUR  12.667)
108.750    805.4142    347.92  .         . Q  V    .         .         .
(PEAK DAY 1, HOUR  12.750)
108.833    807.8271    350.36  .         . Q  V    .         .         .
(PEAK DAY 1, HOUR  12.833)
108.917    810.2573    352.86  .         . Q  V    .         .         .
(PEAK DAY 1, HOUR  12.917)
109.000    812.7045    355.32  .         . Q  V    .         .         .
(PEAK DAY 1, HOUR  13.000)
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109.083    815.1681    357.72  .         .  Q V    .         .         .
(PEAK DAY 1, HOUR  13.083)
109.167    817.6483    360.12  .         .  Q V    .         .         .
(PEAK DAY 1, HOUR  13.167)
109.250    820.1454    362.58  .         .  Q V    .         .         .
(PEAK DAY 1, HOUR  13.250)
109.333    822.6600    365.12  .         .  Q V    .         .         .
(PEAK DAY 1, HOUR  13.333)
109.417    825.1926    367.73  .         .  Q V    .         .         .
(PEAK DAY 1, HOUR  13.417)
109.500    827.7438    370.43  .         .  Q V    .         .         .
(PEAK DAY 1, HOUR  13.500)
109.583    830.3142    373.22  .         .  Q V    .         .         .
(PEAK DAY 1, HOUR  13.583)
109.667    832.9046    376.13  .         .  Q V    .         .         .
(PEAK DAY 1, HOUR  13.667)
109.750    835.5158    379.15  .         .  Q V    .         .         .
(PEAK DAY 1, HOUR  13.750)
109.833    838.1487    382.31  .         .  Q V    .         .         .
(PEAK DAY 1, HOUR  13.833)
109.917    840.8044    385.60  .         .   QV    .         .         .
(PEAK DAY 1, HOUR  13.917)
110.000    843.4838    389.05  .         .   QV    .         .         .
(PEAK DAY 1, HOUR  14.000)
110.083    846.1884    392.71  .         .   QV    .         .         .
(PEAK DAY 1, HOUR  14.083)
110.167    848.9188    396.45  .         .   Q V   .         .         .
(PEAK DAY 1, HOUR  14.167)
110.250    851.6731    399.92  .         .   Q V   .         .         .
(PEAK DAY 1, HOUR  14.250)
110.333    854.4495    403.13  .         .   Q V   .         .         .
(PEAK DAY 1, HOUR  14.333)
110.417    857.2480    406.35  .         .   Q V   .         .         .
(PEAK DAY 1, HOUR  14.417)
110.500    860.0703    409.80  .         .   Q V   .         .         .
(PEAK DAY 1, HOUR  14.500)
110.583    862.9189    413.62  .         .    QV   .         .         .
(PEAK DAY 1, HOUR  14.583)
110.667    865.7970    417.89  .         .    QV   .         .         .
(PEAK DAY 1, HOUR  14.667)
110.750    868.7081    422.69  .         .    QV   .         .         .
(PEAK DAY 1, HOUR  14.750)
110.833    871.6573    428.24  .         .    QV   .         .         .
(PEAK DAY 1, HOUR  14.833)
110.917    874.6511    434.69  .         .    QV   .         .         .
(PEAK DAY 1, HOUR  14.917)
111.000    877.6954    442.04  .         .     Q   .         .         .
(PEAK DAY 1, HOUR  15.000)
111.083    880.7944    449.97  .         .     Q   .         .         .
(PEAK DAY 1, HOUR  15.083)
111.167    883.9514    458.40  .         .     Q   .         .         .
(PEAK DAY 1, HOUR  15.167)
111.250    887.1713    467.53  .         .     VQ  .         .         .
(PEAK DAY 1, HOUR  15.250)
111.333    890.4611    477.67  .         .     VQ  .         .         .
(PEAK DAY 1, HOUR  15.333)
111.417    893.8196    487.67  .         .     VQ  .         .         .
(PEAK DAY 1, HOUR  15.417)
111.500    897.2325    495.54  .         .     V Q .         .         .
(PEAK DAY 1, HOUR  15.500)
111.583    900.6964    502.95  .         .      VQ .         .         .
(PEAK DAY 1, HOUR  15.583)
111.667    904.2389    514.38  .         .      VQ .         .         .
(PEAK DAY 1, HOUR  15.667)
111.750    907.9017    531.84  .         .      V Q.         .         .
(PEAK DAY 1, HOUR  15.750)
111.833    911.7291    555.73  .         .      V  Q         .         .
(PEAK DAY 1, HOUR  15.833)
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111.917    915.7904    589.71  .         .      V  .Q       .         .
(PEAK DAY 1, HOUR  15.917)
112.000    920.2261    644.06  .         .      V  .  Q      .         .
(PEAK DAY 1, HOUR  16.000)
112.083    925.5556    773.84  .         .      V  .       Q .         .
(PEAK DAY 1, HOUR  16.083)
112.167    932.3615    988.22  .         .      V  .         .    Q    .
(PEAK DAY 1, HOUR  16.167)
112.250    939.8552   1088.08  .         .      V  .         .       Q.
(PEAK DAY 1, HOUR  16.250)
112.333    946.5728    975.39  .         .      V  .         .    Q    .
(PEAK DAY 1, HOUR  16.333)
112.417    952.1804    814.22  .         .      V  .        Q.         .
(PEAK DAY 1, HOUR  16.417)
112.500    957.3485    750.42  .         .       V .      Q  .         .
(PEAK DAY 1, HOUR  16.500)
112.583    962.2802    716.08  .         .       V .     Q   .         .
(PEAK DAY 1, HOUR  16.583)
112.667    967.0338    690.24  .         .       V .    Q    .         .
(PEAK DAY 1, HOUR  16.667)
112.750    971.6339    667.92  .         .       V .   Q     .         .
(PEAK DAY 1, HOUR  16.750)
112.833    976.0982    648.23  .         .       V .  Q      .         .
(PEAK DAY 1, HOUR  16.833)
112.917    980.4500    631.88  .         .       V . Q       .         .
(PEAK DAY 1, HOUR  16.917)
113.000    984.7002    617.14  .         .       V . Q       .         .
(PEAK DAY 1, HOUR  17.000)
113.083    988.8781    606.63  .         .       V . Q       .         .
(PEAK DAY 1, HOUR  17.083)
113.167    992.9955    597.85  .         .       V .Q        .         .
(PEAK DAY 1, HOUR  17.167)
113.250    997.0801    593.08  .         .       V .Q        .         .
(PEAK DAY 1, HOUR  17.250)
113.333   1001.1371    589.08  .         .       V .Q        .         .
(PEAK DAY 1, HOUR  17.333)
113.417   1005.1729    585.99  .         .       V .Q        .         .
(PEAK DAY 1, HOUR  17.417)
113.500   1009.1882    583.01  .         .        V.Q        .         .
(PEAK DAY 1, HOUR  17.500)
113.583   1013.1833    580.09  .         .        V.Q        .         .
(PEAK DAY 1, HOUR  17.583)
113.667   1017.1581    577.14  .         .        VQ         .         .
(PEAK DAY 1, HOUR  17.667)
113.750   1021.1161    574.70  .         .        VQ         .         .
(PEAK DAY 1, HOUR  17.750)
113.833   1025.0505    571.29  .         .        VQ         .         .
(PEAK DAY 1, HOUR  17.833)
113.917   1028.9714    569.31  .         .        VQ         .         .
(PEAK DAY 1, HOUR  17.917)
114.000   1032.8760    566.95  .         .        VQ         .         .
(PEAK DAY 1, HOUR  18.000)
114.083   1036.7524    562.86  .         .        VQ         .         .
(PEAK DAY 1, HOUR  18.083)
114.167   1040.6050    559.38  .         .        VQ         .         .
(PEAK DAY 1, HOUR  18.167)
114.250   1044.4312    555.56  .         .        VQ         .         .
(PEAK DAY 1, HOUR  18.250)
114.333   1048.2295    551.53  .         .        VQ         .         .
(PEAK DAY 1, HOUR  18.333)
114.417   1051.9895    545.95  .         .        Q.         .         .
(PEAK DAY 1, HOUR  18.417)
114.500   1055.7319    543.40  .         .        Q.         .         .
(PEAK DAY 1, HOUR  18.500)
114.583   1059.4640    541.89  .         .        QV         .         .
(PEAK DAY 1, HOUR  18.583)
114.667   1063.1875    540.65  .         .        QV         .         .
(PEAK DAY 1, HOUR  18.667)
114.750   1066.9031    539.50  .         .        QV         .         .
(PEAK DAY 1, HOUR  18.750)
114.833   1070.6115    538.45  .         .        QV         .         .
(PEAK DAY 1, HOUR  18.833)
114.917   1074.3131    537.49  .         .        QV         .         .
(PEAK DAY 1, HOUR  18.917)
115.000   1078.0088    536.61  .         .        QV         .         .
(PEAK DAY 1, HOUR  19.000)
115.083   1081.6989    535.80  .         .        QV         .         .
(PEAK DAY 1, HOUR  19.083)
115.167   1085.3835    535.02  .         .        QV         .         .
(PEAK DAY 1, HOUR  19.167)
115.250   1089.0629    534.24  .         .        QV         .         .
(PEAK DAY 1, HOUR  19.250)
115.333   1092.7367    533.44  .         .        QV         .         .
(PEAK DAY 1, HOUR  19.333)
115.417   1096.4049    532.62  .         .        QV         .         .
(PEAK DAY 1, HOUR  19.417)
115.500   1100.0668    531.71  .         .        QV         .         .
(PEAK DAY 1, HOUR  19.500)
115.583   1103.7213    530.65  .         .        QV         .         .
(PEAK DAY 1, HOUR  19.583)
115.667   1107.3621    528.63  .         .        QV         .         .
(PEAK DAY 1, HOUR  19.667)
115.750   1110.9935    527.28  .         .        QV         .         .
(PEAK DAY 1, HOUR  19.750)
115.833   1114.6200    526.57  .         .        Q.V        .         .
(PEAK DAY 1, HOUR  19.833)
115.917   1118.2422    525.94  .         .        Q.V        .         .
(PEAK DAY 1, HOUR  19.917)
116.000   1121.8602    525.34  .         .        Q.V        .         .
(PEAK DAY 1, HOUR  20.000)
116.083   1125.4742    524.75  .         .        Q.V        .         .
(PEAK DAY 1, HOUR  20.083)
116.167   1129.0844    524.20  .         .        Q.V        .         .
(PEAK DAY 1, HOUR  20.167)
116.250   1132.6908    523.66  .         .        Q.V        .         .
(PEAK DAY 1, HOUR  20.250)
116.333   1136.2937    523.13  .         .        Q.V        .         .
(PEAK DAY 1, HOUR  20.333)
116.417   1139.8932    522.64  .         .        Q.V        .         .
(PEAK DAY 1, HOUR  20.417)
116.500   1143.4894    522.17  .         .        Q .V       .         .
(PEAK DAY 1, HOUR  20.500)
116.583   1147.0823    521.69  .         .        Q .V       .         .
(PEAK DAY 1, HOUR  20.583)
116.667   1150.6720    521.23  .         .        Q .V       .         .
(PEAK DAY 1, HOUR  20.667)
116.750   1154.2585    520.77  .         .        Q .V       .         .
(PEAK DAY 1, HOUR  20.750)
116.833   1157.8420    520.32  .         .        Q .V       .         .
(PEAK DAY 1, HOUR  20.833)
116.917   1161.4225    519.88  .         .        Q .V       .         .
(PEAK DAY 1, HOUR  20.917)
117.000   1164.9999    519.43  .         .        Q . V      .         .
(PEAK DAY 1, HOUR  21.000)
117.083   1168.5742    519.00  .         .        Q . V      .         .
(PEAK DAY 1, HOUR  21.083)
117.167   1172.1456    518.56  .         .        Q . V      .         .
(PEAK DAY 1, HOUR  21.167)
117.250   1175.7141    518.14  .         .        Q . V      .         .
(PEAK DAY 1, HOUR  21.250)
117.333   1179.2797    517.71  .         .        Q . V      .         .
(PEAK DAY 1, HOUR  21.333)
117.417   1182.8423    517.29  .         .        Q . V      .         .
(PEAK DAY 1, HOUR  21.417)
117.500   1186.4020    516.87  .         .        Q . V      .         .
(PEAK DAY 1, HOUR  21.500)
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117.583	1189.9589	516.46	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 21.583)										
117.667	1193.5129	516.05	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 21.667)										
117.750	1197.0642	515.65	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 21.750)										
117.833	1200.6128	515.26	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 21.833)										
117.917	1204.1587	514.86	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 21.917)										
118.000	1207.7019	514.47	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 22.000)										
118.083	1211.2424	514.08	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 22.083)										
118.167	1214.7803	513.69	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 22.167)										
118.250	1218.3154	513.31	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 22.250)										
118.333	1221.8479	512.92	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 22.333)										
118.417	1225.3778	512.54	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 22.417)										
118.500	1228.9050	512.16	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 22.500)										
118.583	1232.4297	511.78	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 22.583)										
118.667	1235.9518	511.40	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 22.667)										
118.750	1239.4713	511.03	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 22.750)										
118.833	1242.9883	510.66	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 22.833)										
118.917	1246.5027	510.28	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 22.917)										
119.000	1250.0145	509.91	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 23.000)										
119.083	1253.5238	509.54	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 23.083)										
119.167	1257.0305	509.17	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 23.167)										
119.250	1260.5347	508.80	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 23.250)										
119.333	1264.0363	508.44	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 23.333)										
119.417	1267.5354	508.07	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 23.417)										
119.500	1271.0320	507.71	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 23.500)										
119.583	1274.5261	507.34	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 23.583)										
119.667	1278.0177	506.98	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 23.667)										
119.750	1281.5068	506.62	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 23.750)										
119.833	1284.9934	506.26	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 23.833)										
119.917	1288.4775	505.89	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 23.917)										
120.000	1291.9592	505.53	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 24.000)										
120.083	1295.4344	504.61	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 24.083)										
120.167	1298.8926	502.11	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 24.167)										
120.250	1302.3269	498.66	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 24.250)										
120.333	1305.7426	495.95	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 24.333)										
120.417	1309.1476	494.42	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 24.417)										
120.500	1312.5444	493.22	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 24.500)										
120.583	1315.9342	492.19	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 24.583)										
120.667	1319.3177	491.29	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 24.667)										
120.750	1322.6956	490.46	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 24.750)										
120.833	1326.0681	489.70	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 24.833)										
120.917	1329.4357	488.98	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 24.917)										
121.000	1332.7987	488.31	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 25.000)										
121.083	1336.1573	487.68	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 25.083)										
121.167	1339.5120	487.10	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 25.167)										
121.250	1342.8627	486.53	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 25.250)										
121.333	1346.2097	485.98	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 25.333)										
121.417	1349.5530	485.44	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 25.417)										
121.500	1352.8926	484.91	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 25.500)										
121.583	1356.2285	484.38	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 25.583)										
121.667	1359.5609	483.87	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 25.667)										
121.750	1362.8898	483.35	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 25.750)										
121.833	1366.2152	482.86	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 25.833)										
121.917	1369.5372	482.36	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 25.917)										
122.000	1372.8558	481.86	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 26.000)										
122.083	1376.1711	481.39	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 26.083)										
122.167	1379.4833	480.92	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 26.167)										
122.250	1382.7921	480.45	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 26.250)										
122.333	1386.0978	479.98	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 26.333)										
122.417	1389.4004	479.54	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 26.417)										
122.500	1392.7001	479.11	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 26.500)										
122.583	1395.9968	478.68	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 26.583)										
122.667	1399.2905	478.25	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 26.667)										
122.750	1402.5813	477.82	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 26.750)										
122.833	1405.8691	477.39	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 26.833)										
122.917	1409.1541	476.96	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 26.917)										
123.000	1412.4359	476.53	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 27.000)										
123.083	1415.7148	476.10	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 27.083)										
123.167	1418.9908	475.67	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 27.167)										

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 123.250   1422.2639    475.25  .         .      Q  .     V   .         .
 (PEAK DAY 1, HOUR  27.250)
 123.333   1425.5341    474.82  .         .      Q  .     V   .         .
 (PEAK DAY 1, HOUR  27.333)
 123.417   1428.8011    474.39  .         .      Q  .     V   .         .
 (PEAK DAY 1, HOUR  27.417)
 123.500   1432.0653    473.96  .         .      Q  .      V  .         .
 (PEAK DAY 1, HOUR  27.500)
 123.583   1435.3265    473.53  .         .      Q  .      V  .         .
 (PEAK DAY 1, HOUR  27.583)
 123.667   1438.5850    473.12  .         .      Q  .      V  .         .
 (PEAK DAY 1, HOUR  27.667)
 123.750   1441.8405    472.70  .         .      Q  .      V  .         .
 (PEAK DAY 1, HOUR  27.750)
 123.833   1445.0933    472.30  .         .      Q  .      V  .         .
 (PEAK DAY 1, HOUR  27.833)
 123.917   1448.3434    471.92  .         .      Q  .      V  .         .
 (PEAK DAY 1, HOUR  27.917)
 124.000   1451.5909    471.54  .         .      Q  .      V  .         .
 (PEAK DAY 1, HOUR  28.000)
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6311.00 TO NODE   6330.00 IS CODE = 5.2
--------------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  5040.6 Ac. ***

         THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
         TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
         INTERVALS(Reference: the National Engineering Handbook,
         Hydrology, Chapter 17, page 17-52, August,1972,
         U.S. Department of Commerce).


         ASSUMED REGULAR CHANNEL INFORMATION:
           BASEWIDTH(FT) =   20.00     CHANNEL Z =  1.00
           UPSTREAM ELEVATION(FT) =     382.00
           DOWNSTREAM ELEVATION(FT) =     375.00
           CHANNEL LENGTH(FT) =    1141.00     MANNING'S FACTOR = 0.040
           CONSTANT LOSS RATE(CFS) =    0.00


         CHANNEL ROUTING COEFFICIENT ESTIMATED:
           MAXIMUM INFLOW(CFS) =  1088.08
           AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =   653.80
           CHANNEL NORMAL VELOCITY FOR Q =   653.80 CFS =   6.34 FPS
           ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.789

         MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
         UNIT INTERVALS IS CSTAR = 0.933


         CONVEX METHOD CHANNEL ROUTING RESULTS:
                                                 OUTFLOW LESS
                CLOCK        INFLOW     ROUTED      LOSS
PEAK    TIME    TIME       (STREAM 1)    FLOW     (STREAM 1)
 DAY   (HRS)   (HRS)         (CFS)       (CFS)      (CFS)
  2   24.000  96.000       296.25      296.99      296.99
  1    0.083  96.083       295.32      295.84      295.84
  1    0.167  96.167       295.60      295.49      295.49
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1	0.250	96.250	296.63	296.10	296.10
1	0.333	96.333	297.16	296.86	296.86
1	0.417	96.417	296.88	297.00	297.00
1	0.500	96.500	296.40	296.65	296.65
1	0.583	96.583	295.90	296.17	296.17
1	0.667	96.667	295.44	295.69	295.69
1	0.750	96.750	295.02	295.25	295.25
1	0.833	96.833	294.62	294.84	294.84
1	0.917	96.917	294.25	294.45	294.45
1	1.000	97.000	293.87	294.07	294.07
1	1.083	97.083	293.50	293.70	293.70
1	1.167	97.167	293.13	293.33	293.33
1	1.250	97.250	292.79	292.98	292.98
1	1.333	97.333	292.47	292.64	292.64
1	1.417	97.417	292.16	292.33	292.33
1	1.500	97.500	291.87	292.03	292.03
1	1.583	97.583	291.59	291.74	291.74
1	1.667	97.667	291.26	291.44	291.44
1	1.750	97.750	290.85	291.07	291.07
1	1.833	97.833	290.41	290.65	290.65
1	1.917	97.917	289.99	290.22	290.22
1	2.000	98.000	289.58	289.81	289.81
1	2.083	98.083	289.18	289.40	289.40
1	2.167	98.167	288.79	289.01	289.01
1	2.250	98.250	288.42	288.62	288.62
1	2.333	98.333	288.06	288.25	288.25
1	2.417	98.417	287.68	287.89	287.89
1	2.500	98.500	287.32	287.52	287.52
1	2.583	98.583	286.97	287.16	287.16
1	2.667	98.667	286.63	286.81	286.81
1	2.750	98.750	286.30	286.48	286.48
1	2.833	98.833	285.99	286.16	286.16
1	2.917	98.917	285.69	285.85	285.85
1	3.000	99.000	285.40	285.56	285.56
1	3.083	99.083	285.12	285.27	285.27
1	3.167	99.167	284.86	285.00	285.00
1	3.250	99.250	284.61	284.75	284.75
1	3.333	99.333	284.37	284.50	284.50
1	3.417	99.417	284.14	284.27	284.27
1	3.500	99.500	283.93	284.05	284.05
1	3.583	99.583	283.73	283.84	283.84
1	3.667	99.667	283.53	283.64	283.64
1	3.750	99.750	283.34	283.45	283.45
1	3.833	99.833	283.17	283.26	283.26
1	3.917	99.917	283.01	283.09	283.09
1	4.000	100.000	282.86	282.94	282.94
1	4.083	100.083	282.72	282.79	282.79
1	4.167	100.167	282.59	282.66	282.66
1	4.250	100.250	282.47	282.54	282.54
1	4.333	100.333	282.37	282.42	282.42
1	4.417	100.417	282.27	282.32	282.32
1	4.500	100.500	282.19	282.24	282.24
1	4.583	100.583	282.12	282.16	282.16
1	4.667	100.667	282.06	282.09	282.09
1	4.750	100.750	282.01	282.04	282.04
1	4.833	100.833	281.97	281.99	281.99
1	4.917	100.917	281.95	281.96	281.96
1	5.000	101.000	281.93	281.94	281.94
1	5.083	101.083	281.93	281.93	281.93
1	5.167	101.167	281.94	281.94	281.94
1	5.250	101.250	281.96	281.95	281.95
1	5.333	101.333	281.99	281.98	281.98
1	5.417	101.417	282.04	282.01	282.01
1	5.500	101.500	282.09	282.06	282.06
1	5.583	101.583	282.16	282.12	282.12
1	5.667	101.667	282.24	282.19	282.19
1	5.750	101.750	282.33	282.28	282.28
1	5.833	101.833	282.43	282.38	282.38

1	5.917	101.917	282.55	282.48	282.48
1	6.000	102.000	282.67	282.60	282.60
1	6.083	102.083	282.81	282.74	282.74
1	6.167	102.167	282.96	282.88	282.88
1	6.250	102.250	283.13	283.04	283.04
1	6.333	102.333	283.30	283.21	283.21
1	6.417	102.417	283.49	283.39	283.39
1	6.500	102.500	283.69	283.58	283.58
1	6.583	102.583	283.90	283.79	283.79
1	6.667	102.667	284.13	284.01	284.01
1	6.750	102.750	284.37	284.24	284.24
1	6.833	102.833	284.62	284.49	284.49
1	6.917	102.917	284.89	284.74	284.74
1	7.000	103.000	285.17	285.02	285.02
1	7.083	103.083	285.46	285.30	285.30
1	7.167	103.167	285.76	285.60	285.60
1	7.250	103.250	286.08	285.91	285.91
1	7.333	103.333	286.41	286.23	286.23
1	7.417	103.417	286.76	286.57	286.57
1	7.500	103.500	287.12	286.92	286.92
1	7.583	103.583	287.49	287.29	287.29
1	7.667	103.667	287.88	287.67	287.67
1	7.750	103.750	288.28	288.06	288.06
1	7.833	103.833	288.70	288.47	288.47
1	7.917	103.917	289.13	288.90	288.90
1	8.000	104.000	289.58	289.34	289.34
1	8.083	104.083	290.04	289.79	289.79
1	8.167	104.167	290.52	290.26	290.26
1	8.250	104.250	291.01	290.74	290.74
1	8.333	104.333	291.52	291.24	291.24
1	8.417	104.417	292.04	291.76	291.76
1	8.500	104.500	292.58	292.29	292.29
1	8.583	104.583	293.14	292.84	292.84
1	8.667	104.667	293.71	293.40	293.40
1	8.750	104.750	294.30	293.98	293.98
1	8.833	104.833	294.91	294.58	294.58
1	8.917	104.917	295.53	295.19	295.19
1	9.000	105.000	296.17	295.82	295.82
1	9.083	105.083	296.83	296.47	296.47
1	9.167	105.167	297.51	297.14	297.14
1	9.250	105.250	298.20	297.83	297.83
1	9.333	105.333	298.92	298.53	298.53
1	9.417	105.417	299.65	299.26	299.26
1	9.500	105.500	300.41	300.00	300.00
1	9.583	105.583	301.14	300.74	300.74
1	9.667	105.667	301.80	301.43	301.43
1	9.750	105.750	302.41	302.07	302.07
1	9.833	105.833	303.03	302.69	302.69
1	9.917	105.917	303.66	303.32	303.32
1	10.000	106.000	304.31	303.96	303.96
1	10.083	106.083	304.97	304.61	304.61
1	10.167	106.167	305.65	305.28	305.28
1	10.250	106.250	306.35	305.97	305.97
1	10.333	106.333	307.07	306.68	306.68
1	10.417	106.417	307.81	307.41	307.41
1	10.500	106.500	308.57	308.16	308.16
1	10.583	106.583	309.34	308.92	308.92
1	10.667	106.667	310.14	309.71	309.71
1	10.750	106.750	310.96	310.52	310.52
1	10.833	106.833	311.80	311.34	311.34
1	10.917	106.917	312.66	312.19	312.19
1	11.000	107.000	313.55	313.07	313.07
1	11.083	107.083	314.46	313.96	313.96
1	11.167	107.167	315.39	314.88	314.88
1	11.250	107.250	316.35	315.83	315.83
1	11.333	107.333	317.33	316.79	316.79
1	11.417	107.417	318.34	317.79	317.79
1	11.500	107.500	319.37	318.81	318.81
1	11.583	107.583	320.44	319.86	319.86
1	11.667	107.667	321.53	320.94	320.94
1	11.750	107.750	322.65	322.05	322.05
1	11.833	107.833	323.81	323.18	323.18
1	11.917	107.917	324.99	324.35	324.35
1	12.000	108.000	326.21	325.55	325.55
1	12.083	108.083	327.82	326.96	326.96
1	12.167	108.167	330.46	329.06	329.06
1	12.250	108.250	333.76	331.99	331.99
1	12.333	108.333	336.68	335.08	335.08
1	12.417	108.417	338.95	337.69	337.69
1	12.500	108.500	341.10	339.92	339.92
1	12.583	108.583	343.29	342.10	342.10
1	12.667	108.667	345.56	344.33	344.33
1	12.750	108.750	347.92	346.64	346.64
1	12.833	108.833	350.36	349.04	349.04
1	12.917	108.917	352.86	351.50	351.50
1	13.000	109.000	355.32	353.98	353.98
1	13.083	109.083	357.72	356.41	356.41
1	13.167	109.167	360.12	358.81	358.81
1	13.250	109.250	362.58	361.25	361.25
1	13.333	109.333	365.12	363.74	363.74
1	13.417	109.417	367.73	366.31	366.31
1	13.500	109.500	370.43	368.97	368.97
1	13.583	109.583	373.22	371.71	371.71
1	13.667	109.667	376.13	374.55	374.55
1	13.750	109.750	379.15	377.51	377.51
1	13.833	109.833	382.31	380.59	380.59
1	13.917	109.917	385.60	383.81	383.81
1	14.000	110.000	389.05	387.18	387.18
1	14.083	110.083	392.71	390.73	390.73
1	14.167	110.167	396.45	394.42	394.42
1	14.250	110.250	399.92	398.02	398.02
1	14.333	110.333	403.13	401.37	401.37
1	14.417	110.417	406.35	404.60	404.60
1	14.500	110.500	409.80	407.93	407.93
1	14.583	110.583	413.62	411.56	411.56
1	14.667	110.667	417.89	415.59	415.59
1	14.750	110.750	422.69	420.10	420.10
1	14.833	110.833	428.24	425.25	425.25
1	14.917	110.917	434.69	431.21	431.21
1	15.000	111.000	442.04	438.08	438.08
1	15.083	111.083	449.97	445.68	445.68
1	15.167	111.167	458.40	453.83	453.83
1	15.250	111.250	467.53	462.59	462.59
1	15.333	111.333	477.67	472.19	472.19
1	15.417	111.417	487.67	482.23	482.23
1	15.500	111.500	495.54	491.18	491.18
1	15.583	111.583	502.95	498.90	498.90
1	15.667	111.667	514.38	508.30	508.30
1	15.750	111.750	531.84	522.57	522.57
1	15.833	111.833	555.73	542.98	542.98
1	15.917	111.917	589.71	571.61	571.61
1	16.000	112.000	644.06	615.25	615.25
1	16.083	112.083	773.84	706.01	706.01
1	16.167	112.167	988.22	874.83	874.83
1	16.250	112.250	1088.08	1029.82	1029.82
1	16.333	112.333	975.39	1028.75	1028.75
1	16.417	112.417	814.22	899.63	899.63
1	16.500	112.500	750.42	788.51	788.51
1	16.583	112.583	716.08	736.05	736.05
1	16.667	112.667	690.24	704.69	704.69
1	16.750	112.750	667.92	680.22	680.22
1	16.833	112.833	648.23	659.05	659.05
1	16.917	112.917	631.88	640.90	640.90
1	17.000	113.000	617.14	625.22	625.22
1	17.083	113.083	606.63	612.50	612.50
1	17.167	113.167	597.85	602.70	602.70

1	17.250 113.250	593.08	595.83	595.83
1	17.333 113.333	589.08	591.30	591.30
1	17.417 113.417	585.99	587.71	587.71
1	17.500 113.500	583.01	584.64	584.64
1	17.583 113.583	580.09	581.68	581.68
1	17.667 113.667	577.14	578.74	578.74
1	17.750 113.750	574.70	576.05	576.05
1	17.833 113.833	571.29	573.11	573.11
1	17.917 113.917	569.31	570.44	570.44
1	18.000 114.000	566.95	568.22	568.22
1	18.083 114.083	562.86	565.02	565.02
1	18.167 114.167	559.38	561.29	561.29
1	18.250 114.250	555.56	557.63	557.63
1	18.333 114.333	551.53	553.71	553.71
1	18.417 114.417	545.95	548.93	548.93
1	18.500 114.500	543.40	544.90	544.90
1	18.583 114.583	541.89	542.76	542.76
1	18.667 114.667	540.65	541.34	541.34
1	18.750 114.750	539.50	540.13	540.13
1	18.833 114.833	538.45	539.03	539.03
1	18.917 114.917	537.49	538.02	538.02
1	19.000 115.000	536.61	537.09	537.09
1	19.083 115.083	535.80	536.25	536.25
1	19.167 115.167	535.02	535.44	535.44
1	19.250 115.250	534.24	534.66	534.66
1	19.333 115.333	533.44	533.87	533.87
1	19.417 115.417	532.62	533.06	533.06
1	19.500 115.500	531.71	532.20	532.20
1	19.583 115.583	530.65	531.22	531.22
1	19.667 115.667	528.63	529.69	529.69
1	19.750 115.750	527.28	528.04	528.04
1	19.833 115.833	526.57	526.98	526.98
1	19.917 115.917	525.94	526.29	526.29
1	20.000 116.000	525.34	525.67	525.67
1	20.083 116.083	524.75	525.07	525.07
1	20.167 116.167	524.20	524.50	524.50
1	20.250 116.250	523.66	523.95	523.95
1	20.333 116.333	523.13	523.42	523.42
1	20.417 116.417	522.64	522.91	522.91
1	20.500 116.500	522.17	522.43	522.43
1	20.583 116.583	521.69	521.95	521.95
1	20.667 116.667	521.23	521.48	521.48
1	20.750 116.750	520.77	521.02	521.02
1	20.833 116.833	520.32	520.57	520.57
1	20.917 116.917	519.88	520.12	520.12
1	21.000 117.000	519.43	519.67	519.67
1	21.083 117.083	519.00	519.23	519.23
1	21.167 117.167	518.56	518.80	518.80
1	21.250 117.250	518.14	518.37	518.37
1	21.333 117.333	517.71	517.94	517.94
1	21.417 117.417	517.29	517.52	517.52
1	21.500 117.500	516.87	517.10	517.10
1	21.583 117.583	516.46	516.68	516.68
1	21.667 117.667	516.05	516.27	516.27
1	21.750 117.750	515.65	515.87	515.87
1	21.833 117.833	515.26	515.47	515.47
1	21.917 117.917	514.86	515.08	515.08
1	22.000 118.000	514.47	514.68	514.68
1	22.083 118.083	514.08	514.29	514.29
1	22.167 118.167	513.69	513.90	513.90
1	22.250 118.250	513.31	513.52	513.52
1	22.333 118.333	512.92	513.13	513.13
1	22.417 118.417	512.54	512.75	512.75
1	22.500 118.500	512.16	512.37	512.37
1	22.583 118.583	511.78	511.99	511.99
1	22.667 118.667	511.40	511.61	511.61
1	22.750 118.750	511.03	511.23	511.23
1	22.833 118.833	510.66	510.86	510.86
1	22.917 118.917	510.28	510.49	510.49
1	23.000 119.000	509.91	510.11	510.11
1	23.083 119.083	509.54	509.74	509.74
1	23.167 119.167	509.17	509.37	509.37
1	23.250 119.250	508.80	509.00	509.00
1	23.333 119.333	508.44	508.64	508.64
1	23.417 119.417	508.07	508.27	508.27
1	23.500 119.500	507.71	507.91	507.91
1	23.583 119.583	507.34	507.54	507.54
1	23.667 119.667	506.98	507.18	507.18
1	23.750 119.750	506.62	506.81	506.81
1	23.833 119.833	506.26	506.45	506.45
1	23.917 119.917	505.89	506.09	506.09
1	24.000 120.000	505.53	505.73	505.73
1	24.083 120.083	504.61	505.09	505.09
1	24.167 120.167	502.11	503.41	503.41
1	24.250 120.250	498.66	500.50	500.50
1	24.333 120.333	495.95	497.45	497.45
1	24.417 120.417	494.42	495.30	495.30
1	24.500 120.500	493.22	493.89	493.89
1	24.583 120.583	492.19	492.76	492.76
1	24.667 120.667	491.29	491.79	491.79
1	24.750 120.750	490.46	490.92	490.92
1	24.833 120.833	489.70	490.12	490.12
1	24.917 120.917	488.98	489.37	489.37
1	25.000 121.000	488.31	488.68	488.68
1	25.083 121.083	487.68	488.03	488.03
1	25.167 121.167	487.10	487.42	487.42
1	25.250 121.250	486.53	486.84	486.84
1	25.333 121.333	485.98	486.28	486.28
1	25.417 121.417	485.44	485.74	485.74
1	25.500 121.500	484.91	485.20	485.20
1	25.583 121.583	484.38	484.67	484.67
1	25.667 121.667	483.87	484.15	484.15
1	25.750 121.750	483.35	483.63	483.63
1	25.833 121.833	482.86	483.13	483.13
1	25.917 121.917	482.36	482.63	482.63
1	26.000 122.000	481.86	482.13	482.13
1	26.083 122.083	481.39	481.65	481.65
1	26.167 122.167	480.92	481.17	481.17
1	26.250 122.250	480.45	480.70	480.70
1	26.333 122.333	479.98	480.24	480.24
1	26.417 122.417	479.54	479.78	479.78
1	26.500 122.500	479.11	479.35	479.35
1	26.583 122.583	478.68	478.92	478.92
1	26.667 122.667	478.25	478.49	478.49
1	26.750 122.750	477.82	478.06	478.06
1	26.833 122.833	477.39	477.63	477.63
1	26.917 122.917	476.96	477.20	477.20
1	27.000 123.000	476.53	476.77	476.77
1	27.083 123.083	476.10	476.34	476.34
1	27.167 123.167	475.67	475.91	475.91
1	27.250 123.250	475.25	475.48	475.48
1	27.333 123.333	474.82	475.05	475.05
1	27.417 123.417	474.39	474.62	474.62
1	27.500 123.500	473.96	474.19	474.19
1	27.583 123.583	473.53	473.77	473.77
1	27.667 123.667	473.12	473.34	473.34
1	27.750 123.750	472.70	472.93	472.93
1	27.833 123.833	472.30	472.52	472.52
1	27.917 123.917	471.92	472.13	472.13
1	28.000 124.000	471.54	471.75	471.75

Note: Computed Hydrograph continues past two days after the peak day of the design storm.

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PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 2117.105 AF

OUTFLOW VOLUME = 2117.103 AF

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    LOSS    VOLUME =      0.000 AF
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********************************************************************************
  FLOW PROCESS FROM NODE   6320.00 TO NODE   6330.00 IS CODE =   1
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        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of   300.7 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
================================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #2)

         WATERSHED AREA =     300.700 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.290 HOURS
          CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
          THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
          MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.250
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.750
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:
         +------------------+--------+--------+--------+--------+--------+
         | RAINFALL DEPTHS & |        |        |        |        |        |
         |    LOSS RATES     |  DAY 1 |  DAY 2 |  DAY 3 |  DAY 4 |  DAY 5 |
         |==================+========+========+========+========+========|
         | 5-MINUTE (INCHES) |    0.58|    0.27|    0.12|    0.06|    0.04|
         |30-MINUTE (INCHES) |    1.22|    0.56|    0.24|    0.13|    0.09|
         |   1-HOUR (INCHES) |    1.62|    0.75|    0.33|    0.17|    0.12|
         |   3-HOUR (INCHES) |    2.71|    1.25|    0.54|    0.28|    0.21|
         |   6-HOUR (INCHES) |    3.75|    1.73|    0.75|    0.39|    0.29|
         |  24-HOUR (INCHES) |    6.28|    2.89|    1.26|    0.66|    0.48|
         |==================+========+========+========+========+========|
         | LOSS RATE(IN/HR)  |   0.240|   0.240|   0.240|   0.240|   0.240|
         | LOW LOSS FRACTION |   0.430|   0.670|   0.900|   0.990|   0.990|
         +------------------+--------+--------+--------+--------+--------+
           5-MINUTE FACTOR = 0.987
          30-MINUTE FACTOR = 0.987
           1-HOUR FACTOR = 0.987
           3-HOUR FACTOR = 0.998
           6-HOUR FACTOR = 0.999
          24-HOUR FACTOR = 0.999

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  28.736


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  96.00
         MODEL TIME(HOURS) FOR END OF RESULTS = 124.00


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                      UNIT HYDROGRAPH DETERMINATION

--------------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------------
        1               3.181               115.682
        2              14.148               398.807
        3              32.649               672.813
        4              49.391               608.859
        5              59.445               365.623
        6              65.754               229.414
        7              70.572               175.227
        8              74.508               143.109
        9              77.679               115.331
       10              80.307                95.584
       11              82.561                81.961
       12              84.486                69.998
       13              86.124                59.571
       14              87.475                49.137
       15              88.623                41.748
       16              89.558                33.981
       17              90.435                31.907
       18              91.248                29.581
       19              92.036                28.658
       20              92.761                26.336
       21              93.465                25.630
       22              94.104                23.223
       23              94.697                21.573
       24              95.280                21.195
       25              95.767                17.699
       26              96.231                16.876
       27              96.695                16.868
       28              97.112                15.192
       29              97.431                11.595
       30              97.741                11.275
       31              98.051                11.279
       32              98.361                11.271
       33              98.547                 6.740
       34              98.632                 3.085
       35              98.716                 3.070
       36              98.801                 3.077
       37              98.885                 3.077
       38              98.970                 3.077
       39              99.054                 3.077
       40              99.139                 3.077
       41              99.224                 3.085
       42              99.308                 3.070
       43              99.393                 3.070
       44              99.477                 3.070
       45              99.562                 3.070
       46              99.646                 3.070
       47              99.730                 3.070
       48              99.815                 3.070
       49              99.899                 3.070
       50              99.984                 3.070
       51             100.000                 0.594


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    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =     150.1466
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =     139.5311
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5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 175.0 350.0 525.0 700.0
96.000	37.7332	4.73	Q V . . .
(PEAK DAY 2, HOUR 24.000)			
96.083	37.7682	5.09	Q V . . .
(PEAK DAY 1, HOUR 0.083)			
96.167	37.8124	6.41	Q V . . .
(PEAK DAY 1, HOUR 0.167)			
96.250	37.8721	8.68	Q V . . .
(PEAK DAY 1, HOUR 0.250)			
96.333	37.9461	10.74	Q V . . .
(PEAK DAY 1, HOUR 0.333)			
96.417	38.0287	11.99	Q V . . .
(PEAK DAY 1, HOUR 0.417)			
96.500	38.1168	12.79	Q V . . .
(PEAK DAY 1, HOUR 0.500)			
96.583	38.2091	13.41	Q V . . .
(PEAK DAY 1, HOUR 0.583)			
96.667	38.3050	13.93	Q V . . .
(PEAK DAY 1, HOUR 0.667)			
96.750	38.4039	14.35	Q .V . . .
(PEAK DAY 1, HOUR 0.750)			
96.833	38.5052	14.71	Q .V . . .
(PEAK DAY 1, HOUR 0.833)			
96.917	38.6087	15.03	Q .V . . .
(PEAK DAY 1, HOUR 0.917)			
97.000	38.7141	15.31	Q .V . . .
(PEAK DAY 1, HOUR 1.000)			
97.083	38.8213	15.56	Q .V . . .
(PEAK DAY 1, HOUR 1.083)			
97.167	38.9299	15.77	Q .V . . .
(PEAK DAY 1, HOUR 1.167)			
97.250	39.0398	15.96	Q .V . . .
(PEAK DAY 1, HOUR 1.250)			
97.333	39.1508	16.12	Q .V . . .
(PEAK DAY 1, HOUR 1.333)			
97.417	39.2630	16.28	Q .V . . .
(PEAK DAY 1, HOUR 1.417)			
97.500	39.3762	16.44	Q .V . . .
(PEAK DAY 1, HOUR 1.500)			
97.583	39.4904	16.59	Q .V . . .
(PEAK DAY 1, HOUR 1.583)			
97.667	39.6056	16.73	Q .V . . .
(PEAK DAY 1, HOUR 1.667)			
97.750	39.7218	16.87	Q .V . . .
(PEAK DAY 1, HOUR 1.750)			
97.833	39.8390	17.01	Q .V . . .
(PEAK DAY 1, HOUR 1.833)			
97.917	39.9570	17.14	Q .V . . .
(PEAK DAY 1, HOUR 1.917)			
98.000	40.0760	17.27	Q .V . . .
(PEAK DAY 1, HOUR 2.000)			
98.083	40.1957	17.39	Q .V . . .
(PEAK DAY 1, HOUR 2.083)			
98.167	40.3163	17.51	.Q .V . . .
(PEAK DAY 1, HOUR 2.167)			
98.250	40.4377	17.63	.Q .V . . .
(PEAK DAY 1, HOUR 2.250)			
98.333	40.5599	17.74	.Q .V . . .
(PEAK DAY 1, HOUR 2.333)			
98.417	40.6829	17.85	.Q .V . . .
(PEAK DAY 1, HOUR 2.417)			
98.500	40.8065	17.95	.Q .V . . .
(PEAK DAY 1, HOUR 2.500)			
98.583	40.9308	18.06	.Q .V . . .
(PEAK DAY 1, HOUR 2.583)			
98.667	41.0559	18.16	.Q .V . . .
(PEAK DAY 1, HOUR 2.667)			
98.750	41.1816	18.25	.Q .V . . .
(PEAK DAY 1, HOUR 2.750)			
98.833	41.3079	18.33	.Q .V . . .
(PEAK DAY 1, HOUR 2.833)			
98.917	41.4347	18.41	.Q .V . . .
(PEAK DAY 1, HOUR 2.917)			
99.000	41.5620	18.49	.Q .V . . .
(PEAK DAY 1, HOUR 3.000)			
99.083	41.6899	18.57	.Q .V . . .
(PEAK DAY 1, HOUR 3.083)			
99.167	41.8184	18.66	.Q .V . . .
(PEAK DAY 1, HOUR 3.167)			
99.250	41.9475	18.74	.Q . V . . .
(PEAK DAY 1, HOUR 3.250)			
99.333	42.0771	18.82	.Q . V . . .
(PEAK DAY 1, HOUR 3.333)			
99.417	42.2074	18.91	.Q . V . . .
(PEAK DAY 1, HOUR 3.417)			
99.500	42.3382	18.99	.Q . V . . .
(PEAK DAY 1, HOUR 3.500)			
99.583	42.4696	19.08	.Q . V . . .
(PEAK DAY 1, HOUR 3.583)			
99.667	42.6016	19.17	.Q . V . . .
(PEAK DAY 1, HOUR 3.667)			
99.750	42.7342	19.26	.Q . V . . .
(PEAK DAY 1, HOUR 3.750)			
99.833	42.8675	19.35	.Q . V . . .
(PEAK DAY 1, HOUR 3.833)			
99.917	43.0013	19.44	.Q . V . . .
(PEAK DAY 1, HOUR 3.917)			
100.000	43.1358	19.53	.Q . V . . .
(PEAK DAY 1, HOUR 4.000)			
100.083	43.2709	19.62	.Q . V . . .
(PEAK DAY 1, HOUR 4.083)			
100.167	43.4067	19.71	.Q . V . . .
(PEAK DAY 1, HOUR 4.167)			
100.250	43.5431	19.80	.Q . V . . .
(PEAK DAY 1, HOUR 4.250)			
100.333	43.6800	19.88	.Q . V . . .
(PEAK DAY 1, HOUR 4.333)			
100.417	43.8175	19.97	.Q . V . . .
(PEAK DAY 1, HOUR 4.417)			
100.500	43.9556	20.06	.Q . V . . .
(PEAK DAY 1, HOUR 4.500)			
100.583	44.0944	20.14	.Q . V . . .
(PEAK DAY 1, HOUR 4.583)			
100.667	44.2337	20.23	.Q . V . . .
(PEAK DAY 1, HOUR 4.667)			
100.750	44.3737	20.32	.Q . V . . .
(PEAK DAY 1, HOUR 4.750)			
100.833	44.5142	20.41	.Q . V . . .
(PEAK DAY 1, HOUR 4.833)			
100.917	44.6554	20.50	.Q . V . . .
(PEAK DAY 1, HOUR 4.917)			
101.000	44.7973	20.60	.Q . V . . .
(PEAK DAY 1, HOUR 5.000)			
101.083	44.9398	20.69	.Q . V . . .
(PEAK DAY 1, HOUR 5.083)			

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101.167     45.0829     20.78  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.167)
101.250     45.2267     20.88  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.250)
101.333     45.3712     20.98  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.333)
101.417     45.5163     21.08  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.417)
101.500     45.6622     21.18  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.500)
101.583     45.8087     21.28  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.583)
101.667     45.9559     21.38  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.667)
101.750     46.1039     21.48  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.750)
101.833     46.2525     21.59  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.833)
101.917     46.4019     21.69  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.917)
102.000     46.5520     21.80  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.000)
102.083     46.7029     21.91  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.083)
102.167     46.8546     22.02  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.167)
102.250     47.0070     22.13  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.250)
102.333     47.1602     22.24  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.333)
102.417     47.3141     22.36  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.417)
102.500     47.4689     22.47  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.500)
102.583     47.6245     22.59  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.583)
102.667     47.7809     22.71  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.667)
102.750     47.9381     22.83  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.750)
102.833     48.0962     22.95  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.833)
102.917     48.2552     23.08  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.917)
103.000     48.4150     23.20  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.000)
103.083     48.5757     23.33  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.083)
103.167     48.7373     23.46  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.167)
103.250     48.8998     23.59  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.250)
103.333     49.0632     23.73  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.333)
103.417     49.2275     23.86  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.417)
103.500     49.3928     24.00  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.500)
103.583     49.5591     24.14  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.583)
103.667     49.7263     24.28  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.667)
103.750     49.8946     24.43  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.750)
103.833     50.0638     24.57  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.833)
103.917     50.2341     24.72  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.917)
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104.000     50.4054     24.87  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.000)
104.083     50.5777     25.03  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.083)
104.167     50.7512     25.18  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.167)
104.250     50.9257     25.34  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.250)
104.333     51.1013     25.50  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.333)
104.417     51.2781     25.67  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.417)
104.500     51.4560     25.83  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.500)
104.583     51.6351     26.00  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.583)
104.667     51.8154     26.17  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.667)
104.750     51.9968     26.35  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.750)
104.833     52.1795     26.53  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.833)
104.917     52.3635     26.71  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   8.917)
105.000     52.5487     26.90  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.000)
105.083     52.7353     27.08  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.083)
105.167     52.9231     27.28  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.167)
105.250     53.1123     27.47  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.250)
105.333     53.3029     27.67  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.333)
105.417     53.4948     27.87  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.417)
105.500     53.6882     28.08  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.500)
105.583     53.8830     28.29  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.583)
105.667     54.0794     28.51  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.667)
105.750     54.2772     28.72  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.750)
105.833     54.4766     28.95  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.833)
105.917     54.6775     29.18  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.917)
106.000     54.8800     29.41  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.000)
106.083     55.0842     29.65  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.083)
106.167     55.2901     29.89  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.167)
106.250     55.4977     30.14  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.250)
106.333     55.7070     30.39  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.333)
106.417     55.9181     30.65  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.417)
106.500     56.1310     30.92  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.500)
106.583     56.3458     31.19  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.583)
106.667     56.5625     31.47  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.667)
106.750     56.7812     31.75  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.750)
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106.833     57.0019     32.04  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.833)
106.917     57.2246     32.34  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.917)
107.000     57.4494     32.65  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.000)
107.083     57.6764     32.96  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.083)
107.167     57.9056     33.28  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.167)
107.250     58.1371     33.61  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.250)
107.333     58.3709     33.95  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.333)
107.417     58.6071     34.29  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.417)
107.500     58.8457     34.65  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.500)
107.583     59.0869     35.02  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  11.583)
107.667     59.3307     35.39  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.667)
107.750     59.5771     35.78  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.750)
107.833     59.8263     36.18  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.833)
107.917     60.0783     36.59  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.917)
108.000     60.3332     37.01  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.000)
108.083     60.5935     37.79  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.083)
108.167     60.8648     39.40  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.167)
108.250     61.1528     41.82  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.250)
108.333     61.4563     44.08  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.333)
108.417     61.7707     45.65  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.417)
108.500     62.0934     46.85  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.500)
108.583     62.4233     47.91  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.583)
108.667     62.7601     48.90  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.667)
108.750     63.1033     49.83  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  12.750)
108.833     63.4526     50.72  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  12.833)
108.917     63.8080     51.60  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  12.917)
109.000     64.1694     52.47  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  13.000)
109.083     64.5367     53.33  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.083)
109.167     64.9099     54.19  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.167)
109.250     65.2892     55.06  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.250)
109.333     65.6744     55.94  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.333)
109.417     66.0659     56.85  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.417)
109.500     66.4638     57.78  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  13.500)
109.583     66.8684     58.75  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  13.583)
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109.667     67.2799     59.75  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  13.667)
109.750     67.6986     60.80  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  13.750)
109.833     68.1248     61.88  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  13.833)
109.917     68.5588     63.01  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  13.917)
110.000     69.0009     64.20  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  14.000)
110.083     69.4519     65.49  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  14.083)
110.167     69.9129     66.94  .  Q      .         V         .         .
(PEAK DAY 1, HOUR  14.167)
110.250     70.3852     68.57  .  Q      .         V         .         .
(PEAK DAY 1, HOUR  14.250)
110.333     70.8690     70.25  .   Q     .         V         .         .
(PEAK DAY 1, HOUR  14.333)
110.417     71.3644     71.93  .   Q     .         V         .         .
(PEAK DAY 1, HOUR  14.417)
110.500     71.8716     73.65  .   Q     .         V         .         .
(PEAK DAY 1, HOUR  14.500)
110.583     72.3913     75.46  .   Q     .         V         .         .
(PEAK DAY 1, HOUR  14.583)
110.667     72.9242     77.39  .   Q     .         V         .         .
(PEAK DAY 1, HOUR  14.667)
110.750     73.4713     79.44  .   Q     .         .V        .         .
(PEAK DAY 1, HOUR  14.750)
110.833     74.0334     81.62  .   Q     .         .V        .         .
(PEAK DAY 1, HOUR  14.833)
110.917     74.6125     84.08  .   Q     .         .V        .         .
(PEAK DAY 1, HOUR  14.917)
111.000     75.2118     87.01  .   Q     .         .V        .         .
(PEAK DAY 1, HOUR  15.000)
111.083     75.8365     90.71  .    Q    .         .V        .         .
(PEAK DAY 1, HOUR  15.083)
111.167     76.4923     95.22  .    Q    .         .V        .         .
(PEAK DAY 1, HOUR  15.167)
111.250     77.1851    100.60  .    Q    .         . V       .         .
(PEAK DAY 1, HOUR  15.250)
111.333     77.9209    106.84  .     Q   .         . V       .         .
(PEAK DAY 1, HOUR  15.333)
111.417     78.6996    113.06  .     Q   .         . V       .         .
(PEAK DAY 1, HOUR  15.417)
111.500     79.5111    117.83  .     Q   .         . V       .         .
(PEAK DAY 1, HOUR  15.500)
111.583     80.3491    121.68  .     Q   .         .  V      .         .
(PEAK DAY 1, HOUR  15.583)
111.667     81.2314    128.10  .      Q  .         .  V      .         .
(PEAK DAY 1, HOUR  15.667)
111.750     82.1957    140.01  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  15.750)
111.833     83.2834    157.93  .        Q.         .  V      .         .
(PEAK DAY 1, HOUR  15.833)
111.917     84.5593    185.26  .         Q         .   V     .         .
(PEAK DAY 1, HOUR  15.917)
112.000     86.1399    229.51  .         . Q       .   V     .         .
(PEAK DAY 1, HOUR  16.000)
112.083     88.4661    337.76  .         .        Q.    V    .         .
(PEAK DAY 1, HOUR  16.083)
112.167     91.9571    506.90  .         .         .     V Q .         .
(PEAK DAY 1, HOUR  16.167)
112.250     96.3002    630.61  .         .         .      V  .     Q   .
(PEAK DAY 1, HOUR  16.250)
112.333    100.2459    572.92  .         .         .       V . Q       .
(PEAK DAY 1, HOUR  16.333)
112.417    103.1874    427.11  .         .         .   Q    V.         .
(PEAK DAY 1, HOUR  16.417)
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112.500    105.4805    332.96  .          .         Q.         V         .
(PEAK DAY 1, HOUR  16.500)
112.583    107.4393    284.42  .          .     Q   .          V         .
(PEAK DAY 1, HOUR  16.583)
112.667    109.1666    250.80  .          .   Q     .          .V        .
(PEAK DAY 1, HOUR  16.667)
112.750    110.6897    221.16  .          . Q       .          .V        .
(PEAK DAY 1, HOUR  16.750)
112.833    112.0484    197.28  .          .Q        .          . V       .
(PEAK DAY 1, HOUR  16.833)
112.917    113.2786    178.63  .          Q         .          . V       .
(PEAK DAY 1, HOUR  16.917)
113.000    114.3999    162.81  .        Q.          .          . V       .
(PEAK DAY 1, HOUR  17.000)
113.083    115.4265    149.07  .       Q .          .          .  V      .
(PEAK DAY 1, HOUR  17.083)
113.167    116.3665    136.48  .      Q  .          .          .  V      .
(PEAK DAY 1, HOUR  17.167)
113.250    117.2360    126.24  .      Q  .          .          .  V      .
(PEAK DAY 1, HOUR  17.250)
113.333    118.0425    117.11  .     Q   .          .          .  V      .
(PEAK DAY 1, HOUR  17.333)
113.417    118.8097    111.40  .     Q   .          .          .   V     .
(PEAK DAY 1, HOUR  17.417)
113.500    119.5417    106.29  .     Q   .          .          .   V     .
(PEAK DAY 1, HOUR  17.500)
113.583    120.2453    102.15  .    Q    .          .          .   V     .
(PEAK DAY 1, HOUR  17.583)
113.667    120.9185     97.75  .    Q    .          .          .   V     .
(PEAK DAY 1, HOUR  17.667)
113.750    121.5674     94.22  .    Q    .          .          .   V     .
(PEAK DAY 1, HOUR  17.750)
113.833    122.1886     90.20  .    Q    .          .          .    V    .
(PEAK DAY 1, HOUR  17.833)
113.917    122.7854     86.66  .   Q     .          .          .    V    .
(PEAK DAY 1, HOUR  17.917)
114.000    123.3617     83.68  .   Q     .          .          .    V    .
(PEAK DAY 1, HOUR  18.000)
114.083    123.9081     79.33  .   Q     .          .          .    V    .
(PEAK DAY 1, HOUR  18.083)
114.167    124.4278     75.48  .   Q     .          .          .    V    .
(PEAK DAY 1, HOUR  18.167)
114.250    124.9180     71.17  .   Q     .          .          .    V    .
(PEAK DAY 1, HOUR  18.250)
114.333    125.3749     66.35  .  Q      .          .          .    V    .
(PEAK DAY 1, HOUR  18.333)
114.417    125.7995     61.64  .  Q      .          .          .     V   .
(PEAK DAY 1, HOUR  18.417)
114.500    126.2051     58.90  .  Q      .          .          .     V   .
(PEAK DAY 1, HOUR  18.500)
114.583    126.5940     56.47  .  Q      .          .          .     V   .
(PEAK DAY 1, HOUR  18.583)
114.667    126.9651     53.89  .  Q      .          .          .     V   .
(PEAK DAY 1, HOUR  18.667)
114.750    127.3064     49.55  . Q       .          .          .     V   .
(PEAK DAY 1, HOUR  18.750)
114.833    127.6234     46.02  . Q       .          .          .     V   .
(PEAK DAY 1, HOUR  18.833)
114.917    127.9294     44.44  . Q       .          .          .     V   .
(PEAK DAY 1, HOUR  18.917)
115.000    128.2266     43.15  . Q       .          .          .     V   .
(PEAK DAY 1, HOUR  19.000)
115.083    128.5158     41.99  . Q       .          .          .     V   .
(PEAK DAY 1, HOUR  19.083)
115.167    128.7977     40.93  . Q       .          .          .     V   .
(PEAK DAY 1, HOUR  19.167)
115.250    129.0729     39.96  . Q       .          .          .      V  .
(PEAK DAY 1, HOUR  19.250)
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115.333    129.3420     39.07  . Q       .          .          .      V  .
(PEAK DAY 1, HOUR  19.333)
115.417    129.6053     38.24  . Q       .          .          .      V  .
(PEAK DAY 1, HOUR  19.417)
115.500    129.8631     37.43  . Q       .          .          .      V  .
(PEAK DAY 1, HOUR  19.500)
115.583    130.1157     36.68  . Q       .          .          .      V  .
(PEAK DAY 1, HOUR  19.583)
115.667    130.3634     35.96  . Q       .          .          .      V  .
(PEAK DAY 1, HOUR  19.667)
115.750    130.6062     35.25  . Q       .          .          .      V  .
(PEAK DAY 1, HOUR  19.750)
115.833    130.8441     34.56  .Q        .          .          .      V  .
(PEAK DAY 1, HOUR  19.833)
115.917    131.0773     33.85  .Q        .          .          .      V  .
(PEAK DAY 1, HOUR  19.917)
116.000    131.3054     33.13  .Q        .          .          .      V  .
(PEAK DAY 1, HOUR  20.000)
116.083    131.5281     32.33  .Q        .          .          .      V  .
(PEAK DAY 1, HOUR  20.083)
116.167    131.7443     31.40  .Q        .          .          .      V  .
(PEAK DAY 1, HOUR  20.167)
116.250    131.9476     29.51  .Q        .          .          .      V  .
(PEAK DAY 1, HOUR  20.250)
116.333    132.1442     28.55  .Q        .          .          .      V  .
(PEAK DAY 1, HOUR  20.333)
116.417    132.3369     27.98  .Q        .          .          .      V  .
(PEAK DAY 1, HOUR  20.417)
116.500    132.5261     27.48  .Q        .          .          .      V  .
(PEAK DAY 1, HOUR  20.500)
116.583    132.7121     27.00  .Q        .          .          .       V .
(PEAK DAY 1, HOUR  20.583)
116.667    132.8950     26.56  .Q        .          .          .       V .
(PEAK DAY 1, HOUR  20.667)
116.750    133.0751     26.15  .Q        .          .          .       V .
(PEAK DAY 1, HOUR  20.750)
116.833    133.2526     25.78  .Q        .          .          .       V .
(PEAK DAY 1, HOUR  20.833)
116.917    133.4277     25.42  .Q        .          .          .       V .
(PEAK DAY 1, HOUR  20.917)
117.000    133.6004     25.08  .Q        .          .          .       V .
(PEAK DAY 1, HOUR  21.000)
117.083    133.7708     24.75  .Q        .          .          .       V .
(PEAK DAY 1, HOUR  21.083)
117.167    133.9391     24.43  .Q        .          .          .       V .
(PEAK DAY 1, HOUR  21.167)
117.250    134.1053     24.13  .Q        .          .          .       V .
(PEAK DAY 1, HOUR  21.250)
117.333    134.2694     23.83  .Q        .          .          .       V .
(PEAK DAY 1, HOUR  21.333)
117.417    134.4316     23.55  .Q        .          .          .       V .
(PEAK DAY 1, HOUR  21.417)
117.500    134.5918     23.27  .Q        .          .          .       V .
(PEAK DAY 1, HOUR  21.500)
117.583    134.7503     23.00  .Q        .          .          .       V .
(PEAK DAY 1, HOUR  21.583)
117.667    134.9069     22.74  .Q        .          .          .       V .
(PEAK DAY 1, HOUR  21.667)
117.750    135.0618     22.49  .Q        .          .          .       V .
(PEAK DAY 1, HOUR  21.750)
117.833    135.2150     22.25  .Q        .          .          .       V .
(PEAK DAY 1, HOUR  21.833)
117.917    135.3666     22.01  .Q        .          .          .       V .
(PEAK DAY 1, HOUR  21.917)
118.000    135.5165     21.77  .Q        .          .          .       V .
(PEAK DAY 1, HOUR  22.000)
118.083    135.6649     21.55  .Q        .          .          .       V .
(PEAK DAY 1, HOUR  22.083)
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118.167	135.8118	21.33	.Q	.	.	.	V	.	
(PEAK DAY 1, HOUR 22.167)									
118.250	135.9573	21.12	.Q	.	.	.	V	.	
(PEAK DAY 1, HOUR 22.250)									
118.333	136.1014	20.92	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 22.333)									
118.417	136.2441	20.73	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 22.417)									
118.500	136.3856	20.54	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 22.500)									
118.583	136.5257	20.35	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 22.583)									
118.667	136.6646	20.17	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 22.667)									
118.750	136.8023	19.99	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 22.750)									
118.833	136.9388	19.82	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 22.833)									
118.917	137.0741	19.65	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 22.917)									
119.000	137.2083	19.48	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 23.000)									
119.083	137.3414	19.32	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 23.083)									
119.167	137.4734	19.16	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 23.167)									
119.250	137.6043	19.01	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 23.250)									
119.333	137.7341	18.86	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 23.333)									
119.417	137.8630	18.71	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 23.417)									
119.500	137.9908	18.56	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 23.500)									
119.583	138.1177	18.42	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 23.583)									
119.667	138.2436	18.28	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 23.667)									
119.750	138.3686	18.15	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 23.750)									
119.833	138.4927	18.01	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 23.833)									
119.917	138.6158	17.88	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 23.917)									
120.000	138.7381	17.75	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 24.000)									
120.083	138.8558	17.09	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 24.083)									
120.167	138.9599	15.13	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 24.167)									
120.250	139.0420	11.91	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 24.250)									
120.333	139.1041	9.02	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 24.333)									
120.417	139.1541	7.26	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 24.417)									
120.500	139.1965	6.15	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 24.500)									
120.583	139.2330	5.30	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 24.583)									
120.667	139.2646	4.60	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 24.667)									
120.750	139.2924	4.03	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 24.750)									
120.833	139.3169	3.56	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 24.833)									
120.917	139.3386	3.15	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 24.917)									
121.000	139.3580	2.81	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 25.000)									
121.083	139.3753	2.51	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 25.083)									
121.167	139.3909	2.27	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 25.167)									
121.250	139.4051	2.06	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 25.250)									
121.333	139.4180	1.89	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 25.333)									
121.417	139.4299	1.72	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 25.417)									
121.500	139.4408	1.58	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 25.500)									
121.583	139.4506	1.43	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 25.583)									
121.667	139.4596	1.30	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 25.667)									
121.750	139.4676	1.17	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 25.750)									
121.833	139.4749	1.06	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 25.833)									
121.917	139.4814	0.95	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 25.917)									
122.000	139.4873	0.84	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 26.000)									
122.083	139.4925	0.76	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 26.083)									
122.167	139.4971	0.67	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 26.167)									
122.250	139.5012	0.59	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 26.250)									
122.333	139.5047	0.52	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 26.333)									
122.417	139.5079	0.46	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 26.417)									
122.500	139.5107	0.40	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 26.500)									
122.583	139.5130	0.35	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 26.583)									
122.667	139.5151	0.29	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 26.667)									
122.750	139.5168	0.26	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 26.750)									
122.833	139.5185	0.24	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 26.833)									
122.917	139.5201	0.23	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 26.917)									
123.000	139.5216	0.21	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 27.000)									
123.083	139.5229	0.20	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 27.083)									
123.167	139.5242	0.18	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 27.167)									
123.250	139.5253	0.17	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 27.250)									
123.333	139.5264	0.15	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 27.333)									
123.417	139.5273	0.13	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 27.417)									
123.500	139.5281	0.12	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 27.500)									
123.583	139.5288	0.10	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 27.583)									
123.667	139.5294	0.09	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 27.667)									
123.750	139.5300	0.08	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 27.750)									

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 123.833    139.5304      0.06  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  27.833)
 123.917    139.5307      0.05  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  27.917)
 124.000    139.5309      0.03  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  28.000)
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********************************************************************************
  FLOW PROCESS FROM NODE   6330.00 TO NODE   6330.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  5341.3 Ac. ***
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6330.00 TO NODE   6330.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  5341.3 Ac. ***

            STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
        (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      425.0     850.0    1275.0    1700.0
--------------------------------------------------------------------------------
  96.000    530.4213    301.71  .      Q V.          .          .          .
 (PEAK DAY 2, HOUR  24.000)
  96.083    532.4938    300.93  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   0.083)
  96.167    534.5730    301.91  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   0.167)
  96.250    536.6720    304.78  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   0.250)
  96.333    538.7904    307.60  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   0.333)
  96.417    540.9185    308.99  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   0.417)
  96.500    543.0496    309.44  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   0.500)
  96.583    545.1816    309.58  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   0.583)
  96.667    547.3140    309.62  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   0.667)
  96.750    549.4462    309.60  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   0.750)
  96.833    551.5781    309.55  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   0.833)
  96.917    553.7095    309.48  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   0.917)
  97.000    555.8402    309.38  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   1.000)
  97.083    557.9701    309.26  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   1.083)
  97.167    560.0989    309.10  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   1.167)
  97.250    562.2266    308.94  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   1.250)
  97.333    564.3531    308.77  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   1.333)
  97.417    566.4785    308.61  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   1.417)
  97.500    568.6029    308.46  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   1.500)
  97.583    570.7264    308.33  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   1.583)
  97.667    572.8488    308.17  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   1.667)
  97.750    574.9695    307.94  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   1.750)
  97.833    577.0884    307.66  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   1.833)
  97.917    579.2052    307.36  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   1.917)
  98.000    581.3201    307.08  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   2.000)
  98.083    583.4330    306.79  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   2.083)
  98.167    585.5439    306.52  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   2.167)
  98.250    587.6531    306.25  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   2.250)
  98.333    589.7606    306.00  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   2.333)
  98.417    591.8661    305.73  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   2.417)
  98.500    593.9699    305.47  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   2.500)
  98.583    596.0720    305.22  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   2.583)
  98.667    598.1724    304.98  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   2.667)
  98.750    600.2711    304.73  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   2.750)
  98.833    602.3681    304.49  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   2.833)
  98.917    604.4636    304.26  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   2.917)
  99.000    606.5576    304.05  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   3.000)
  99.083    608.6501    303.85  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   3.083)
  99.167    610.7415    303.66  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   3.167)
  99.250    612.8315    303.49  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   3.250)
  99.333    614.9205    303.32  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   3.333)
  99.417    617.0085    303.18  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   3.417)
  99.500    619.0956    303.04  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   3.500)
  99.583    621.1818    302.92  .      Q .V          .          .          .
 (PEAK DAY 1, HOUR   3.583)
  99.667    623.2673    302.81  .      Q .V          .          .          .
 (PEAK DAY 1, HOUR   3.667)
  99.750    625.3520    302.70  .      Q .V          .          .          .
 (PEAK DAY 1, HOUR   3.750)
  99.833    627.4361    302.61  .      Q .V          .          .          .
 (PEAK DAY 1, HOUR   3.833)
  99.917    629.5197    302.53  .      Q .V          .          .          .
 (PEAK DAY 1, HOUR   3.917)
 100.000    631.6027    302.47  .      Q .V          .          .          .
 (PEAK DAY 1, HOUR   4.000)
 100.083    633.6854    302.41  .      Q .V          .          .          .
 (PEAK DAY 1, HOUR   4.083)
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100.167    635.7679    302.37  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   4.167)
100.250    637.8501    302.33  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   4.250)
100.333    639.9321    302.31  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   4.333)
100.417    642.0140    302.29  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   4.417)
100.500    644.0959    302.29  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   4.500)
100.583    646.1779    302.30  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   4.583)
100.667    648.2600    302.32  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   4.667)
100.750    650.3423    302.36  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   4.750)
100.833    652.4250    302.41  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   4.833)
100.917    654.5081    302.47  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   4.917)
101.000    656.5917    302.54  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   5.000)
101.083    658.6759    302.62  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   5.083)
101.167    660.7607    302.72  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   5.167)
101.250    662.8464    302.83  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   5.250)
101.333    664.9328    302.95  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   5.333)
101.417    667.0202    303.09  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   5.417)
101.500    669.1086    303.24  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   5.500)
101.583    671.1981    303.40  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   5.583)
101.667    673.2888    303.57  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   5.667)
101.750    675.3809    303.76  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   5.750)
101.833    677.4742    303.96  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   5.833)
101.917    679.5691    304.18  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   5.917)
102.000    681.6655    304.40  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   6.000)
102.083    683.7636    304.64  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   6.083)
102.167    685.8635    304.90  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   6.167)
102.250    687.9651    305.17  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   6.250)
102.333    690.0688    305.45  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   6.333)
102.417    692.1745    305.75  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   6.417)
102.500    694.2823    306.06  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   6.500)
102.583    696.3924    306.38  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   6.583)
102.667    698.5048    306.72  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   6.667)
102.750    700.6196    307.07  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   6.750)
102.833    702.7369    307.44  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   6.833)
102.917    704.8569    307.82  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   6.917)
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103.000    706.9797    308.22  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   7.000)
103.083    709.1052    308.63  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   7.083)
103.167    711.2338    309.06  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   7.167)
103.250    713.3653    309.50  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   7.250)
103.333    715.5000    309.96  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   7.333)
103.417    717.6380    310.44  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   7.417)
103.500    719.7794    310.92  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   7.500)
103.583    721.9242    311.43  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   7.583)
103.667    724.0726    311.95  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   7.667)
103.750    726.2248    312.49  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   7.750)
103.833    728.3807    313.05  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   7.833)
103.917    730.5406    313.62  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   7.917)
104.000    732.7047    314.21  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   8.000)
104.083    734.8728    314.82  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   8.083)
104.167    737.0453    315.44  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   8.167)
104.250    739.2222    316.08  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   8.250)
104.333    741.4036    316.74  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   8.333)
104.417    743.5897    317.42  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   8.417)
104.500    745.7806    318.12  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   8.500)
104.583    747.9765    318.84  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   8.583)
104.667    750.1774    319.57  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   8.667)
104.750    752.3835    320.33  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   8.750)
104.833    754.5950    321.11  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   8.833)
104.917    756.8120    321.90  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   8.917)
105.000    759.0346    322.72  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   9.000)
105.083    761.2629    323.56  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   9.083)
105.167    763.4972    324.42  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   9.167)
105.250    765.7375    325.30  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   9.250)
105.333    767.9841    326.20  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   9.333)
105.417    770.2371    327.13  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   9.417)
105.500    772.4965    328.08  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   9.500)
105.583    774.7626    329.03  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   9.583)
105.667    777.0349    329.94  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   9.667)
105.750    779.3132    330.80  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   9.750)
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105.833    781.5972    331.64  .      Q  .  V      .         .         .
(PEAK DAY 1, HOUR   9.833)
105.917    783.8871    332.49  .      Q  .  V      .         .         .
(PEAK DAY 1, HOUR   9.917)
106.000    786.1830    333.37  .      Q  .  V      .         .         .
(PEAK DAY 1, HOUR  10.000)
106.083    788.4851    334.26  .      Q  .  V      .         .         .
(PEAK DAY 1, HOUR  10.083)
106.167    790.7935    335.17  .      Q  .   V     .         .         .
(PEAK DAY 1, HOUR  10.167)
106.250    793.1083    336.11  .      Q  .   V     .         .         .
(PEAK DAY 1, HOUR  10.250)
106.333    795.4297    337.07  .      Q  .   V     .         .         .
(PEAK DAY 1, HOUR  10.333)
106.417    797.7580    338.06  .      Q  .   V     .         .         .
(PEAK DAY 1, HOUR  10.417)
106.500    800.0932    339.07  .      Q  .   V     .         .         .
(PEAK DAY 1, HOUR  10.500)
106.583    802.4355    340.11  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  10.583)
106.667    804.7852    341.17  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  10.667)
106.750    807.1424    342.27  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  10.750)
106.833    809.5073    343.39  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  10.833)
106.917    811.8801    344.53  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  10.917)
107.000    814.2610    345.71  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  11.000)
107.083    816.6503    346.92  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  11.083)
107.167    819.0482    348.16  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  11.167)
107.250    821.4547    349.44  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  11.250)
107.333    823.8703    350.74  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  11.333)
107.417    826.2951    352.08  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  11.417)
107.500    828.7294    353.46  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  11.500)
107.583    831.1735    354.88  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  11.583)
107.667    833.6276    356.33  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  11.667)
107.750    836.0920    357.83  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  11.750)
107.833    838.5670    359.36  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  11.833)
107.917    841.0528    360.94  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  11.917)
108.000    843.5498    362.57  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  12.000)
108.083    846.0618    364.75  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  12.083)
108.167    848.5994    368.46  .       Q .    V    .         .         .
(PEAK DAY 1, HOUR  12.167)
108.250    851.1739    373.81  .       Q .    V    .         .         .
(PEAK DAY 1, HOUR  12.250)
108.333    853.7852    379.16  .       Q .    V    .         .         .
(PEAK DAY 1, HOUR  12.333)
108.417    856.4252    383.34  .        Q.    V    .         .         .
(PEAK DAY 1, HOUR  12.417)
108.500    859.0889    386.77  .        Q.    V    .         .         .
(PEAK DAY 1, HOUR  12.500)
108.583    861.7750    390.01  .        Q.    V    .         .         .
(PEAK DAY 1, HOUR  12.583)
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108.667    864.4831    393.22  .        Q.    V    .         .         .
(PEAK DAY 1, HOUR  12.667)
108.750    867.2136    396.47  .        Q.    V    .         .         .
(PEAK DAY 1, HOUR  12.750)
108.833    869.9668    399.76  .        Q.    V    .         .         .
(PEAK DAY 1, HOUR  12.833)
108.917    872.7430    403.10  .        Q.    V    .         .         .
(PEAK DAY 1, HOUR  12.917)
109.000    875.5422    406.45  .        Q.    V    .         .         .
(PEAK DAY 1, HOUR  13.000)
109.083    878.3642    409.75  .        Q.    V    .         .         .
(PEAK DAY 1, HOUR  13.083)
109.167    881.2086    413.01  .        Q.    V    .         .         .
(PEAK DAY 1, HOUR  13.167)
109.250    884.0757    416.31  .        Q.    V    .         .         .
(PEAK DAY 1, HOUR  13.250)
109.333    886.9661    419.68  .        Q.    V    .         .         .
(PEAK DAY 1, HOUR  13.333)
109.417    889.8804    423.16  .        Q.    V    .         .         .
(PEAK DAY 1, HOUR  13.417)
109.500    892.8195    426.74  .         Q    V    .         .         .
(PEAK DAY 1, HOUR  13.500)
109.583    895.7841    430.46  .         Q    V    .         .         .
(PEAK DAY 1, HOUR  13.583)
109.667    898.7751    434.30  .         Q    V    .         .         .
(PEAK DAY 1, HOUR  13.667)
109.750    901.7937    438.31  .         Q    V    .         .         .
(PEAK DAY 1, HOUR  13.750)
109.833    904.8411    442.47  .         Q     V   .         .         .
(PEAK DAY 1, HOUR  13.833)
109.917    907.9184    446.83  .         Q     V   .         .         .
(PEAK DAY 1, HOUR  13.917)
110.000    911.0271    451.38  .         Q     V   .         .         .
(PEAK DAY 1, HOUR  14.000)
110.083    914.1691    456.21  .         Q     V   .         .         .
(PEAK DAY 1, HOUR  14.083)
110.167    917.3464    461.35  .         Q     V   .         .         .
(PEAK DAY 1, HOUR  14.167)
110.250    920.5599    466.59  .         Q     V   .         .         .
(PEAK DAY 1, HOUR  14.250)
110.333    923.8080    471.63  .         .Q    V   .         .         .
(PEAK DAY 1, HOUR  14.333)
110.417    927.0898    476.52  .         .Q    V   .         .         .
(PEAK DAY 1, HOUR  14.417)
110.500    930.4065    481.58  .         .Q    V   .         .         .
(PEAK DAY 1, HOUR  14.500)
110.583    933.7606    487.02  .         .Q    V   .         .         .
(PEAK DAY 1, HOUR  14.583)
110.667    937.1558    492.97  .         .Q    V   .         .         .
(PEAK DAY 1, HOUR  14.667)
110.750    940.5961    499.53  .         .Q    V   .         .         .
(PEAK DAY 1, HOUR  14.750)
110.833    944.0869    506.87  .         .Q    V   .         .         .
(PEAK DAY 1, HOUR  14.833)
110.917    947.6357    515.29  .         . Q   V   .         .         .
(PEAK DAY 1, HOUR  14.917)
111.000    951.2521    525.09  .         . Q   V   .         .         .
(PEAK DAY 1, HOUR  15.000)
111.083    954.9462    536.39  .         . Q   V   .         .         .
(PEAK DAY 1, HOUR  15.083)
111.167    958.7275    549.05  .         . Q   V   .         .         .
(PEAK DAY 1, HOUR  15.167)
111.250    962.6063    563.19  .         .  Q   V  .         .         .
(PEAK DAY 1, HOUR  15.250)
111.333    966.5941    579.03  .         .  Q   V  .         .         .
(PEAK DAY 1, HOUR  15.333)
111.417    970.6938    595.29  .         .   Q  V  .         .         .
(PEAK DAY 1, HOUR  15.417)
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 111.500    974.8882    609.02  .         .   Q  V  .         .         .
(PEAK DAY 1, HOUR  15.500)
 111.583    979.1621    620.58  .         .   Q  V  .         .         .
(PEAK DAY 1, HOUR  15.583)
 111.667    983.5450    636.41  .         .   Q  V  .         .         .
(PEAK DAY 1, HOUR  15.667)
 111.750    988.1083    662.58  .         .    Q V  .         .         .
(PEAK DAY 1, HOUR  15.750)
 111.833    992.9355    700.92  .         .     QV  .         .         .
(PEAK DAY 1, HOUR  15.833)
 111.917    998.1481    756.87  .         .      Q  .         .         .
(PEAK DAY 1, HOUR  15.917)
 112.000   1003.9661    844.76  .         .      V Q.         .         .
(PEAK DAY 1, HOUR  16.000)
 112.083   1011.1546   1043.78  .         .      V  .   Q     .         .
(PEAK DAY 1, HOUR  16.083)
 112.167   1020.6707   1381.73  .         .       V .         . Q       .
(PEAK DAY 1, HOUR  16.167)
 112.250   1032.1061   1660.43  .         .       V .         .        Q.
(PEAK DAY 1, HOUR  16.250)
 112.333   1043.1368   1601.66  .         .       V .         .     Q  .
(PEAK DAY 1, HOUR  16.333)
 112.417   1052.2742   1326.73  .         .       V .         .Q        .
(PEAK DAY 1, HOUR  16.417)
 112.500   1059.9978   1121.47  .         .       V .     Q   .         .
(PEAK DAY 1, HOUR  16.500)
 112.583   1067.0259   1020.47  .         .       V .   Q     .         .
(PEAK DAY 1, HOUR  16.583)
 112.667   1073.6063    955.49  .         .        V. Q       .         .
(PEAK DAY 1, HOUR  16.667)
 112.750   1079.8141    901.38  .         .        V.Q        .         .
(PEAK DAY 1, HOUR  16.750)
 112.833   1085.7117    856.32  .         .        VQ         .         .
(PEAK DAY 1, HOUR  16.833)
 112.917   1091.3558    819.53  .         .        Q.         .         .
(PEAK DAY 1, HOUR  16.917)
 113.000   1096.7831    788.03  .         .       QV.         .         .
(PEAK DAY 1, HOUR  17.000)
 113.083   1102.0281    761.58  .         .      Q V.         .         .
(PEAK DAY 1, HOUR  17.083)
 113.167   1107.1189    739.18  .         .      Q V.         .         .
(PEAK DAY 1, HOUR  17.167)
 113.250   1112.0918    722.07  .         .     Q  V.         .         .
(PEAK DAY 1, HOUR  17.250)
 113.333   1116.9706    708.41  .         .     Q  V.         .         .
(PEAK DAY 1, HOUR  17.333)
 113.417   1121.7854    699.11  .         .     Q  V.         .         .
(PEAK DAY 1, HOUR  17.417)
 113.500   1126.5439    690.93  .         .     Q  V.         .         .
(PEAK DAY 1, HOUR  17.500)
 113.583   1131.2535    683.84  .         .     Q   V         .         .
(PEAK DAY 1, HOUR  17.583)
 113.667   1135.9126    676.50  .         .    Q    V         .         .
(PEAK DAY 1, HOUR  17.667)
 113.750   1140.5288    670.27  .         .    Q    V         .         .
(PEAK DAY 1, HOUR  17.750)
 113.833   1145.0970    663.31  .         .    Q    V         .         .
(PEAK DAY 1, HOUR  17.833)
 113.917   1149.6224    657.09  .         .    Q    V         .         .
(PEAK DAY 1, HOUR  17.917)
 114.000   1154.1122    651.91  .         .    Q    V         .         .
(PEAK DAY 1, HOUR  18.000)
 114.083   1158.5498    644.35  .         .    Q    V         .         .
(PEAK DAY 1, HOUR  18.083)
 114.167   1162.9353    636.77  .         .   Q     V         .         .
(PEAK DAY 1, HOUR  18.167)
 114.250   1167.2659    628.79  .         .   Q     V         .         .
(PEAK DAY 1, HOUR  18.250)
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 114.333   1171.5363    620.07  .         .   Q     V         .         .
(PEAK DAY 1, HOUR  18.333)
 114.417   1175.7413    610.57  .         .   Q     V         .         .
(PEAK DAY 1, HOUR  18.417)
 114.500   1179.8997    603.79  .         .   Q     V         .         .
(PEAK DAY 1, HOUR  18.500)
 114.583   1184.0266    599.23  .         .   Q     V         .         .
(PEAK DAY 1, HOUR  18.583)
 114.667   1188.1260    595.23  .         .   Q     .V        .         .
(PEAK DAY 1, HOUR  18.667)
 114.750   1192.1871    589.68  .         .  Q      .V        .         .
(PEAK DAY 1, HOUR  18.750)
 114.833   1196.2164    585.05  .         .  Q      .V        .         .
(PEAK DAY 1, HOUR  18.833)
 114.917   1200.2278    582.45  .         .  Q      .V        .         .
(PEAK DAY 1, HOUR  18.917)
 115.000   1204.2240    580.24  .         .  Q      .V        .         .
(PEAK DAY 1, HOUR  19.000)
 115.083   1208.2063    578.24  .         .  Q      .V        .         .
(PEAK DAY 1, HOUR  19.083)
 115.167   1212.1758    576.37  .         .  Q      .V        .         .
(PEAK DAY 1, HOUR  19.167)
 115.250   1216.1332    574.62  .         .  Q      .V        .         .
(PEAK DAY 1, HOUR  19.250)
 115.333   1220.0791    572.95  .         .  Q      .V        .         .
(PEAK DAY 1, HOUR  19.333)
 115.417   1224.0137    571.30  .         .  Q      .V        .         .
(PEAK DAY 1, HOUR  19.417)
 115.500   1227.9368    569.63  .         .  Q      .V        .         .
(PEAK DAY 1, HOUR  19.500)
 115.583   1231.8479    567.90  .         .  Q      .V        .         .
(PEAK DAY 1, HOUR  19.583)
 115.667   1235.7435    565.65  .         .  Q      .V        .         .
(PEAK DAY 1, HOUR  19.667)
 115.750   1239.6229    563.29  .         .  Q      .V        .         .
(PEAK DAY 1, HOUR  19.750)
 115.833   1243.4902    561.54  .         .  Q      . V       .         .
(PEAK DAY 1, HOUR  19.833)
 115.917   1247.3479    560.14  .         .  Q      . V       .         .
(PEAK DAY 1, HOUR  19.917)
 116.000   1251.1963    558.79  .         .  Q      . V       .         .
(PEAK DAY 1, HOUR  20.000)
 116.083   1255.0352    557.40  .         .  Q      . V       .         .
(PEAK DAY 1, HOUR  20.083)
 116.167   1258.8636    555.90  .         .  Q      . V       .         .
(PEAK DAY 1, HOUR  20.167)
 116.250   1262.6754    553.46  .         .  Q      . V       .         .
(PEAK DAY 1, HOUR  20.250)
 116.333   1266.4768    551.97  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  20.333)
 116.417   1270.2708    550.89  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  20.417)
 116.500   1274.0580    549.91  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  20.500)
 116.583   1277.8386    548.95  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  20.583)
 116.667   1281.6130    548.04  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  20.667)
 116.750   1285.3815    547.17  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  20.750)
 116.833   1289.1442    546.34  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  20.833)
 116.917   1292.9014    545.54  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  20.917)
 117.000   1296.6531    544.75  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  21.000)
 117.083   1300.3995    543.98  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  21.083)
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 117.167   1304.1407    543.23  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  21.167)
 117.250   1307.8770    542.50  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  21.250)
 117.333   1311.6082    541.77  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  21.333)
 117.417   1315.3345    541.07  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  21.417)
 117.500   1319.0560    540.37  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  21.500)
 117.583   1322.7728    539.69  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  21.583)
 117.667   1326.4851    539.02  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  21.667)
 117.750   1330.1929    538.36  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  21.750)
 117.833   1333.8961    537.72  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  21.833)
 117.917   1337.5951    537.08  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  21.917)
 118.000   1341.2897    536.46  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  22.000)
 118.083   1344.9800    535.84  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  22.083)
 118.167   1348.6661    535.23  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  22.167)
 118.250   1352.3483    534.64  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  22.250)
 118.333   1356.0264    534.05  .         . Q       .   V     .         .
(PEAK DAY 1, HOUR  22.333)
 118.417   1359.7004    533.47  .         . Q       .   V     .         .
(PEAK DAY 1, HOUR  22.417)
 118.500   1363.3706    532.90  .         . Q       .   V     .         .
(PEAK DAY 1, HOUR  22.500)
 118.583   1367.0369    532.34  .         . Q       .   V     .         .
(PEAK DAY 1, HOUR  22.583)
 118.667   1370.6992    531.78  .         . Q       .   V     .         .
(PEAK DAY 1, HOUR  22.667)
 118.750   1374.3578    531.22  .         . Q       .   V     .         .
(PEAK DAY 1, HOUR  22.750)
 118.833   1378.0126    530.68  .         . Q       .   V     .         .
(PEAK DAY 1, HOUR  22.833)
 118.917   1381.6637    530.13  .         . Q       .   V     .         .
(PEAK DAY 1, HOUR  22.917)
 119.000   1385.3110    529.60  .         . Q       .   V     .         .
(PEAK DAY 1, HOUR  23.000)
 119.083   1388.9547    529.06  .         . Q       .   V     .         .
(PEAK DAY 1, HOUR  23.083)
 119.167   1392.5947    528.54  .         . Q       .   V     .         .
(PEAK DAY 1, HOUR  23.167)
 119.250   1396.2312    528.01  .         . Q       .   V     .         .
(PEAK DAY 1, HOUR  23.250)
 119.333   1399.8641    527.49  .         . Q       .   V     .         .
(PEAK DAY 1, HOUR  23.333)
 119.417   1403.4935    526.98  .         . Q       .   V     .         .
(PEAK DAY 1, HOUR  23.417)
 119.500   1407.1194    526.47  .         . Q       .   V     .         .
(PEAK DAY 1, HOUR  23.500)
 119.583   1410.7417    525.96  .         . Q       .    V    .         .
(PEAK DAY 1, HOUR  23.583)
 119.667   1414.3606    525.46  .         . Q       .    V    .         .
(PEAK DAY 1, HOUR  23.667)
 119.750   1417.9761    524.96  .         . Q       .    V    .         .
(PEAK DAY 1, HOUR  23.750)
 119.833   1421.5881    524.46  .         . Q       .    V    .         .
(PEAK DAY 1, HOUR  23.833)
 119.917   1425.1968    523.97  .         . Q       .    V    .         .
(PEAK DAY 1, HOUR  23.917)
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 120.000   1428.8020    523.48  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  24.000)
 120.083   1432.3983    522.18  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  24.083)
 120.167   1435.9695    518.54  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  24.167)
 120.250   1439.4985    512.42  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  24.250)
 120.333   1442.9866    506.47  .         .Q        .  V      .         .
(PEAK DAY 1, HOUR  24.333)
 120.417   1446.4478    502.56  .         .Q        .  V      .         .
(PEAK DAY 1, HOUR  24.417)
 120.500   1449.8915    500.04  .         .Q        .  V      .         .
(PEAK DAY 1, HOUR  24.500)
 120.583   1453.3217    498.06  .         .Q        .  V      .         .
(PEAK DAY 1, HOUR  24.583)
 120.667   1456.7402    496.38  .         .Q        .  V      .         .
(PEAK DAY 1, HOUR  24.667)
 120.750   1460.1489    494.95  .         .Q        .  V      .         .
(PEAK DAY 1, HOUR  24.750)
 120.833   1463.5490    493.68  .         .Q        .  V      .         .
(PEAK DAY 1, HOUR  24.833)
 120.917   1466.9410    492.53  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  24.917)
 121.000   1470.3259    491.48  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  25.000)
 121.083   1473.7043    490.54  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  25.083)
 121.167   1477.0768    489.68  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  25.167)
 121.250   1480.4438    488.90  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  25.250)
 121.333   1483.8059    488.17  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  25.333)
 121.417   1487.1631    487.46  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  25.417)
 121.500   1490.5155    486.77  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  25.500)
 121.583   1493.8633    486.10  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  25.583)
 121.667   1497.2065    485.45  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  25.667)
 121.750   1500.5454    484.80  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  25.750)
 121.833   1503.8800    484.18  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  25.833)
 121.917   1507.2104    483.58  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  25.917)
 122.000   1510.5367    482.98  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  26.000)
 122.083   1513.8591    482.40  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  26.083)
 122.167   1517.1776    481.85  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  26.167)
 122.250   1520.4923    481.29  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  26.250)
 122.333   1523.8032    480.75  .         .Q        .    V    .         .
(PEAK DAY 1, HOUR  26.333)
 122.417   1527.1107    480.24  .         .Q        .    V    .         .
(PEAK DAY 1, HOUR  26.417)
 122.500   1530.4148    479.75  .         .Q        .    V    .         .
(PEAK DAY 1, HOUR  26.500)
 122.583   1533.7155    479.26  .         .Q        .    V    .         .
(PEAK DAY 1, HOUR  26.583)
 122.667   1537.0128    478.78  .         .Q        .    V    .         .
(PEAK DAY 1, HOUR  26.667)
 122.750   1540.3070    478.32  .         .Q        .    V    .         .
(PEAK DAY 1, HOUR  26.750)
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 122.833   1543.5981    477.87  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  26.833)
 122.917   1546.8862    477.42  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  26.917)
 123.000   1550.1711    476.98  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  27.000)
 123.083   1553.4530    476.53  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  27.083)
 123.167   1556.7318    476.09  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  27.167)
 123.250   1560.0076    475.64  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  27.250)
 123.333   1563.2803    475.20  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  27.333)
 123.417   1566.5499    474.76  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  27.417)
 123.500   1569.8165    474.31  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  27.500)
 123.583   1573.0801    473.87  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  27.583)
 123.667   1576.3407    473.43  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  27.667)
 123.750   1579.5983    473.00  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  27.750)
 123.833   1582.8529    472.58  .         .Q        .       V .         .
 (PEAK DAY 1, HOUR  27.833)
 123.917   1586.1047    472.17  .         .Q        .       V .         .
 (PEAK DAY 1, HOUR  27.917)
 124.000   1589.3539    471.78  .         .Q        .       V .         .
 (PEAK DAY 1, HOUR  28.000)
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
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  FLOW PROCESS FROM NODE   6330.00 TO NODE   6355.00 IS CODE = 5.2
-------------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
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         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  5341.3 Ac. ***

         THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
         TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
         INTERVALS(Reference: the National Engineering Handbook,
         Hydrology, Chapter 17, page 17-52, August,1972,
         U.S. Department of Commerce).


         ASSUMED REGULAR CHANNEL INFORMATION:
           BASEWIDTH(FT) =   30.00     CHANNEL Z =  1.00
           UPSTREAM ELEVATION(FT) =     375.00
           DOWNSTREAM ELEVATION(FT) =     314.00
           CHANNEL LENGTH(FT) =    6086.00     MANNING'S FACTOR = 0.040
           CONSTANT LOSS RATE(CFS) =    0.00


         CHANNEL ROUTING COEFFICIENT ESTIMATED:
           MAXIMUM INFLOW(CFS) =  1660.43
           AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  1155.84
           CHANNEL NORMAL VELOCITY FOR Q =  1155.84 CFS =   8.31 FPS
           ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.830

         MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
         UNIT INTERVALS IS CSTAR = 0.691
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CONVEX METHOD CHANNEL ROUTING RESULTS:

PEAK DAY	TIME (HRS)	CLOCK TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
2	24.000	96.000	301.71	305.18	305.18
1	0.083	96.083	300.93	303.77	303.77
1	0.167	96.167	301.91	302.38	302.38
1	0.250	96.250	304.78	301.39	301.39
1	0.333	96.333	307.60	301.73	301.73
1	0.417	96.417	308.99	303.78	303.78
1	0.500	96.500	309.44	306.36	306.36
1	0.583	96.583	309.58	308.15	308.15
1	0.667	96.667	309.62	309.03	309.03
1	0.750	96.750	309.60	309.41	309.41
1	0.833	96.833	309.55	309.55	309.55
1	0.917	96.917	309.48	309.59	309.59
1	1.000	97.000	309.38	309.56	309.56
1	1.083	97.083	309.26	309.51	309.51
1	1.167	97.167	309.10	309.42	309.42
1	1.250	97.250	308.94	309.31	309.31
1	1.333	97.333	308.77	309.17	309.17
1	1.417	97.417	308.61	309.01	309.01
1	1.500	97.500	308.46	308.85	308.85
1	1.583	97.583	308.33	308.69	308.69
1	1.667	97.667	308.17	308.54	308.54
1	1.750	97.750	307.94	308.40	308.40
1	1.833	97.833	307.66	308.24	308.24
1	1.917	97.917	307.36	308.04	308.04
1	2.000	98.000	307.08	307.78	307.78
1	2.083	98.083	306.79	307.50	307.50
1	2.167	98.167	306.52	307.21	307.21
1	2.250	98.250	306.25	306.93	306.93
1	2.333	98.333	306.00	306.65	306.65
1	2.417	98.417	305.73	306.38	306.38
1	2.500	98.500	305.47	306.12	306.12
1	2.583	98.583	305.22	305.86	305.86
1	2.667	98.667	304.98	305.59	305.59
1	2.750	98.750	304.73	305.34	305.34
1	2.833	98.833	304.49	305.09	305.09
1	2.917	98.917	304.26	304.85	304.85
1	3.000	99.000	304.05	304.61	304.61
1	3.083	99.083	303.85	304.37	304.37
1	3.167	99.167	303.66	304.15	304.15
1	3.250	99.250	303.49	303.95	303.95
1	3.333	99.333	303.32	303.75	303.75
1	3.417	99.417	303.18	303.57	303.57
1	3.500	99.500	303.04	303.40	303.40
1	3.583	99.583	302.92	303.25	303.25
1	3.667	99.667	302.81	303.11	303.11
1	3.750	99.750	302.70	302.98	302.98
1	3.833	99.833	302.61	302.86	302.86
1	3.917	99.917	302.53	302.75	302.75
1	4.000	100.000	302.47	302.66	302.66
1	4.083	100.083	302.41	302.57	302.57
1	4.167	100.167	302.37	302.50	302.50
1	4.250	100.250	302.33	302.44	302.44
1	4.333	100.333	302.31	302.39	302.39
1	4.417	100.417	302.29	302.35	302.35
1	4.500	100.500	302.29	302.32	302.32
1	4.583	100.583	302.30	302.30	302.30
1	4.667	100.667	302.32	302.29	302.29
1	4.750	100.750	302.36	302.30	302.30
1	4.833	100.833	302.41	302.32	302.32
1	4.917	100.917	302.47	302.34	302.34
1	5.000	101.000	302.54	302.39	302.39

1	5.083	101.083	302.62	302.44	302.44
1	5.167	101.167	302.72	302.51	302.51
1	5.250	101.250	302.83	302.58	302.58
1	5.333	101.333	302.95	302.68	302.68
1	5.417	101.417	303.09	302.78	302.78
1	5.500	101.500	303.24	302.90	302.90
1	5.583	101.583	303.40	303.03	303.03
1	5.667	101.667	303.57	303.17	303.17
1	5.750	101.750	303.76	303.32	303.32
1	5.833	101.833	303.96	303.49	303.49
1	5.917	101.917	304.18	303.67	303.67
1	6.000	102.000	304.40	303.87	303.87
1	6.083	102.083	304.64	304.08	304.08
1	6.167	102.167	304.90	304.30	304.30
1	6.250	102.250	305.17	304.53	304.53
1	6.333	102.333	305.45	304.78	304.78
1	6.417	102.417	305.75	305.04	305.04
1	6.500	102.500	306.06	305.32	305.32
1	6.583	102.583	306.38	305.61	305.61
1	6.667	102.667	306.72	305.91	305.91
1	6.750	102.750	307.07	306.23	306.23
1	6.833	102.833	307.44	306.56	306.56
1	6.917	102.917	307.82	306.91	306.91
1	7.000	103.000	308.22	307.27	307.27
1	7.083	103.083	308.63	307.64	307.64
1	7.167	103.167	309.06	308.03	308.03
1	7.250	103.250	309.50	308.44	308.44
1	7.333	103.333	309.96	308.86	308.86
1	7.417	103.417	310.44	309.30	309.30
1	7.500	103.500	310.92	309.75	309.75
1	7.583	103.583	311.43	310.21	310.21
1	7.667	103.667	311.95	310.70	310.70
1	7.750	103.750	312.49	311.19	311.19
1	7.833	103.833	313.05	311.71	311.71
1	7.917	103.917	313.62	312.24	312.24
1	8.000	104.000	314.21	312.79	312.79
1	8.083	104.083	314.82	313.35	313.35
1	8.167	104.167	315.44	313.93	313.93
1	8.250	104.250	316.08	314.53	314.53
1	8.333	104.333	316.74	315.15	315.15
1	8.417	104.417	317.42	315.78	315.78
1	8.500	104.500	318.12	316.43	316.43
1	8.583	104.583	318.84	317.10	317.10
1	8.667	104.667	319.57	317.79	317.79
1	8.750	104.750	320.33	318.50	318.50
1	8.833	104.833	321.11	319.23	319.23
1	8.917	104.917	321.90	319.98	319.98
1	9.000	105.000	322.72	320.74	320.74
1	9.083	105.083	323.56	321.53	321.53
1	9.167	105.167	324.42	322.34	322.34
1	9.250	105.250	325.30	323.16	323.16
1	9.333	105.333	326.20	324.01	324.01
1	9.417	105.417	327.13	324.88	324.88
1	9.500	105.500	328.08	325.78	325.78
1	9.583	105.583	329.03	326.69	326.69
1	9.667	105.667	329.94	327.63	327.63
1	9.750	105.750	330.80	328.58	328.58
1	9.833	105.833	331.64	329.50	329.50
1	9.917	105.917	332.49	330.38	330.38
1	10.000	106.000	333.37	331.24	331.24
1	10.083	106.083	334.26	332.09	332.09
1	10.167	106.167	335.17	332.95	332.95
1	10.250	106.250	336.11	333.84	333.84
1	10.333	106.333	337.07	334.74	334.74
1	10.417	106.417	338.06	335.67	335.67
1	10.500	106.500	339.07	336.62	336.62
1	10.583	106.583	340.11	337.60	337.60
1	10.667	106.667	341.17	338.60	338.60
1	10.750	106.750	342.27	339.62	339.62
1	10.833	106.833	343.39	340.68	340.68
1	10.917	106.917	344.53	341.75	341.75
1	11.000	107.000	345.71	342.86	342.86
1	11.083	107.083	346.92	344.00	344.00
1	11.167	107.167	348.16	345.16	345.16
1	11.250	107.250	349.44	346.35	346.35
1	11.333	107.333	350.74	347.58	347.58
1	11.417	107.417	352.08	348.84	348.84
1	11.500	107.500	353.46	350.13	350.13
1	11.583	107.583	354.88	351.46	351.46
1	11.667	107.667	356.33	352.82	352.82
1	11.750	107.750	357.83	354.21	354.21
1	11.833	107.833	359.36	355.65	355.65
1	11.917	107.917	360.94	357.13	357.13
1	12.000	108.000	362.57	358.64	358.64
1	12.083	108.083	364.75	360.20	360.20
1	12.167	108.167	368.46	361.81	361.81
1	12.250	108.250	373.81	363.80	363.80
1	12.333	108.333	379.16	366.95	366.95
1	12.417	108.417	383.34	371.59	371.59
1	12.500	108.500	386.77	376.72	376.72
1	12.583	108.583	390.01	381.21	381.21
1	12.667	108.667	393.22	384.99	384.99
1	12.750	108.750	396.47	388.40	388.40
1	12.833	108.833	399.76	391.67	391.67
1	12.917	108.917	403.10	394.93	394.93
1	13.000	109.000	406.45	398.20	398.20
1	13.083	109.083	409.75	401.53	401.53
1	13.167	109.167	413.01	404.87	404.87
1	13.250	109.250	416.31	408.18	408.18
1	13.333	109.333	419.68	411.45	411.45
1	13.417	109.417	423.16	414.75	414.75
1	13.500	109.500	426.74	418.10	418.10
1	13.583	109.583	430.46	421.53	421.53
1	13.667	109.667	434.30	425.07	425.07
1	13.750	109.750	438.31	428.72	428.72
1	13.833	109.833	442.47	432.50	432.50
1	13.917	109.917	446.83	436.44	436.44
1	14.000	110.000	451.38	440.53	440.53
1	14.083	110.083	456.21	444.80	444.80
1	14.167	110.167	461.35	449.26	449.26
1	14.250	110.250	466.59	453.97	453.97
1	14.333	110.333	471.63	458.98	458.98
1	14.417	110.417	476.52	464.14	464.14
1	14.500	110.500	481.58	469.22	469.22
1	14.583	110.583	487.02	474.18	474.18
1	14.667	110.667	492.97	479.20	479.20
1	14.750	110.750	499.53	484.50	484.50
1	14.833	110.833	506.87	490.24	490.24
1	14.917	110.917	515.29	496.54	496.54
1	15.000	111.000	525.09	503.54	503.54
1	15.083	111.083	536.39	511.50	511.50
1	15.167	111.167	549.05	520.71	520.71
1	15.250	111.250	563.19	531.33	531.33
1	15.333	111.333	579.03	543.34	543.34
1	15.417	111.417	595.29	556.79	556.79
1	15.500	111.500	609.02	571.86	571.86
1	15.583	111.583	620.58	587.74	587.74
1	15.667	111.667	636.41	602.19	602.19
1	15.750	111.750	662.58	614.68	614.68
1	15.833	111.833	700.92	629.39	629.39
1	15.917	111.917	756.87	651.84	651.84
1	16.000	112.000	844.76	685.03	685.03
1	16.083	112.083	1043.78	733.62	733.62
1	16.167	112.167	1381.73	808.77	808.77
1	16.250	112.250	1660.43	967.43	967.43
1	16.333	112.333	1601.66	1247.38	1247.38

1	16.417	112.417	1326.73	1527.57	1527.57
1	16.500	112.500	1121.47	1579.85	1579.85
1	16.583	112.583	1020.47	1410.09	1410.09
1	16.667	112.667	955.49	1214.50	1214.50
1	16.750	112.750	901.38	1082.33	1082.33
1	16.833	112.833	856.32	995.90	995.90
1	16.917	112.917	819.53	931.60	931.60
1	17.000	113.000	788.03	880.43	880.43
1	17.083	113.083	761.58	839.04	839.04
1	17.167	113.167	739.18	804.38	804.38
1	17.250	113.250	722.07	775.30	775.30
1	17.333	113.333	708.41	750.76	750.76
1	17.417	113.417	699.11	731.26	731.26
1	17.500	113.500	690.93	715.72	715.72
1	17.583	113.583	683.84	704.42	704.42
1	17.667	113.667	676.50	695.25	695.25
1	17.750	113.750	670.27	687.50	687.50
1	17.833	113.833	663.31	680.04	680.04
1	17.917	113.917	657.09	673.40	673.40
1	18.000	114.000	651.91	666.56	666.56
1	18.083	114.083	644.35	660.14	660.14
1	18.167	114.167	636.77	654.55	654.55
1	18.250	114.250	628.79	647.64	647.64
1	18.333	114.333	620.07	640.27	640.27
1	18.417	114.417	610.57	632.49	632.49
1	18.500	114.500	603.79	624.07	624.07
1	18.583	114.583	599.23	614.92	614.92
1	18.667	114.667	595.23	607.36	607.36
1	18.750	114.750	589.68	601.83	601.83
1	18.833	114.833	585.05	597.34	597.34
1	18.917	114.917	582.45	592.15	592.15
1	19.000	115.000	580.24	587.33	587.33
1	19.083	115.083	578.24	584.01	584.01
1	19.167	115.167	576.37	581.45	581.45
1	19.250	115.250	574.62	579.27	579.27
1	19.333	115.333	572.95	577.30	577.30
1	19.417	115.417	571.30	575.48	575.48
1	19.500	115.500	569.63	573.76	573.76
1	19.583	115.583	567.90	572.09	572.09
1	19.667	115.667	565.65	570.43	570.43
1	19.750	115.750	563.29	568.71	568.71
1	19.833	115.833	561.54	566.64	566.64
1	19.917	115.917	560.14	564.37	564.37
1	20.000	116.000	558.79	562.45	562.45
1	20.083	116.083	557.40	560.88	560.88
1	20.167	116.167	555.90	559.46	559.46
1	20.250	116.250	553.46	558.06	558.06
1	20.333	116.333	551.97	556.60	556.60
1	20.417	116.417	550.89	554.48	554.48
1	20.500	116.500	549.91	552.77	552.77
1	20.583	116.583	548.95	551.49	551.49
1	20.667	116.667	548.04	550.41	550.41
1	20.750	116.750	547.17	549.42	549.42
1	20.833	116.833	546.34	548.48	548.48
1	20.917	116.917	545.54	547.59	547.59
1	21.000	117.000	544.75	546.75	546.75
1	21.083	117.083	543.98	545.93	545.93
1	21.167	117.167	543.23	545.13	545.13
1	21.250	117.250	542.50	544.35	544.35
1	21.333	117.333	541.77	543.59	543.59
1	21.417	117.417	541.07	542.85	542.85
1	21.500	117.500	540.37	542.12	542.12
1	21.583	117.583	539.69	541.40	541.40
1	21.667	117.667	539.02	540.70	540.70
1	21.750	117.750	538.36	540.01	540.01
1	21.833	117.833	537.72	539.34	539.34
1	21.917	117.917	537.08	538.67	538.67
1	22.000	118.000	536.46	538.03	538.03
1	22.083	118.083	535.84	537.39	537.39
1	22.167	118.167	535.23	536.76	536.76
1	22.250	118.250	534.64	536.14	536.14
1	22.333	118.333	534.05	535.52	535.52
1	22.417	118.417	533.47	534.92	534.92
1	22.500	118.500	532.90	534.33	534.33
1	22.583	118.583	532.34	533.75	533.75
1	22.667	118.667	531.78	533.17	533.17
1	22.750	118.750	531.22	532.61	532.61
1	22.833	118.833	530.68	532.04	532.04
1	22.917	118.917	530.13	531.49	531.49
1	23.000	119.000	529.60	530.94	530.94
1	23.083	119.083	529.06	530.39	530.39
1	23.167	119.167	528.54	529.85	529.85
1	23.250	119.250	528.01	529.32	529.32
1	23.333	119.333	527.49	528.79	528.79
1	23.417	119.417	526.98	528.26	528.26
1	23.500	119.500	526.47	527.74	527.74
1	23.583	119.583	525.96	527.22	527.22
1	23.667	119.667	525.46	526.71	526.71
1	23.750	119.750	524.96	526.20	526.20
1	23.833	119.833	524.46	525.70	525.70
1	23.917	119.917	523.97	525.20	525.20
1	24.000	120.000	523.48	524.70	524.70
1	24.083	120.083	522.18	524.21	524.21
1	24.167	120.167	518.54	523.71	523.71
1	24.250	120.250	512.42	522.68	522.68
1	24.333	120.333	506.47	519.89	519.89
1	24.417	120.417	502.56	514.84	514.84
1	24.500	120.500	500.04	509.17	509.17
1	24.583	120.583	498.06	504.68	504.68
1	24.667	120.667	496.38	501.52	501.52
1	24.750	120.750	494.95	499.16	499.16
1	24.833	120.833	493.68	497.27	497.27
1	24.917	120.917	492.53	495.69	495.69
1	25.000	121.000	491.48	494.32	494.32
1	25.083	121.083	490.54	493.10	493.10
1	25.167	121.167	489.68	492.00	492.00
1	25.250	121.250	488.90	491.01	491.01
1	25.333	121.333	488.17	490.11	490.11
1	25.417	121.417	487.46	489.29	489.29
1	25.500	121.500	486.77	488.53	488.53
1	25.583	121.583	486.10	487.80	487.80
1	25.667	121.667	485.45	487.11	487.11
1	25.750	121.750	484.80	486.42	486.42
1	25.833	121.833	484.18	485.76	485.76
1	25.917	121.917	483.58	485.11	485.11
1	26.000	122.000	482.98	484.48	484.48
1	26.083	122.083	482.40	483.87	483.87
1	26.167	122.167	481.85	483.26	483.26
1	26.250	122.250	481.29	482.68	482.68
1	26.333	122.333	480.75	482.12	482.12
1	26.417	122.417	480.24	481.56	481.56
1	26.500	122.500	479.75	481.01	481.01
1	26.583	122.583	479.26	480.49	480.49
1	26.667	122.667	478.78	479.99	479.99
1	26.750	122.750	478.32	479.50	479.50
1	26.833	122.833	477.87	479.01	479.01
1	26.917	122.917	477.42	478.54	478.54
1	27.000	123.000	476.98	478.08	478.08
1	27.083	123.083	476.53	477.64	477.64
1	27.167	123.167	476.09	477.19	477.19
1	27.250	123.250	475.64	476.74	476.74
1	27.333	123.333	475.20	476.30	476.30
1	27.417	123.417	474.76	475.86	475.86
1	27.500	123.500	474.31	475.41	475.41
1	27.583	123.583	473.87	474.97	474.97
1	27.667	123.667	473.43	474.52	474.52

```
  1   27.750 123.750       473.00      474.08      474.08
  1   27.833 123.833       472.58      473.64      473.64
  1   27.917 123.917       472.17      473.21      473.21
  1   28.000 124.000       471.78      472.78      472.78
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
================================================================================
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   2256.634 AF
    OUTFLOW VOLUME =   2256.636 AF
    LOSS    VOLUME =      0.000 AF
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6340.00 TO NODE   6355.00 IS CODE =   1
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        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of   697.9 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
================================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #2)

        WATERSHED AREA =     697.900 ACRES
        BASEFLOW =   0.000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    0.340 HOURS
         CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
         THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
         MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
        VALLEY(DEVELOPED):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.900
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
        VALLEY(UNDEVELOPED)/DESERT:
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:
        +------------------+--------+--------+--------+--------+--------+
        | RAINFALL DEPTHS & |        |        |        |        |        |
        |    LOSS RATES     |  DAY 1 |  DAY 2 |  DAY 3 |  DAY 4 |  DAY 5 |
        |==================+========+========+========+========+========|
        | 5-MINUTE (INCHES) |    0.58|    0.27|    0.12|    0.06|    0.04|
        |30-MINUTE (INCHES) |    1.22|    0.56|    0.24|    0.13|    0.09|
        |   1-HOUR (INCHES) |    1.62|    0.75|    0.33|    0.17|    0.12|
        |   3-HOUR (INCHES) |    2.71|    1.25|    0.54|    0.28|    0.21|
        |   6-HOUR (INCHES) |    3.75|    1.73|    0.75|    0.39|    0.29|
        |  24-HOUR (INCHES) |    6.28|    2.89|    1.26|    0.66|    0.48|
        |==================+========+========+========+========+========|
        | LOSS RATE(IN/HR)  |   0.210|   0.210|   0.210|   0.210|   0.210|
        | LOW LOSS FRACTION |   0.450|   0.690|   0.900|   0.980|   0.990|
        +------------------+--------+--------+--------+--------+--------+
          5-MINUTE FACTOR = 0.969
         30-MINUTE FACTOR = 0.969
          1-HOUR FACTOR = 0.969
          3-HOUR FACTOR = 0.995
          6-HOUR FACTOR = 0.998
         24-HOUR FACTOR = 0.999

        UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
        UNIT INTERVAL PERCENTAGE OF LAG-TIME =  24.510


        RUNOFF HYDROGRAPH LISTING LIMITS:
        MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  96.00
        MODEL TIME(HOURS) FOR END OF RESULTS = 124.00
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================================================================================
                    UNIT HYDROGRAPH DETERMINATION

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    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------------
       1                1.545               130.419
       2                7.337               488.804
       3               20.261              1090.852
       4               37.173              1427.448
       5               57.561              1720.753
       6               73.834              1373.504
       7               84.155               871.070
       8               90.157               506.624
       9               93.846               311.340
      10               95.934               176.209
      11               96.823                75.053
      12               97.453                53.201
      13               98.047                50.140
      14               98.563                43.554
      15               98.877                26.445
      16               99.042                13.975
      17               99.137                 8.025
      18               99.206                 5.797
      19               99.261                 4.649
      20               99.315                 4.546
      21               99.365                 4.228
      22               99.414                 4.161
      23               99.461                 3.902
      24               99.505                 3.743
      25               99.548                 3.674
      26               99.587                 3.272
      27               99.625                 3.204
      28               99.663                 3.169
      29               99.695                 2.719
      30               99.726                 2.582
      31               99.756                 2.583
      32               99.787                 2.570
      33               99.813                 2.195
      34               99.830                 1.492
      35               99.848                 1.489
      36               99.866                 1.488
      37               99.883                 1.487
      38               99.899                 1.328
      39               99.905                 0.518
      40               99.910                 0.406
      41               99.915                 0.406
      42               99.919                 0.404
      43               99.924                 0.406
      44               99.929                 0.406
      45               99.934                 0.405
      46               99.939                 0.408
      47               99.944                 0.405
      48               99.948                 0.408
      49               99.953                 0.404
      50               99.958                 0.405
      51               99.963                 0.405
      52               99.968                 0.405
      53               99.972                 0.405
      54               99.977                 0.404
      55               99.982                 0.405
      56               99.987                 0.405
      57               99.992                 0.405
      58               99.996                 0.405
      59              100.000                 0.311
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    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =     349.4661
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =     322.3159
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5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 400.0 800.0 1200.0 1600.0
96.000	87.4798	10.14	Q V . . .
(PEAK DAY 2, HOUR 24.000)			
96.083	87.5521	10.50	Q V . . .
(PEAK DAY 1, HOUR 0.083)			
96.167	87.6352	12.06	Q V . . .
(PEAK DAY 1, HOUR 0.167)			
96.250	87.7427	15.61	Q V . . .
(PEAK DAY 1, HOUR 0.250)			
96.333	87.8825	20.31	Q V . . .
(PEAK DAY 1, HOUR 0.333)			
96.417	88.0616	26.00	Q V . . .
(PEAK DAY 1, HOUR 0.417)			
96.500	88.2723	30.59	Q V . . .
(PEAK DAY 1, HOUR 0.500)			
96.583	88.5034	33.55	Q V . . .
(PEAK DAY 1, HOUR 0.583)			
96.667	88.7466	35.32	Q .V . . .
(PEAK DAY 1, HOUR 0.667)			
96.750	88.9977	36.46	Q .V . . .
(PEAK DAY 1, HOUR 0.750)			
96.833	89.2536	37.16	Q .V . . .
(PEAK DAY 1, HOUR 0.833)			
96.917	89.5120	37.53	Q .V . . .
(PEAK DAY 1, HOUR 0.917)			
97.000	89.7725	37.82	Q .V . . .
(PEAK DAY 1, HOUR 1.000)			
97.083	90.0351	38.12	Q .V . . .
(PEAK DAY 1, HOUR 1.083)			
97.167	90.2995	38.39	Q .V . . .
(PEAK DAY 1, HOUR 1.167)			
97.250	90.5654	38.61	Q .V . . .
(PEAK DAY 1, HOUR 1.250)			
97.333	90.8325	38.79	Q .V . . .
(PEAK DAY 1, HOUR 1.333)			
97.417	91.1007	38.95	Q .V . . .
(PEAK DAY 1, HOUR 1.417)			
97.500	91.3700	39.10	Q .V . . .
(PEAK DAY 1, HOUR 1.500)			
97.583	91.6403	39.25	Q .V . . .
(PEAK DAY 1, HOUR 1.583)			
97.667	91.9117	39.41	Q .V . . .
(PEAK DAY 1, HOUR 1.667)			
97.750	92.1842	39.56	Q .V . . .
(PEAK DAY 1, HOUR 1.750)			
97.833	92.4577	39.71	Q .V . . .
(PEAK DAY 1, HOUR 1.833)			
97.917	92.7323	39.87	Q .V . . .
(PEAK DAY 1, HOUR 1.917)			
98.000	93.0079	40.03	.Q .V . . .
(PEAK DAY 1, HOUR 2.000)			
98.083	93.2847	40.18	.Q .V . . .
(PEAK DAY 1, HOUR 2.083)			
98.167	93.5625	40.34	.Q .V . . .
(PEAK DAY 1, HOUR 2.167)			
98.250	93.8414	40.50	.Q .V . . .
(PEAK DAY 1, HOUR 2.250)			
98.333	94.1214	40.66	.Q .V . . .
(PEAK DAY 1, HOUR 2.333)			
98.417	94.4026	40.82	.Q .V . . .
(PEAK DAY 1, HOUR 2.417)			
98.500	94.6848	40.98	.Q .V . . .
(PEAK DAY 1, HOUR 2.500)			
98.583	94.9682	41.14	.Q .V . . .
(PEAK DAY 1, HOUR 2.583)			
98.667	95.2526	41.31	.Q .V . . .
(PEAK DAY 1, HOUR 2.667)			
98.750	95.5383	41.47	.Q .V . . .
(PEAK DAY 1, HOUR 2.750)			
98.833	95.8250	41.63	.Q .V . . .
(PEAK DAY 1, HOUR 2.833)			
98.917	96.1129	41.80	.Q .V . . .
(PEAK DAY 1, HOUR 2.917)			
99.000	96.4019	41.97	.Q .V . . .
(PEAK DAY 1, HOUR 3.000)			
99.083	96.6921	42.14	.Q .V . . .
(PEAK DAY 1, HOUR 3.083)			
99.167	96.9835	42.31	.Q . V . . .
(PEAK DAY 1, HOUR 3.167)			
99.250	97.2760	42.48	.Q . V . . .
(PEAK DAY 1, HOUR 3.250)			
99.333	97.5697	42.65	.Q . V . . .
(PEAK DAY 1, HOUR 3.333)			
99.417	97.8646	42.82	.Q . V . . .
(PEAK DAY 1, HOUR 3.417)			
99.500	98.1607	42.99	.Q . V . . .
(PEAK DAY 1, HOUR 3.500)			
99.583	98.4580	43.17	.Q . V . . .
(PEAK DAY 1, HOUR 3.583)			
99.667	98.7566	43.35	.Q . V . . .
(PEAK DAY 1, HOUR 3.667)			
99.750	99.0563	43.53	.Q . V . . .
(PEAK DAY 1, HOUR 3.750)			
99.833	99.3573	43.71	.Q . V . . .
(PEAK DAY 1, HOUR 3.833)			
99.917	99.6596	43.89	.Q . V . . .
(PEAK DAY 1, HOUR 3.917)			
100.000	99.9632	44.08	.Q . V . . .
(PEAK DAY 1, HOUR 4.000)			
100.083	100.2680	44.26	.Q . V . . .
(PEAK DAY 1, HOUR 4.083)			
100.167	100.5742	44.45	.Q . V . . .
(PEAK DAY 1, HOUR 4.167)			
100.250	100.8816	44.65	.Q . V . . .
(PEAK DAY 1, HOUR 4.250)			
100.333	101.1905	44.84	.Q . V . . .
(PEAK DAY 1, HOUR 4.333)			
100.417	101.5006	45.04	.Q . V . . .
(PEAK DAY 1, HOUR 4.417)			
100.500	101.8121	45.23	.Q . V . . .
(PEAK DAY 1, HOUR 4.500)			
100.583	102.1251	45.43	.Q . V . . .
(PEAK DAY 1, HOUR 4.583)			
100.667	102.4394	45.64	.Q . V . . .
(PEAK DAY 1, HOUR 4.667)			
100.750	102.7551	45.84	.Q . V . . .
(PEAK DAY 1, HOUR 4.750)			
100.833	103.0722	46.05	.Q . V . . .
(PEAK DAY 1, HOUR 4.833)			
100.917	103.3908	46.26	.Q . V . . .
(PEAK DAY 1, HOUR 4.917)			
101.000	103.7108	46.47	.Q . V . . .
(PEAK DAY 1, HOUR 5.000)			
101.083	104.0324	46.68	.Q . V . . .
(PEAK DAY 1, HOUR 5.083)			

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101.167    104.3554     46.90  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.167)
101.250    104.6799     47.12  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.250)
101.333    105.0059     47.34  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.333)
101.417    105.3335     47.56  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.417)
101.500    105.6626     47.79  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.500)
101.583    105.9933     48.02  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.583)
101.667    106.3257     48.25  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.667)
101.750    106.6596     48.49  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.750)
101.833    106.9952     48.73  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.833)
101.917    107.3325     48.97  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.917)
102.000    107.6714     49.21  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.000)
102.083    108.0120     49.46  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.083)
102.167    108.3544     49.71  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.167)
102.250    108.6985     49.97  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.250)
102.333    109.0444     50.23  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.333)
102.417    109.3922     50.49  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.417)
102.500    109.7417     50.75  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.500)
102.583    110.0931     51.02  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.583)
102.667    110.4463     51.29  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.667)
102.750    110.8015     51.57  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.750)
102.833    111.1586     51.85  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.833)
102.917    111.5177     52.14  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.917)
103.000    111.8787     52.42  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.000)
103.083    112.2418     52.72  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.083)
103.167    112.6068     53.01  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.167)
103.250    112.9740     53.31  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.250)
103.333    113.3433     53.62  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.333)
103.417    113.7147     53.93  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.417)
103.500    114.0882     54.24  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.500)
103.583    114.4640     54.56  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.583)
103.667    114.8420     54.89  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.667)
103.750    115.2223     55.22  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.750)
103.833    115.6049     55.55  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.833)
103.917    115.9898     55.89  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.917)
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104.000    116.3771     56.24  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.000)
104.083    116.7669     56.59  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.083)
104.167    117.1590     56.94  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.167)
104.250    117.5537     57.31  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.250)
104.333    117.9509     57.68  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.333)
104.417    118.3508     58.05  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.417)
104.500    118.7532     58.43  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.500)
104.583    119.1583     58.82  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.583)
104.667    119.5661     59.22  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.667)
104.750    119.9767     59.62  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.750)
104.833    120.3901     60.03  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.833)
104.917    120.8064     60.45  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.917)
105.000    121.2256     60.87  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.000)
105.083    121.6478     61.30  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.083)
105.167    122.0730     61.74  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.167)
105.250    122.5013     62.19  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.250)
105.333    122.9327     62.64  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.333)
105.417    123.3674     63.11  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.417)
105.500    123.8053     63.58  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.500)
105.583    124.2466     64.07  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.583)
105.667    124.6912     64.56  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.667)
105.750    125.1393     65.07  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.750)
105.833    125.5910     65.58  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.833)
105.917    126.0462     66.11  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.917)
106.000    126.5052     66.64  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.000)
106.083    126.9679     67.19  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.083)
106.167    127.4345     67.74  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.167)
106.250    127.9050     68.32  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.250)
106.333    128.3795     68.90  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.333)
106.417    128.8582     69.50  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.417)
106.500    129.3410     70.11  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.500)
106.583    129.8282     70.74  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.583)
106.667    130.3197     71.37  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.667)
106.750    130.8158     72.03  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.750)
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106.833    131.3165     72.70  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.833)
106.917    131.8219     73.39  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.917)
107.000    132.3321     74.09  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.000)
107.083    132.8474     74.81  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.083)
107.167    133.3677     75.55  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.167)
107.250    133.8932     76.31  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.250)
107.333    134.4241     77.09  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.333)
107.417    134.9606     77.90  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.417)
107.500    135.5027     78.71  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.500)
107.583    136.0507     79.56  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.583)
107.667    136.6046     80.43  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  11.667)
107.750    137.1647     81.33  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.750)
107.833    137.7311     82.24  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.833)
107.917    138.3041     83.20  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.917)
108.000    138.8838     84.17  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.000)
108.083    139.4731     85.56  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.083)
108.167    140.0790     87.98  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.167)
108.250    140.7138     92.17  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.250)
108.333    141.3842     97.34  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.333)
108.417    142.0964    103.42  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.417)
108.500    142.8440    108.54  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.500)
108.583    143.6175    112.31  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.583)
108.667    144.4101    115.08  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.667)
108.750    145.2184    117.37  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  12.750)
108.833    146.0400    119.30  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  12.833)
108.917    146.8734    121.02  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  12.917)
109.000    147.7185    122.71  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.000)
109.083    148.5758    124.48  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.083)
109.167    149.4454    126.26  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.167)
109.250    150.3275    128.09  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.250)
109.333    151.2224    129.93  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.333)
109.417    152.1305    131.86  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.417)
109.500    153.0522    133.83  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.500)
109.583    153.9883    135.93  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  13.583)
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109.667    154.9393    138.08  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  13.667)
109.750    155.9060    140.37  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  13.750)
109.833    156.8890    142.73  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  13.833)
109.917    157.8894    145.25  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  13.917)
110.000    158.9077    147.86  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  14.000)
110.083    159.9461    150.77  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  14.083)
110.167    161.0074    154.10  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  14.167)
110.250    162.0967    158.17  .  Q      .         V         .         .
(PEAK DAY 1, HOUR  14.250)
110.333    163.2173    162.70  .   Q     .         V         .         .
(PEAK DAY 1, HOUR  14.333)
110.417    164.3738    167.94  .   Q     .         V         .         .
(PEAK DAY 1, HOUR  14.417)
110.500    165.5685    173.47  .   Q     .         V         .         .
(PEAK DAY 1, HOUR  14.500)
110.583    166.8051    179.55  .   Q     .         V         .         .
(PEAK DAY 1, HOUR  14.583)
110.667    168.0883    186.32  .   Q     .         V         .         .
(PEAK DAY 1, HOUR  14.667)
110.750    169.4257    194.19  .   Q     .         .V        .         .
(PEAK DAY 1, HOUR  14.750)
110.833    170.8223    202.78  .    Q    .         .V        .         .
(PEAK DAY 1, HOUR  14.833)
110.917    172.2852    212.42  .    Q    .         .V        .         .
(PEAK DAY 1, HOUR  14.917)
111.000    173.8201    222.86  .    Q    .         .V        .         .
(PEAK DAY 1, HOUR  15.000)
111.083    175.4357    234.58  .    Q    .         .V        .         .
(PEAK DAY 1, HOUR  15.083)
111.167    177.1388    247.30  .     Q   .         .V        .         .
(PEAK DAY 1, HOUR  15.167)
111.250    178.9411    261.69  .     Q   .         . V       .         .
(PEAK DAY 1, HOUR  15.250)
111.333    180.8522    277.50  .     Q   .         . V       .         .
(PEAK DAY 1, HOUR  15.333)
111.417    182.8791    294.30  .      Q  .         . V       .         .
(PEAK DAY 1, HOUR  15.417)
111.500    185.0097    309.37  .      Q  .         . V       .         .
(PEAK DAY 1, HOUR  15.500)
111.583    187.2243    321.55  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  15.583)
111.667    189.5230    333.78  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  15.667)
111.750    191.9303    349.53  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  15.750)
111.833    194.5298    377.44  .        Q.         .   V     .         .
(PEAK DAY 1, HOUR  15.833)
111.917    197.4737    427.47  .         Q         .   V     .         .
(PEAK DAY 1, HOUR  15.917)
112.000    200.9750    508.38  .         . Q       .   V     .         .
(PEAK DAY 1, HOUR  16.000)
112.083    205.6728    682.13  .         .      Q  .    V    .         .
(PEAK DAY 1, HOUR  16.083)
112.167    212.3362    967.53  .         .         .   Q V   .         .
(PEAK DAY 1, HOUR  16.167)
112.250    221.4721   1326.53  .         .         .      V  .  Q      .
(PEAK DAY 1, HOUR  16.250)
112.333    231.8962   1513.58  .         .         .       V .      Q  .
(PEAK DAY 1, HOUR  16.333)
112.417    242.8206   1586.22  .         .         .         V        Q.
(PEAK DAY 1, HOUR  16.417)
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112.500    251.9846   1330.62  .          .          .          .V Q       .
(PEAK DAY 1, HOUR  16.500)
112.583    258.8450    996.13  .          .          .   Q      . V        .
(PEAK DAY 1, HOUR  16.583)
112.667    263.9171    736.46  .          .       Q  .          . V        .
(PEAK DAY 1, HOUR  16.667)
112.750    267.8633    572.98  .          .   Q      .          .  V       .
(PEAK DAY 1, HOUR  16.750)
112.833    270.9846    453.22  .          .Q         .          .  V       .
(PEAK DAY 1, HOUR  16.833)
112.917    273.4837    362.87  .        Q.           .          .  V       .
(PEAK DAY 1, HOUR  16.917)
113.000    275.6631    316.44  .      Q   .          .          .   V      .
(PEAK DAY 1, HOUR  17.000)
113.083    277.6262    285.04  .      Q   .          .          .   V      .
(PEAK DAY 1, HOUR  17.083)
113.167    279.3894    256.02  .     Q    .          .          .   V      .
(PEAK DAY 1, HOUR  17.167)
113.250    280.9456    225.96  .    Q     .          .          .   V      .
(PEAK DAY 1, HOUR  17.250)
113.333    282.3374    202.09  .    Q     .          .          .    V     .
(PEAK DAY 1, HOUR  17.333)
113.417    283.6112    184.96  .   Q      .          .          .    V     .
(PEAK DAY 1, HOUR  17.417)
113.500    284.8014    172.81  .   Q      .          .          .    V     .
(PEAK DAY 1, HOUR  17.500)
113.583    285.9275    163.52  .   Q      .          .          .    V     .
(PEAK DAY 1, HOUR  17.583)
113.667    287.0038    156.28  .  Q       .          .          .    V     .
(PEAK DAY 1, HOUR  17.667)
113.750    288.0374    150.07  .  Q       .          .          .    V     .
(PEAK DAY 1, HOUR  17.750)
113.833    289.0344    144.76  .  Q       .          .          .    V     .
(PEAK DAY 1, HOUR  17.833)
113.917    289.9984    139.98  .  Q       .          .          .    V     .
(PEAK DAY 1, HOUR  17.917)
114.000    290.9330    135.70  .  Q       .          .          .     V    .
(PEAK DAY 1, HOUR  18.000)
114.083    291.8382    131.44  .  Q       .          .          .     V    .
(PEAK DAY 1, HOUR  18.083)
114.167    292.7084    126.36  .  Q       .          .          .     V    .
(PEAK DAY 1, HOUR  18.167)
114.250    293.5348    119.99  . Q        .          .          .     V    .
(PEAK DAY 1, HOUR  18.250)
114.333    294.3125    112.92  . Q        .          .          .     V    .
(PEAK DAY 1, HOUR  18.333)
114.417    295.0361    105.07  . Q        .          .          .     V    .
(PEAK DAY 1, HOUR  18.417)
114.500    295.7149     98.56  . Q        .          .          .     V    .
(PEAK DAY 1, HOUR  18.500)
114.583    296.3602     93.70  . Q        .          .          .     V    .
(PEAK DAY 1, HOUR  18.583)
114.667    296.9800     89.99  . Q        .          .          .     V    .
(PEAK DAY 1, HOUR  18.667)
114.750    297.5778     86.80  . Q        .          .          .     V    .
(PEAK DAY 1, HOUR  18.750)
114.833    298.1563     84.01  . Q        .          .          .      V   .
(PEAK DAY 1, HOUR  18.833)
114.917    298.7205     81.92  . Q        .          .          .      V   .
(PEAK DAY 1, HOUR  18.917)
115.000    299.2716     80.01  . Q        .          .          .      V   .
(PEAK DAY 1, HOUR  19.000)
115.083    299.8099     78.17  .Q         .          .          .      V   .
(PEAK DAY 1, HOUR  19.083)
115.167    300.3355     76.31  .Q         .          .          .      V   .
(PEAK DAY 1, HOUR  19.167)
115.250    300.8476     74.35  .Q         .          .          .      V   .
(PEAK DAY 1, HOUR  19.250)
115.333    301.3492     72.83  .Q         .          .          .      V   .
(PEAK DAY 1, HOUR  19.333)
115.417    301.8414     71.47  .Q         .          .          .      V   .
(PEAK DAY 1, HOUR  19.417)
115.500    302.3248     70.19  .Q         .          .          .      V   .
(PEAK DAY 1, HOUR  19.500)
115.583    302.7998     68.97  .Q         .          .          .      V   .
(PEAK DAY 1, HOUR  19.583)
115.667    303.2668     67.81  .Q         .          .          .      V   .
(PEAK DAY 1, HOUR  19.667)
115.750    303.7261     66.70  .Q         .          .          .      V   .
(PEAK DAY 1, HOUR  19.750)
115.833    304.1781     65.64  .Q         .          .          .      V   .
(PEAK DAY 1, HOUR  19.833)
115.917    304.6231     64.62  .Q         .          .          .      V   .
(PEAK DAY 1, HOUR  19.917)
116.000    305.0614     63.64  .Q         .          .          .      V   .
(PEAK DAY 1, HOUR  20.000)
116.083    305.4932     62.70  .Q         .          .          .      V   .
(PEAK DAY 1, HOUR  20.083)
116.167    305.9187     61.79  .Q         .          .          .      V   .
(PEAK DAY 1, HOUR  20.167)
116.250    306.3383     60.92  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  20.250)
116.333    306.7520     60.08  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  20.333)
116.417    307.1602     59.26  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  20.417)
116.500    307.5629     58.48  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  20.500)
116.583    307.9604     57.71  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  20.583)
116.667    308.3527     56.97  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  20.667)
116.750    308.7400     56.24  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  20.750)
116.833    309.1223     55.51  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  20.833)
116.917    309.4995     54.76  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  20.917)
117.000    309.8710     53.95  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  21.000)
117.083    310.2382     53.31  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  21.083)
117.167    310.6010     52.69  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  21.167)
117.250    310.9598     52.10  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  21.250)
117.333    311.3147     51.52  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  21.333)
117.417    311.6657     50.97  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  21.417)
117.500    312.0130     50.43  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  21.500)
117.583    312.3567     49.90  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  21.583)
117.667    312.6969     49.39  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  21.667)
117.750    313.0336     48.90  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  21.750)
117.833    313.3671     48.41  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  21.833)
117.917    313.6973     47.94  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  21.917)
118.000    314.0243     47.49  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  22.000)
118.083    314.3483     47.04  .Q         .          .          .        V.
(PEAK DAY 1, HOUR  22.083)
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118.167	314.6692	46.60	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.167)								
118.250	314.9872	46.18	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.250)								
118.333	315.3024	45.76	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.333)								
118.417	315.6148	45.36	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.417)								
118.500	315.9244	44.96	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.500)								
118.583	316.2314	44.57	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.583)								
118.667	316.5357	44.19	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.667)								
118.750	316.8376	43.82	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.750)								
118.833	317.1369	43.46	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.833)								
118.917	317.4337	43.10	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.917)								
119.000	317.7282	42.76	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.000)								
119.083	318.0204	42.42	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.083)								
119.167	318.3102	42.09	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.167)								
119.250	318.5978	41.76	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.250)								
119.333	318.8832	41.44	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.333)								
119.417	319.1664	41.13	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.417)								
119.500	319.4476	40.82	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.500)								
119.583	319.7266	40.52	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.583)								
119.667	320.0037	40.22	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.667)								
119.750	320.2787	39.94	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.750)								
119.833	320.5518	39.65	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.833)								
119.917	320.8229	39.37	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.917)								
120.000	321.0922	39.10	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.000)								
120.083	321.3556	38.25	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.083)								
120.167	321.6022	35.81	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.167)								
120.250	321.8137	30.70	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.250)								
120.333	321.9799	24.13	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.333)								
120.417	322.0921	16.30	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.417)								
120.500	322.1615	10.07	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.500)								
120.583	322.2036	6.12	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.583)								
120.667	322.2299	3.82	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.667)								
120.750	322.2465	2.40	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.750)								
120.833	322.2575	1.60	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.833)								
120.917	322.2662	1.26	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.917)								
121.000	322.2732	1.01	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.000)								
121.083	322.2785	0.78	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.083)								
121.167	322.2825	0.58	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.167)								
121.250	322.2857	0.46	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.250)								
121.333	322.2884	0.39	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.333)								
121.417	322.2908	0.35	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.417)								
121.500	322.2931	0.33	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.500)								
121.583	322.2951	0.30	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.583)								
121.667	322.2971	0.28	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.667)								
121.750	322.2988	0.26	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.750)								
121.833	322.3005	0.24	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.833)								
121.917	322.3020	0.22	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.917)								
122.000	322.3033	0.20	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.000)								
122.083	322.3046	0.18	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.083)								
122.167	322.3058	0.17	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.167)								
122.250	322.3068	0.15	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.250)								
122.333	322.3077	0.14	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.333)								
122.417	322.3086	0.12	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.417)								
122.500	322.3094	0.11	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.500)								
122.583	322.3100	0.10	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.583)								
122.667	322.3106	0.09	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.667)								
122.750	322.3111	0.08	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.750)								
122.833	322.3116	0.07	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.833)								
122.917	322.3120	0.06	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.917)								
123.000	322.3124	0.05	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.000)								
123.083	322.3127	0.05	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.083)								
123.167	322.3130	0.04	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.167)								
123.250	322.3133	0.04	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.250)								
123.333	322.3135	0.04	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.333)								
123.417	322.3138	0.03	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.417)								
123.500	322.3140	0.03	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.500)								
123.583	322.3142	0.03	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.583)								
123.667	322.3144	0.03	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.667)								
123.750	322.3145	0.03	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.750)								

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 123.833    322.3147      0.02  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  27.833)
 123.917    322.3148      0.02  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  27.917)
 124.000    322.3150      0.02  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  28.000)
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********************************************************************************
  FLOW PROCESS FROM NODE   6355.00 TO NODE   6355.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  6039.2 Ac. ***
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6355.00 TO NODE   6355.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  6039.2 Ac. ***

            STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
        (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      800.0    1600.0    2400.0    3200.0
--------------------------------------------------------------------------------
  96.000    612.7386    315.32  .  Q     V.         .          .          .
 (PEAK DAY 2, HOUR  24.000)
  96.083    614.9030    314.28  .  Q     V.         .          .          .
 (PEAK DAY 1, HOUR   0.083)
  96.167    617.0685    314.43  .  Q     V.         .          .          .
 (PEAK DAY 1, HOUR   0.167)
  96.250    619.2518    317.00  .  Q     V.         .          .          .
 (PEAK DAY 1, HOUR   0.250)
  96.333    621.4697    322.04  .   Q    V.         .          .          .
 (PEAK DAY 1, HOUR   0.333)
  96.417    623.7409    329.79  .   Q    V.         .          .          .
 (PEAK DAY 1, HOUR   0.417)
  96.500    626.0615    336.96  .   Q    V.         .          .          .
 (PEAK DAY 1, HOUR   0.500)
  96.583    628.4149    341.70  .   Q    V.         .          .          .
 (PEAK DAY 1, HOUR   0.583)
  96.667    630.7864    344.35  .   Q    V.         .          .          .
 (PEAK DAY 1, HOUR   0.667)
  96.750    633.1685    345.87  .   Q    V.         .          .          .
 (PEAK DAY 1, HOUR   0.750)
  96.833    635.5563    346.71  .   Q    V.         .          .          .
 (PEAK DAY 1, HOUR   0.833)
  96.917    637.9468    347.11  .   Q    V.         .          .          .
 (PEAK DAY 1, HOUR   0.917)
  97.000    640.3393    347.39  .   Q    V.         .          .          .
 (PEAK DAY 1, HOUR   1.000)
  97.083    642.7334    347.63  .   Q    V.         .          .          .
 (PEAK DAY 1, HOUR   1.083)
  97.167    645.1288    347.81  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   1.167)
  97.250    647.5249    347.92  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   1.250)
  97.333    649.9213    347.96  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   1.333)
  97.417    652.3177    347.96  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   1.417)
  97.500    654.7141    347.95  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   1.500)
  97.583    657.1104    347.94  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   1.583)
  97.667    659.5067    347.94  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   1.667)
  97.750    661.9031    347.96  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   1.750)
  97.833    664.2994    347.96  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   1.833)
  97.917    666.6955    347.91  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   1.917)
  98.000    669.0909    347.81  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   2.000)
  98.083    671.4854    347.68  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   2.083)
  98.167    673.8790    347.55  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   2.167)
  98.250    676.2717    347.43  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   2.250)
  98.333    678.6636    347.31  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   2.333)
  98.417    681.0548    347.20  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   2.417)
  98.500    683.4453    347.10  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   2.500)
  98.583    685.8351    347.00  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   2.583)
  98.667    688.2242    346.90  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   2.667)
  98.750    690.6127    346.81  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   2.750)
  98.833    693.0007    346.73  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   2.833)
  98.917    695.3881    346.65  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   2.917)
  99.000    697.7750    346.57  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   3.000)
  99.083    700.1614    346.51  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   3.083)
  99.167    702.5475    346.46  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   3.167)
  99.250    704.9334    346.42  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   3.250)
  99.333    707.3191    346.40  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   3.333)
  99.417    709.7047    346.39  .   Q     .V        .          .          .
 (PEAK DAY 1, HOUR   3.417)
  99.500    712.0903    346.40  .   Q     .V        .          .          .
 (PEAK DAY 1, HOUR   3.500)
  99.583    714.4761    346.42  .   Q     .V        .          .          .
 (PEAK DAY 1, HOUR   3.583)
  99.667    716.8622    346.45  .   Q     .V        .          .          .
 (PEAK DAY 1, HOUR   3.667)
  99.750    719.2486    346.51  .   Q     .V        .          .          .
 (PEAK DAY 1, HOUR   3.750)
  99.833    721.6354    346.57  .   Q     .V        .          .          .
 (PEAK DAY 1, HOUR   3.833)
  99.917    724.0228    346.65  .   Q     .V        .          .          .
 (PEAK DAY 1, HOUR   3.917)
 100.000    726.4108    346.73  .   Q     .V        .          .          .
 (PEAK DAY 1, HOUR   4.000)
 100.083    728.7994    346.84  .   Q     .V        .          .          .
 (PEAK DAY 1, HOUR   4.083)
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 100.167    731.1889    346.95  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   4.167)
 100.250    733.5793    347.09  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   4.250)
 100.333    735.9707    347.23  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   4.333)
 100.417    738.3632    347.39  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   4.417)
 100.500    740.7568    347.56  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   4.500)
 100.583    743.1517    347.74  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   4.583)
 100.667    745.5480    347.93  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   4.667)
 100.750    747.9456    348.14  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   4.750)
 100.833    750.3448    348.36  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   4.833)
 100.917    752.7457    348.60  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   4.917)
 101.000    755.1483    348.86  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   5.000)
 101.083    757.5527    349.12  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   5.083)
 101.167    759.9591    349.40  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   5.167)
 101.250    762.3676    349.70  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   5.250)
 101.333    764.7781    350.02  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   5.333)
 101.417    767.1910    350.34  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   5.417)
 101.500    769.6062    350.69  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   5.500)
 101.583    772.0239    351.05  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   5.583)
 101.667    774.4441    351.42  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   5.667)
 101.750    776.8671    351.81  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   5.750)
 101.833    779.2928    352.22  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   5.833)
 101.917    781.7214    352.64  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   5.917)
 102.000    784.1531    353.08  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   6.000)
 102.083    786.5880    353.54  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   6.083)
 102.167    789.0261    354.01  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   6.167)
 102.250    791.4676    354.50  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   6.250)
 102.333    793.9125    355.01  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   6.333)
 102.417    796.3611    355.53  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   6.417)
 102.500    798.8134    356.07  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   6.500)
 102.583    801.2695    356.63  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   6.583)
 102.667    803.7296    357.20  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   6.667)
 102.750    806.1937    357.80  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   6.750)
 102.833    808.6621    358.41  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   6.833)
 102.917    811.1349    359.04  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   6.917)
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 103.000    813.6121    359.69  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   7.000)
 103.083    816.0939    360.36  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   7.083)
 103.167    818.5804    361.04  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   7.167)
 103.250    821.0718    361.75  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   7.250)
 103.333    823.5682    362.48  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   7.333)
 103.417    826.0698    363.22  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   7.417)
 103.500    828.5765    363.99  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   7.500)
 103.583    831.0888    364.78  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   7.583)
 103.667    833.6066    365.58  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   7.667)
 103.750    836.1301    366.41  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   7.750)
 103.833    838.6594    367.26  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   7.833)
 103.917    841.1948    368.13  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   7.917)
 104.000    843.7363    369.02  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   8.000)
 104.083    846.2841    369.94  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   8.083)
 104.167    848.8383    370.88  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   8.167)
 104.250    851.3992    371.84  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   8.250)
 104.333    853.9669    372.82  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   8.333)
 104.417    856.5416    373.84  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   8.417)
 104.500    859.1233    374.87  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   8.500)
 104.583    861.7123    375.93  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   8.583)
 104.667    864.3088    377.01  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   8.667)
 104.750    866.9130    378.12  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   8.750)
 104.833    869.5249    379.25  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   8.833)
 104.917    872.1449    380.42  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   8.917)
 105.000    874.7731    381.61  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   9.000)
 105.083    877.4097    382.83  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   9.083)
 105.167    880.0548    384.07  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   9.167)
 105.250    882.7087    385.35  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   9.250)
 105.333    885.3716    386.66  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   9.333)
 105.417    888.0438    388.00  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   9.417)
 105.500    890.7253    389.36  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   9.500)
 105.583    893.4166    390.76  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   9.583)
 105.667    896.1176    392.19  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   9.667)
 105.750    898.8287    393.65  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   9.750)
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 105.833    901.5496    395.08  .   Q     .  V      .         .         .
(PEAK DAY 1, HOUR   9.833)
 105.917    904.2803    396.49  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR   9.917)
 106.000    907.0204    397.88  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.000)
 106.083    909.7703    399.28  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.083)
 106.167    912.5300    400.70  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  10.167)
 106.250    915.2997    402.16  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  10.250)
 106.333    918.0796    403.64  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  10.333)
 106.417    920.8701    405.17  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  10.417)
 106.500    923.6712    406.73  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  10.500)
 106.583    926.4835    408.34  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  10.583)
 106.667    929.3069    409.97  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  10.667)
 106.750    932.1420    411.66  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  10.750)
 106.833    934.9890    413.37  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  10.833)
 106.917    937.8481    415.14  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  10.917)
 107.000    940.7196    416.95  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  11.000)
 107.083    943.6039    418.81  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  11.083)
 107.167    946.5014    420.71  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  11.167)
 107.250    949.4124    422.67  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  11.250)
 107.333    952.3370    424.67  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  11.333)
 107.417    955.2760    426.73  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  11.417)
 107.500    958.2294    428.84  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  11.500)
 107.583    961.1979    431.02  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  11.583)
 107.667    964.1816    433.24  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  11.667)
 107.750    967.1813    435.54  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  11.750)
 107.833    970.1971    437.89  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  11.833)
 107.917    973.2296    440.33  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  11.917)
 108.000    976.2793    442.81  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  12.000)
 108.083    979.3493    445.76  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  12.083)
 108.167    982.4470    449.79  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  12.167)
 108.250    985.5873    455.97  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  12.250)
 108.333    988.7849    464.29  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  12.333)
 108.417    992.0563    475.01  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  12.417)
 108.500    995.3984    485.26  .     Q   .    V    .         .         .
(PEAK DAY 1, HOUR  12.500)
 108.583    998.7974    493.53  .     Q   .    V    .         .         .
(PEAK DAY 1, HOUR  12.583)
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 108.667   1002.2414    500.07  .     Q   .    V    .         .         .
(PEAK DAY 1, HOUR  12.667)
 108.750   1005.7246    505.76  .     Q   .    V    .         .         .
(PEAK DAY 1, HOUR  12.750)
 108.833   1009.2437    510.97  .     Q   .    V    .         .         .
(PEAK DAY 1, HOUR  12.833)
 108.917   1012.7971    515.95  .     Q   .    V    .         .         .
(PEAK DAY 1, HOUR  12.917)
 109.000   1016.3846    520.91  .     Q   .    V    .         .         .
(PEAK DAY 1, HOUR  13.000)
 109.083   1020.0073    526.00  .     Q   .    V    .         .         .
(PEAK DAY 1, HOUR  13.083)
 109.167   1023.6652    531.13  .     Q   .    V    .         .         .
(PEAK DAY 1, HOUR  13.167)
 109.250   1027.3585    536.27  .     Q   .    V    .         .         .
(PEAK DAY 1, HOUR  13.250)
 109.333   1031.0870    541.38  .     Q   .    V    .         .         .
(PEAK DAY 1, HOUR  13.333)
 109.417   1034.8516    546.61  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  13.417)
 109.500   1038.6527    551.93  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  13.500)
 109.583   1042.4919    557.46  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  13.583)
 109.667   1046.3704    563.14  .      Q  .     V   .         .         .
(PEAK DAY 1, HOUR  13.667)
 109.750   1050.2897    569.09  .      Q  .     V   .         .         .
(PEAK DAY 1, HOUR  13.750)
 109.833   1054.2513    575.23  .      Q  .     V   .         .         .
(PEAK DAY 1, HOUR  13.833)
 109.917   1058.2574    581.69  .      Q  .     V   .         .         .
(PEAK DAY 1, HOUR  13.917)
 110.000   1062.3097    588.39  .      Q  .     V   .         .         .
(PEAK DAY 1, HOUR  14.000)
 110.083   1066.4115    595.57  .      Q  .     V   .         .         .
(PEAK DAY 1, HOUR  14.083)
 110.167   1070.5669    603.36  .      Q  .     V   .         .         .
(PEAK DAY 1, HOUR  14.167)
 110.250   1074.7827    612.14  .      Q  .     V   .         .         .
(PEAK DAY 1, HOUR  14.250)
 110.333   1079.0642    621.68  .      Q  .     V   .         .         .
(PEAK DAY 1, HOUR  14.333)
 110.417   1083.4174    632.08  .      Q  .     V   .         .         .
(PEAK DAY 1, HOUR  14.417)
 110.500   1087.8435    642.68  .       Q .     V   .         .         .
(PEAK DAY 1, HOUR  14.500)
 110.583   1092.3458    653.73  .       Q .     V   .         .         .
(PEAK DAY 1, HOUR  14.583)
 110.667   1096.9293    665.52  .       Q .      V  .         .         .
(PEAK DAY 1, HOUR  14.667)
 110.750   1101.6035    678.69  .       Q .      V  .         .         .
(PEAK DAY 1, HOUR  14.750)
 110.833   1106.3765    693.02  .       Q .      V  .         .         .
(PEAK DAY 1, HOUR  14.833)
 110.917   1111.2592    708.96  .       Q .      V  .         .         .
(PEAK DAY 1, HOUR  14.917)
 111.000   1116.2618    726.39  .        Q.      V  .         .         .
(PEAK DAY 1, HOUR  15.000)
 111.083   1121.4001    746.09  .        Q.      V  .         .         .
(PEAK DAY 1, HOUR  15.083)
 111.167   1126.6895    768.01  .        Q.      V  .         .         .
(PEAK DAY 1, HOUR  15.167)
 111.250   1132.1510    793.02  .        Q.      V  .         .         .
(PEAK DAY 1, HOUR  15.250)
 111.333   1137.8042    820.84  .         Q      V  .         .         .
(PEAK DAY 1, HOUR  15.333)
 111.417   1143.6656    851.09  .         Q      V  .         .         .
(PEAK DAY 1, HOUR  15.417)
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 111.500   1149.7347    881.23  .         .Q     V  .         .         .
(PEAK DAY 1, HOUR  15.500)
 111.583   1155.9971    909.29  .         .Q     V  .         .         .
(PEAK DAY 1, HOUR  15.583)
 111.667   1162.4431    935.97  .         .Q      V .         .         .
(PEAK DAY 1, HOUR  15.667)
 111.750   1169.0837    964.21  .         . Q     V .         .         .
(PEAK DAY 1, HOUR  15.750)
 111.833   1176.0179   1006.84  .         . Q     V .         .         .
(PEAK DAY 1, HOUR  15.833)
 111.917   1183.4512   1079.30  .         .  Q    V .         .         .
(PEAK DAY 1, HOUR  15.917)
 112.000   1191.6703   1193.41  .         .   Q   V .         .         .
(PEAK DAY 1, HOUR  16.000)
 112.083   1201.4207   1415.75  .         .      QV .         .         .
(PEAK DAY 1, HOUR  16.083)
 112.167   1213.6542   1776.30  .         .       V . Q       .         .
(PEAK DAY 1, HOUR  16.167)
 112.250   1229.4529   2293.97  .         .        V.       Q .         .
(PEAK DAY 1, HOUR  16.250)
 112.333   1248.4678   2760.96  .         .        V.         .   Q     .
(PEAK DAY 1, HOUR  16.333)
 112.417   1269.9126   3113.79  .         .        V.         .       Q .
(PEAK DAY 1, HOUR  16.417)
 112.500   1289.9572   2910.47  .         .         V         .     Q   .
(PEAK DAY 1, HOUR  16.500)
 112.583   1306.5289   2406.22  .         .         V         Q         .
(PEAK DAY 1, HOUR  16.583)
 112.667   1319.9653   1950.96  .         .         V   Q     .         .
(PEAK DAY 1, HOUR  16.667)
 112.750   1331.3655   1655.31  .         .         Q         .         .
(PEAK DAY 1, HOUR  16.750)
 112.833   1341.3457   1449.13  .         .       Q V         .         .
(PEAK DAY 1, HOUR  16.833)
 112.917   1350.2609   1294.47  .         .     Q   V         .         .
(PEAK DAY 1, HOUR  16.917)
 113.000   1358.5038   1196.88  .         .   Q     .V        .         .
(PEAK DAY 1, HOUR  17.000)
 113.083   1366.2454   1124.08  .         .   Q     .V        .         .
(PEAK DAY 1, HOUR  17.083)
 113.167   1373.5485   1060.41  .         .  Q      .V        .         .
(PEAK DAY 1, HOUR  17.167)
 113.250   1380.4442   1001.26  .         . Q       .V        .         .
(PEAK DAY 1, HOUR  17.250)
 113.333   1387.0066    952.86  .         .Q        .V        .         .
(PEAK DAY 1, HOUR  17.333)
 113.417   1393.3167    916.22  .         .Q        .V        .         .
(PEAK DAY 1, HOUR  17.417)
 113.500   1399.4360    888.53  .         .Q        .V        .         .
(PEAK DAY 1, HOUR  17.500)
 113.583   1405.4136    867.94  .        Q          .V        .         .
(PEAK DAY 1, HOUR  17.583)
 113.667   1411.2781    851.53  .        Q          .V        .         .
(PEAK DAY 1, HOUR  17.667)
 113.750   1417.0464    837.57  .        Q          .V        .         .
(PEAK DAY 1, HOUR  17.750)
 113.833   1422.7268    824.80  .        Q          . V       .         .
(PEAK DAY 1, HOUR  17.833)
 113.917   1428.3286    813.38  .        Q          . V       .         .
(PEAK DAY 1, HOUR  17.917)
 114.000   1433.8538    802.26  .        Q          . V       .         .
(PEAK DAY 1, HOUR  18.000)
 114.083   1439.3054    791.57  .       Q.          . V       .         .
(PEAK DAY 1, HOUR  18.083)
 114.167   1444.6836    780.91  .       Q.          . V       .         .
(PEAK DAY 1, HOUR  18.167)
 114.250   1449.9703    767.63  .       Q.          . V       .         .
(PEAK DAY 1, HOUR  18.250)
 114.333   1455.1576    753.19  .        Q.         . V       .         .
(PEAK DAY 1, HOUR  18.333)
 114.417   1460.2372    737.56  .        Q.         . V       .         .
(PEAK DAY 1, HOUR  18.417)
 114.500   1465.2140    722.62  .        Q.         . V       .         .
(PEAK DAY 1, HOUR  18.500)
 114.583   1470.0942    708.62  .       Q .         . V       .         .
(PEAK DAY 1, HOUR  18.583)
 114.667   1474.8970    697.35  .       Q .         . V       .         .
(PEAK DAY 1, HOUR  18.667)
 114.750   1479.6395    688.63  .       Q .         . V       .         .
(PEAK DAY 1, HOUR  18.750)
 114.833   1484.3320    681.35  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  18.833)
 114.917   1488.9744    674.07  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  18.917)
 115.000   1493.5704    667.34  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  19.000)
 115.083   1498.1309    662.18  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  19.083)
 115.167   1502.6609    657.76  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  19.167)
 115.250   1507.1625    653.62  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  19.250)
 115.333   1511.6400    650.13  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  19.333)
 115.417   1516.0956    646.95  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  19.417)
 115.500   1520.5305    643.95  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  19.500)
 115.583   1524.9456    641.06  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  19.583)
 115.667   1529.3411    638.23  .     Q   .         .  V      .         .
(PEAK DAY 1, HOUR  19.667)
 115.750   1533.7172    635.41  .     Q   .         .  V      .         .
(PEAK DAY 1, HOUR  19.750)
 115.833   1538.0717    632.28  .     Q   .         .  V      .         .
(PEAK DAY 1, HOUR  19.833)
 115.917   1542.4034    628.98  .     Q   .         .  V      .         .
(PEAK DAY 1, HOUR  19.917)
 116.000   1546.7153    626.08  .     Q   .         .  V      .         .
(PEAK DAY 1, HOUR  20.000)
 116.083   1551.0099    623.57  .     Q   .         .   V     .         .
(PEAK DAY 1, HOUR  20.083)
 116.167   1555.2885    621.25  .     Q   .         .   V     .         .
(PEAK DAY 1, HOUR  20.167)
 116.250   1559.5514    618.98  .     Q   .         .   V     .         .
(PEAK DAY 1, HOUR  20.250)
 116.333   1563.7985    616.67  .     Q   .         .   V     .         .
(PEAK DAY 1, HOUR  20.333)
 116.417   1568.0253    613.74  .     Q   .         .   V     .         .
(PEAK DAY 1, HOUR  20.417)
 116.500   1572.2350    611.25  .     Q   .         .   V     .         .
(PEAK DAY 1, HOUR  20.500)
 116.583   1576.4305    609.20  .     Q   .         .   V     .         .
(PEAK DAY 1, HOUR  20.583)
 116.667   1580.6136    607.38  .     Q   .         .   V     .         .
(PEAK DAY 1, HOUR  20.667)
 116.750   1584.7849    605.66  .     Q   .         .   V     .         .
(PEAK DAY 1, HOUR  20.750)
 116.833   1588.9447    604.00  .     Q   .         .   V     .         .
(PEAK DAY 1, HOUR  20.833)
 116.917   1593.0931    602.35  .     Q   .         .   V     .         .
(PEAK DAY 1, HOUR  20.917)
 117.000   1597.2302    600.70  .     Q   .         .   V     .         .
(PEAK DAY 1, HOUR  21.000)
 117.083   1601.3572    599.23  .     Q   .         .   V     .         .
(PEAK DAY 1, HOUR  21.083)
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 117.167   1605.4744    597.82  .      Q  .          .   V     .          .
(PEAK DAY 1, HOUR  21.167)
 117.250   1609.5822    596.45  .      Q  .          .   V     .          .
(PEAK DAY 1, HOUR  21.250)
 117.333   1613.6808    595.12  .      Q  .          .    V    .          .
(PEAK DAY 1, HOUR  21.333)
 117.417   1617.7704    593.82  .      Q  .          .    V    .          .
(PEAK DAY 1, HOUR  21.417)
 117.500   1621.8513    592.55  .      Q  .          .    V    .          .
(PEAK DAY 1, HOUR  21.500)
 117.583   1625.9237    591.31  .      Q  .          .    V    .          .
(PEAK DAY 1, HOUR  21.583)
 117.667   1629.9877    590.10  .      Q  .          .    V    .          .
(PEAK DAY 1, HOUR  21.667)
 117.750   1634.0436    588.91  .      Q  .          .    V    .          .
(PEAK DAY 1, HOUR  21.750)
 117.833   1638.0914    587.75  .      Q  .          .    V    .          .
(PEAK DAY 1, HOUR  21.833)
 117.917   1642.1315    586.62  .      Q  .          .    V    .          .
(PEAK DAY 1, HOUR  21.917)
 118.000   1646.1639    585.51  .      Q  .          .    V    .          .
(PEAK DAY 1, HOUR  22.000)
 118.083   1650.1890    584.43  .      Q  .          .    V    .          .
(PEAK DAY 1, HOUR  22.083)
 118.167   1654.2065    583.36  .      Q  .          .    V    .          .
(PEAK DAY 1, HOUR  22.167)
 118.250   1658.2169    582.31  .      Q  .          .    V    .          .
(PEAK DAY 1, HOUR  22.250)
 118.333   1662.2202    581.28  .      Q  .          .    V    .          .
(PEAK DAY 1, HOUR  22.333)
 118.417   1666.2167    580.28  .      Q  .          .    V    .          .
(PEAK DAY 1, HOUR  22.417)
 118.500   1670.2063    579.29  .      Q  .          .    V    .          .
(PEAK DAY 1, HOUR  22.500)
 118.583   1674.1892    578.32  .      Q  .          .    V    .          .
(PEAK DAY 1, HOUR  22.583)
 118.667   1678.1655    577.37  .      Q  .          .     V   .          .
(PEAK DAY 1, HOUR  22.667)
 118.750   1682.1354    576.43  .      Q  .          .     V   .          .
(PEAK DAY 1, HOUR  22.750)
 118.833   1686.0989    575.50  .      Q  .          .     V   .          .
(PEAK DAY 1, HOUR  22.833)
 118.917   1690.0562    574.59  .      Q  .          .     V   .          .
(PEAK DAY 1, HOUR  22.917)
 119.000   1694.0072    573.70  .      Q  .          .     V   .          .
(PEAK DAY 1, HOUR  23.000)
 119.083   1697.9521    572.81  .      Q  .          .     V   .          .
(PEAK DAY 1, HOUR  23.083)
 119.167   1701.8911    571.94  .      Q  .          .     V   .          .
(PEAK DAY 1, HOUR  23.167)
 119.250   1705.8242    571.08  .      Q  .          .     V   .          .
(PEAK DAY 1, HOUR  23.250)
 119.333   1709.7515    570.23  .      Q  .          .     V   .          .
(PEAK DAY 1, HOUR  23.333)
 119.417   1713.6729    569.39  .      Q  .          .     V   .          .
(PEAK DAY 1, HOUR  23.417)
 119.500   1717.5886    568.56  .      Q  .          .     V   .          .
(PEAK DAY 1, HOUR  23.500)
 119.583   1721.4987    567.74  .      Q  .          .     V   .          .
(PEAK DAY 1, HOUR  23.583)
 119.667   1725.4032    566.94  .      Q  .          .     V   .          .
(PEAK DAY 1, HOUR  23.667)
 119.750   1729.3022    566.14  .      Q  .          .     V   .          .
(PEAK DAY 1, HOUR  23.750)
 119.833   1733.1958    565.35  .      Q  .          .     V   .          .
(PEAK DAY 1, HOUR  23.833)
 119.917   1737.0840    564.57  .      Q  .          .     V   .          .
(PEAK DAY 1, HOUR  23.917)
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 120.000   1740.9669    563.80  .      Q  .          .     V   .          .
(PEAK DAY 1, HOUR  24.000)
 120.083   1744.8406    562.45  .      Q  .          .     V   .          .
(PEAK DAY 1, HOUR  24.083)
 120.167   1748.6941    559.52  .     Q   .          .     V   .          .
(PEAK DAY 1, HOUR  24.167)
 120.250   1752.5052    553.38  .     Q   .          .     V   .          .
(PEAK DAY 1, HOUR  24.250)
 120.333   1756.2520    544.02  .     Q   .          .     V   .          .
(PEAK DAY 1, HOUR  24.333)
 120.417   1759.9099    531.14  .     Q   .          .     V   .          .
(PEAK DAY 1, HOUR  24.417)
 120.500   1763.4860    519.24  .     Q   .          .     V   .          .
(PEAK DAY 1, HOUR  24.500)
 120.583   1767.0038    510.79  .     Q   .          .     V   .          .
(PEAK DAY 1, HOUR  24.583)
 120.667   1770.4840    505.34  .     Q   .          .     V   .          .
(PEAK DAY 1, HOUR  24.667)
 120.750   1773.9384    501.57  .     Q   .          .     V   .          .
(PEAK DAY 1, HOUR  24.750)
 120.833   1777.3741    498.88  .     Q   .          .     V   .          .
(PEAK DAY 1, HOUR  24.833)
 120.917   1780.7966    496.95  .     Q   .          .     V   .          .
(PEAK DAY 1, HOUR  24.917)
 121.000   1784.2080    495.33  .     Q   .          .     V   .          .
(PEAK DAY 1, HOUR  25.000)
 121.083   1787.6094    493.88  .     Q   .          .     V   .          .
(PEAK DAY 1, HOUR  25.083)
 121.167   1791.0018    492.58  .     Q   .          .     V   .          .
(PEAK DAY 1, HOUR  25.167)
 121.250   1794.3866    491.47  .     Q   .          .     V   .          .
(PEAK DAY 1, HOUR  25.250)
 121.333   1797.7646    490.50  .     Q   .          .     V   .          .
(PEAK DAY 1, HOUR  25.333)
 121.417   1801.1368    489.64  .     Q   .          .     V   .          .
(PEAK DAY 1, HOUR  25.417)
 121.500   1804.5035    488.85  .     Q   .          .     V   .          .
(PEAK DAY 1, HOUR  25.500)
 121.583   1807.8651    488.11  .     Q   .          .      V  .          .
(PEAK DAY 1, HOUR  25.583)
 121.667   1811.2218    487.39  .     Q   .          .      V  .          .
(PEAK DAY 1, HOUR  25.667)
 121.750   1814.5736    486.68  .     Q   .          .      V  .          .
(PEAK DAY 1, HOUR  25.750)
 121.833   1817.9207    486.00  .     Q   .          .      V  .          .
(PEAK DAY 1, HOUR  25.833)
 121.917   1821.2632    485.33  .     Q   .          .      V  .          .
(PEAK DAY 1, HOUR  25.917)
 122.000   1824.6012    484.68  .     Q   .          .      V  .          .
(PEAK DAY 1, HOUR  26.000)
 122.083   1827.9349    484.05  .     Q   .          .      V  .          .
(PEAK DAY 1, HOUR  26.083)
 122.167   1831.2644    483.43  .     Q   .          .      V  .          .
(PEAK DAY 1, HOUR  26.167)
 122.250   1834.5897    482.83  .     Q   .          .      V  .          .
(PEAK DAY 1, HOUR  26.250)
 122.333   1837.9110    482.25  .     Q   .          .      V  .          .
(PEAK DAY 1, HOUR  26.333)
 122.417   1841.2284    481.68  .     Q   .          .      V  .          .
(PEAK DAY 1, HOUR  26.417)
 122.500   1844.5419    481.12  .     Q   .          .      V  .          .
(PEAK DAY 1, HOUR  26.500)
 122.583   1847.8517    480.59  .     Q   .          .      V  .          .
(PEAK DAY 1, HOUR  26.583)
 122.667   1851.1580    480.07  .     Q   .          .      V  .          .
(PEAK DAY 1, HOUR  26.667)
 122.750   1854.4608    479.57  .    Q    .          .      V  .          .
(PEAK DAY 1, HOUR  26.750)
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 122.833   1857.7603    479.08  .    Q    .         .       V .         .
 (PEAK DAY 1, HOUR  26.833)
 122.917   1861.0564    478.60  .    Q    .         .       V .         .
 (PEAK DAY 1, HOUR  26.917)
 123.000   1864.3494    478.14  .    Q    .         .       V .         .
 (PEAK DAY 1, HOUR  27.000)
 123.083   1867.6392    477.68  .    Q    .         .       V .         .
 (PEAK DAY 1, HOUR  27.083)
 123.167   1870.9259    477.23  .    Q    .         .        V.         .
 (PEAK DAY 1, HOUR  27.167)
 123.250   1874.2095    476.78  .    Q    .         .        V.         .
 (PEAK DAY 1, HOUR  27.250)
 123.333   1877.4900    476.34  .    Q    .         .        V.         .
 (PEAK DAY 1, HOUR  27.333)
 123.417   1880.7675    475.89  .    Q    .         .        V.         .
 (PEAK DAY 1, HOUR  27.417)
 123.500   1884.0419    475.44  .    Q    .         .        V.         .
 (PEAK DAY 1, HOUR  27.500)
 123.583   1887.3132    475.00  .    Q    .         .        V.         .
 (PEAK DAY 1, HOUR  27.583)
 123.667   1890.5815    474.55  .    Q    .         .        V.         .
 (PEAK DAY 1, HOUR  27.667)
 123.750   1893.8468    474.11  .    Q    .         .        V.         .
 (PEAK DAY 1, HOUR  27.750)
 123.833   1897.1090    473.67  .    Q    .         .        V.         .
 (PEAK DAY 1, HOUR  27.833)
 123.917   1900.3682    473.23  .    Q    .         .        V.         .
 (PEAK DAY 1, HOUR  27.917)
 124.000   1903.6244    472.80  .    Q    .         .        V.         .
 (PEAK DAY 1, HOUR  28.000)
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
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  FLOW PROCESS FROM NODE   6355.00 TO NODE   6371.00 IS CODE = 5.2
-------------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
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         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  6039.2 Ac. ***

         THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
         TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
         INTERVALS(Reference: the National Engineering Handbook,
         Hydrology, Chapter 17, page 17-52, August,1972,
         U.S. Department of Commerce).


         ASSUMED REGULAR CHANNEL INFORMATION:
           BASEWIDTH(FT) =   30.00     CHANNEL Z =  1.00
           UPSTREAM ELEVATION(FT) =     314.00
           DOWNSTREAM ELEVATION(FT) =     220.00
           CHANNEL LENGTH(FT) =    5919.00     MANNING'S FACTOR = 0.040
           CONSTANT LOSS RATE(CFS) =    0.00


         CHANNEL ROUTING COEFFICIENT ESTIMATED:
           MAXIMUM INFLOW(CFS) =  3113.79
           AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  2358.50
           CHANNEL NORMAL VELOCITY FOR Q =  2358.50 CFS =  12.27 FPS
           ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.878

         MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
         UNIT INTERVALS IS CSTAR = 0.817
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CONVEX METHOD CHANNEL ROUTING RESULTS:

PEAK DAY	TIME (HRS)	CLOCK TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
2	24.000	96.000	315.32	317.74	317.74
1	0.083	96.083	314.28	316.26	316.26
1	0.167	96.167	314.43	314.99	314.99
1	0.250	96.250	317.00	314.48	314.48
1	0.333	96.333	322.04	315.68	315.68
1	0.417	96.417	329.79	319.18	319.18
1	0.500	96.500	336.96	325.23	325.23
1	0.583	96.583	341.70	332.39	332.39
1	0.667	96.667	344.35	338.40	338.40
1	0.750	96.750	345.87	342.37	342.37
1	0.833	96.833	346.71	344.72	344.72
1	0.917	96.917	347.11	346.06	346.06
1	1.000	97.000	347.39	346.78	346.78
1	1.083	97.083	347.63	347.18	347.18
1	1.167	97.167	347.81	347.47	347.47
1	1.250	97.250	347.92	347.69	347.69
1	1.333	97.333	347.96	347.84	347.84
1	1.417	97.417	347.96	347.92	347.92
1	1.500	97.500	347.95	347.95	347.95
1	1.583	97.583	347.94	347.95	347.95
1	1.667	97.667	347.94	347.95	347.95
1	1.750	97.750	347.96	347.94	347.94
1	1.833	97.833	347.96	347.95	347.95
1	1.917	97.917	347.91	347.96	347.96
1	2.000	98.000	347.81	347.93	347.93
1	2.083	98.083	347.68	347.86	347.86
1	2.167	98.167	347.55	347.76	347.76
1	2.250	98.250	347.43	347.63	347.63
1	2.333	98.333	347.31	347.51	347.51
1	2.417	98.417	347.20	347.38	347.38
1	2.500	98.500	347.10	347.27	347.27
1	2.583	98.583	347.00	347.16	347.16
1	2.667	98.667	346.90	347.07	347.07
1	2.750	98.750	346.81	346.97	346.97
1	2.833	98.833	346.73	346.87	346.87
1	2.917	98.917	346.65	346.78	346.78
1	3.000	99.000	346.57	346.70	346.70
1	3.083	99.083	346.51	346.62	346.62
1	3.167	99.167	346.46	346.55	346.55
1	3.250	99.250	346.42	346.49	346.49
1	3.333	99.333	346.40	346.45	346.45
1	3.417	99.417	346.39	346.42	346.42
1	3.500	99.500	346.40	346.40	346.40
1	3.583	99.583	346.42	346.39	346.39
1	3.667	99.667	346.45	346.41	346.41
1	3.750	99.750	346.51	346.43	346.43
1	3.833	99.833	346.57	346.47	346.47
1	3.917	99.917	346.65	346.53	346.53
1	4.000	100.000	346.73	346.60	346.60
1	4.083	100.083	346.84	346.68	346.68
1	4.167	100.167	346.95	346.77	346.77
1	4.250	100.250	347.09	346.88	346.88
1	4.333	100.333	347.23	347.00	347.00
1	4.417	100.417	347.39	347.14	347.14
1	4.500	100.500	347.56	347.29	347.29
1	4.583	100.583	347.74	347.45	347.45
1	4.667	100.667	347.93	347.62	347.62
1	4.750	100.750	348.14	347.81	347.81
1	4.833	100.833	348.36	348.01	348.01
1	4.917	100.917	348.60	348.22	348.22
1	5.000	101.000	348.86	348.45	348.45

1	5.083	101.083	349.12	348.70	348.70
1	5.167	101.167	349.40	348.96	348.96
1	5.250	101.250	349.70	349.23	349.23
1	5.333	101.333	350.02	349.52	349.52
1	5.417	101.417	350.34	349.82	349.82
1	5.500	101.500	350.69	350.14	350.14
1	5.583	101.583	351.05	350.47	350.47
1	5.667	101.667	351.42	350.82	350.82
1	5.750	101.750	351.81	351.19	351.19
1	5.833	101.833	352.22	351.57	351.57
1	5.917	101.917	352.64	351.96	351.96
1	6.000	102.000	353.08	352.38	352.38
1	6.083	102.083	353.54	352.81	352.81
1	6.167	102.167	354.01	353.25	353.25
1	6.250	102.250	354.50	353.71	353.71
1	6.333	102.333	355.01	354.19	354.19
1	6.417	102.417	355.53	354.69	354.69
1	6.500	102.500	356.07	355.20	355.20
1	6.583	102.583	356.63	355.73	355.73
1	6.667	102.667	357.20	356.28	356.28
1	6.750	102.750	357.80	356.84	356.84
1	6.833	102.833	358.41	357.42	357.42
1	6.917	102.917	359.04	358.02	358.02
1	7.000	103.000	359.69	358.64	358.64
1	7.083	103.083	360.36	359.28	359.28
1	7.167	103.167	361.04	359.94	359.94
1	7.250	103.250	361.75	360.61	360.61
1	7.333	103.333	362.48	361.31	361.31
1	7.417	103.417	363.22	362.02	362.02
1	7.500	103.500	363.99	362.75	362.75
1	7.583	103.583	364.78	363.50	363.50
1	7.667	103.667	365.58	364.28	364.28
1	7.750	103.750	366.41	365.07	365.07
1	7.833	103.833	367.26	365.89	365.89
1	7.917	103.917	368.13	366.72	366.72
1	8.000	104.000	369.02	367.58	367.58
1	8.083	104.083	369.94	368.46	368.46
1	8.167	104.167	370.88	369.36	369.36
1	8.250	104.250	371.84	370.28	370.28
1	8.333	104.333	372.82	371.23	371.23
1	8.417	104.417	373.84	372.20	372.20
1	8.500	104.500	374.87	373.20	373.20
1	8.583	104.583	375.93	374.21	374.21
1	8.667	104.667	377.01	375.26	375.26
1	8.750	104.750	378.12	376.32	376.32
1	8.833	104.833	379.25	377.42	377.42
1	8.917	104.917	380.42	378.54	378.54
1	9.000	105.000	381.61	379.68	379.68
1	9.083	105.083	382.83	380.86	380.86
1	9.167	105.167	384.07	382.06	382.06
1	9.250	105.250	385.35	383.29	383.29
1	9.333	105.333	386.66	384.54	384.54
1	9.417	105.417	388.00	385.83	385.83
1	9.500	105.500	389.36	387.15	387.15
1	9.583	105.583	390.76	388.50	388.50
1	9.667	105.667	392.19	389.88	389.88
1	9.750	105.750	393.65	391.29	391.29
1	9.833	105.833	395.08	392.73	392.73
1	9.917	105.917	396.49	394.17	394.17
1	10.000	106.000	397.88	395.59	395.59
1	10.083	106.083	399.28	396.99	396.99
1	10.167	106.167	400.70	398.39	398.39
1	10.250	106.250	402.16	399.80	399.80
1	10.333	106.333	403.64	401.24	401.24
1	10.417	106.417	405.17	402.70	402.70
1	10.500	106.500	406.73	404.21	404.21
1	10.583	106.583	408.34	405.74	405.74
1	10.667	106.667	409.97	407.32	407.32

1	10.750	106.750	411.66	408.93	408.93
1	10.833	106.833	413.37	410.59	410.59
1	10.917	106.917	415.14	412.28	412.28
1	11.000	107.000	416.95	414.02	414.02
1	11.083	107.083	418.81	415.80	415.80
1	11.167	107.167	420.71	417.63	417.63
1	11.250	107.250	422.67	419.51	419.51
1	11.333	107.333	424.67	421.43	421.43
1	11.417	107.417	426.73	423.40	423.40
1	11.500	107.500	428.84	425.43	425.43
1	11.583	107.583	431.02	427.51	427.51
1	11.667	107.667	433.24	429.64	429.64
1	11.750	107.750	435.54	431.84	431.84
1	11.833	107.833	437.89	434.09	434.09
1	11.917	107.917	440.33	436.41	436.41
1	12.000	108.000	442.81	438.79	438.79
1	12.083	108.083	445.76	441.24	441.24
1	12.167	108.167	449.79	443.94	443.94
1	12.250	108.250	455.97	447.36	447.36
1	12.333	108.333	464.29	452.31	452.31
1	12.417	108.417	475.01	459.30	459.30
1	12.500	108.500	485.26	468.52	468.52
1	12.583	108.583	493.53	478.75	478.75
1	12.667	108.667	500.07	488.04	488.04
1	12.750	108.750	505.76	495.66	495.66
1	12.833	108.833	510.97	502.00	502.00
1	12.917	108.917	515.95	507.57	507.57
1	13.000	109.000	520.91	512.74	512.74
1	13.083	109.083	526.00	517.74	517.74
1	13.167	109.167	531.13	522.78	522.78
1	13.250	109.250	536.27	527.87	527.87
1	13.333	109.333	541.38	533.00	533.00
1	13.417	109.417	546.61	538.13	538.13
1	13.500	109.500	551.93	543.30	543.30
1	13.583	109.583	557.46	548.56	548.56
1	13.667	109.667	563.14	553.97	553.97
1	13.750	109.750	569.09	559.55	559.55
1	13.833	109.833	575.23	565.34	565.34
1	13.917	109.917	581.69	571.35	571.35
1	14.000	110.000	588.39	577.62	577.62
1	14.083	110.083	595.57	584.17	584.17
1	14.167	110.167	603.36	591.07	591.07
1	14.250	110.250	612.14	598.49	598.49
1	14.333	110.333	621.68	606.69	606.69
1	14.417	110.417	632.08	615.72	615.72
1	14.500	110.500	642.68	625.58	625.58
1	14.583	110.583	653.73	635.98	635.98
1	14.667	110.667	665.52	646.76	646.76
1	14.750	110.750	678.69	658.12	658.12
1	14.833	110.833	693.02	670.49	670.49
1	14.917	110.917	708.96	684.07	684.07
1	15.000	111.000	726.39	699.04	699.04
1	15.083	111.083	746.09	715.51	715.51
1	15.167	111.167	768.01	733.86	733.86
1	15.250	111.250	793.02	754.37	754.37
1	15.333	111.333	820.84	777.52	777.52
1	15.417	111.417	851.09	803.54	803.54
1	15.500	111.500	881.23	832.20	832.20
1	15.583	111.583	909.29	862.11	862.11
1	15.667	111.667	935.97	891.20	891.20
1	15.750	111.750	964.21	918.79	918.79
1	15.833	111.833	1006.84	946.38	946.38
1	15.917	111.917	1079.30	981.42	981.42
1	16.000	112.000	1193.41	1036.98	1036.98
1	16.083	112.083	1415.75	1126.35	1126.35
1	16.167	112.167	1776.30	1287.90	1287.90
1	16.250	112.250	2293.97	1565.48	1565.48
1	16.333	112.333	2760.96	1986.29	1986.29

1	16.417	112.417	3113.79	2461.87	2461.87
1	16.500	112.500	2910.47	2875.60	2875.60
1	16.583	112.583	2406.22	2972.49	2972.49
1	16.667	112.667	1950.96	2679.65	2679.65
1	16.750	112.750	1655.31	2237.68	2237.68
1	16.833	112.833	1449.13	1861.51	1861.51
1	16.917	112.917	1294.47	1594.08	1594.08
1	17.000	113.000	1196.88	1401.42	1401.42
1	17.083	113.083	1124.08	1267.20	1267.20
1	17.167	113.167	1060.41	1174.80	1174.80
1	17.250	113.250	1001.26	1102.79	1102.79
1	17.333	113.333	952.86	1039.77	1039.77
1	17.417	113.417	916.22	985.07	985.07
1	17.500	113.500	888.53	941.17	941.17
1	17.583	113.583	867.94	907.49	907.49
1	17.667	113.667	851.53	882.12	882.12
1	17.750	113.750	837.57	862.66	862.66
1	17.833	113.833	824.80	846.86	846.86
1	17.917	113.917	813.38	833.14	833.14
1	18.000	114.000	802.26	820.84	820.84
1	18.083	114.083	791.57	809.41	809.41
1	18.167	114.167	780.91	798.44	798.44
1	18.250	114.250	767.63	787.71	787.71
1	18.333	114.333	753.19	775.78	775.78
1	18.417	114.417	737.56	762.19	762.19
1	18.500	114.500	722.62	747.33	747.33
1	18.583	114.583	708.62	732.18	732.18
1	18.667	114.667	697.35	717.65	717.65
1	18.750	114.750	688.63	704.86	704.86
1	18.833	114.833	681.35	694.54	694.54
1	18.917	114.917	674.07	686.21	686.21
1	19.000	115.000	667.34	678.75	678.75
1	19.083	115.083	662.18	671.70	671.70
1	19.167	115.167	657.76	665.66	665.66
1	19.250	115.250	653.62	660.69	660.69
1	19.333	115.333	650.13	656.31	656.31
1	19.417	115.417	646.95	652.44	652.44
1	19.500	115.500	643.95	649.03	649.03
1	19.583	115.583	641.06	645.89	645.89
1	19.667	115.667	638.23	642.92	642.92
1	19.750	115.750	635.41	640.04	640.04
1	19.833	115.833	632.28	637.21	637.21
1	19.917	115.917	628.98	634.23	634.23
1	20.000	116.000	626.08	631.05	631.05
1	20.083	116.083	623.57	627.97	627.97
1	20.167	116.167	621.25	625.22	625.22
1	20.250	116.250	618.98	622.76	622.76
1	20.333	116.333	616.67	620.44	620.44
1	20.417	116.417	613.74	618.14	618.14
1	20.500	116.500	611.25	615.53	615.53
1	20.583	116.583	609.20	612.87	612.87
1	20.667	116.667	607.38	610.56	610.56
1	20.750	116.750	605.66	608.58	608.58
1	20.833	116.833	604.00	606.77	606.77
1	20.917	116.917	602.35	605.07	605.07
1	21.000	117.000	600.70	603.40	603.40
1	21.083	117.083	599.23	601.75	601.75
1	21.167	117.167	597.82	600.19	600.19
1	21.250	117.250	596.45	598.73	598.73
1	21.333	117.333	595.12	597.33	597.33
1	21.417	117.417	593.82	595.97	595.97
1	21.500	117.500	592.55	594.65	594.65
1	21.583	117.583	591.31	593.36	593.36
1	21.667	117.667	590.10	592.10	592.10
1	21.750	117.750	588.91	590.87	590.87
1	21.833	117.833	587.75	589.67	589.67
1	21.917	117.917	586.62	588.49	588.49
1	22.000	118.000	585.51	587.34	587.34

1	22.083	118.083	584.43	586.22	586.22
1	22.167	118.167	583.36	585.12	585.12
1	22.250	118.250	582.31	584.04	584.04
1	22.333	118.333	581.28	582.98	582.98
1	22.417	118.417	580.28	581.94	581.94
1	22.500	118.500	579.29	580.92	580.92
1	22.583	118.583	578.32	579.92	579.92
1	22.667	118.667	577.37	578.94	578.94
1	22.750	118.750	576.43	577.98	577.98
1	22.833	118.833	575.50	577.03	577.03
1	22.917	118.917	574.59	576.09	576.09
1	23.000	119.000	573.70	575.17	575.17
1	23.083	119.083	572.81	574.27	574.27
1	23.167	119.167	571.94	573.38	573.38
1	23.250	119.250	571.08	572.50	572.50
1	23.333	119.333	570.23	571.63	571.63
1	23.417	119.417	569.39	570.77	570.77
1	23.500	119.500	568.56	569.93	569.93
1	23.583	119.583	567.74	569.09	569.09
1	23.667	119.667	566.94	568.27	568.27
1	23.750	119.750	566.14	567.45	567.45
1	23.833	119.833	565.35	566.65	566.65
1	23.917	119.917	564.57	565.85	565.85
1	24.000	120.000	563.80	565.07	565.07
1	24.083	120.083	562.45	564.29	564.29
1	24.167	120.167	559.52	563.24	563.24
1	24.250	120.250	553.38	561.19	561.19
1	24.333	120.333	544.02	556.88	556.88
1	24.417	120.417	531.14	549.53	549.53
1	24.500	120.500	519.24	538.84	538.84
1	24.583	120.583	510.79	526.84	526.84
1	24.667	120.667	505.34	516.57	516.57
1	24.750	120.750	501.57	509.23	509.23
1	24.833	120.833	498.88	504.24	504.24
1	24.917	120.917	496.95	500.77	500.77
1	25.000	121.000	495.33	498.30	498.30
1	25.083	121.083	493.88	496.42	496.42
1	25.167	121.167	492.58	494.84	494.84
1	25.250	121.250	491.47	493.43	493.43
1	25.333	121.333	490.50	492.20	492.20
1	25.417	121.417	489.64	491.14	491.14
1	25.500	121.500	488.85	490.20	490.20
1	25.583	121.583	488.11	489.37	489.37
1	25.667	121.667	487.39	488.59	488.59
1	25.750	121.750	486.68	487.85	487.85
1	25.833	121.833	486.00	487.13	487.13
1	25.917	121.917	485.33	486.44	486.44
1	26.000	122.000	484.68	485.76	485.76
1	26.083	122.083	484.05	485.10	485.10
1	26.167	122.167	483.43	484.46	484.46
1	26.250	122.250	482.83	483.83	483.83
1	26.333	122.333	482.25	483.22	483.22
1	26.417	122.417	481.68	482.62	482.62
1	26.500	122.500	481.12	482.05	482.05
1	26.583	122.583	480.59	481.48	481.48
1	26.667	122.667	480.07	480.93	480.93
1	26.750	122.750	479.57	480.40	480.40
1	26.833	122.833	479.08	479.89	479.89
1	26.917	122.917	478.60	479.39	479.39
1	27.000	123.000	478.14	478.91	478.91
1	27.083	123.083	477.68	478.43	478.43
1	27.167	123.167	477.23	477.97	477.97
1	27.250	123.250	476.78	477.52	477.52
1	27.333	123.333	476.34	477.07	477.07
1	27.417	123.417	475.89	476.62	476.62
1	27.500	123.500	475.44	476.17	476.17
1	27.583	123.583	475.00	475.73	475.73
1	27.667	123.667	474.55	475.28	475.28

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  1   27.750 123.750       474.11      474.84      474.84
  1   27.833 123.833       473.67      474.39      474.39
  1   27.917 123.917       473.23      473.95      473.95
  1   28.000 124.000       472.80      473.51      473.51
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
================================================================================
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   2578.951 AF
    OUTFLOW VOLUME =   2578.949 AF
    LOSS    VOLUME =      0.000 AF
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6360.00 TO NODE   6371.00 IS CODE =   1
--------------------------------------------------------------------------------

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of   922.3 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
================================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #2)

        WATERSHED AREA =     922.300 ACRES
        BASEFLOW =   0.000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    0.250 HOURS
         CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
         THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
         MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
        VALLEY(DEVELOPED):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.900
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
        VALLEY(UNDEVELOPED)/DESERT:
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:
        +------------------+--------+--------+--------+--------+--------+
        | RAINFALL DEPTHS & |        |        |        |        |        |
        |    LOSS RATES     |  DAY 1 |  DAY 2 |  DAY 3 |  DAY 4 |  DAY 5 |
        |==================+========+========+========+========+========|
        | 5-MINUTE (INCHES) |    0.58|    0.27|    0.12|    0.06|    0.04|
        |30-MINUTE (INCHES) |    1.22|    0.56|    0.24|    0.13|    0.09|
        |   1-HOUR (INCHES) |    1.62|    0.75|    0.33|    0.17|    0.12|
        |   3-HOUR (INCHES) |    2.71|    1.25|    0.54|    0.28|    0.21|
        |   6-HOUR (INCHES) |    3.75|    1.73|    0.75|    0.39|    0.29|
        |  24-HOUR (INCHES) |    6.28|    2.89|    1.26|    0.66|    0.48|
        |==================+========+========+========+========+========|
        | LOSS RATE(IN/HR)  |   0.120|   0.120|   0.120|   0.120|   0.120|
        | LOW LOSS FRACTION |   0.510|   0.760|   0.950|   0.990|   0.990|
        +------------------+--------+--------+--------+--------+--------+
          5-MINUTE FACTOR = 0.959
         30-MINUTE FACTOR = 0.959
          1-HOUR FACTOR = 0.959
          3-HOUR FACTOR = 0.994
          6-HOUR FACTOR = 0.997
         24-HOUR FACTOR = 0.998

        UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
        UNIT INTERVAL PERCENTAGE OF LAG-TIME =  33.333


        RUNOFF HYDROGRAPH LISTING LIMITS:
        MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  96.00
        MODEL TIME(HOURS) FOR END OF RESULTS = 124.00
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================================================================================
                    UNIT HYDROGRAPH DETERMINATION

--------------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------------
       1                2.292               255.704
       2               13.821              1285.900
       3               35.522              2420.567
       4               62.164              2971.648
       5               80.648              2061.668
       6               89.997              1042.866
       7               94.646               518.513
       8               96.625               220.790
       9               97.489                96.296
      10               98.211                80.598
      11               98.708                55.360
      12               99.005                33.223
      13               99.174                18.845
      14               99.253                 8.821
      15               99.326                 8.100
      16               99.394                 7.535
      17               99.458                 7.164
      18               99.518                 6.727
      19               99.574                 6.257
      20               99.626                 5.759
      21               99.675                 5.514
      22               99.718                 4.708
      23               99.759                 4.643
      24               99.799                 4.443
      25               99.827                 3.130
      26               99.851                 2.675
      27               99.875                 2.675
      28               99.897                 2.469
      29               99.906                 1.014
      30               99.913                 0.730
      31               99.919                 0.731
      32               99.926                 0.729
      33               99.932                 0.731
      34               99.939                 0.729
      35               99.946                 0.730
      36               99.952                 0.729
      37               99.959                 0.729
      38               99.965                 0.729
      39               99.972                 0.730
      40               99.978                 0.729
      41               99.985                 0.729
      42               99.991                 0.729
      43               99.998                 0.729
      44              100.000                 0.237


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    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =     433.5397
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =     453.8287
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5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 650.0 1300.0 1950.0 2600.0
96.000	126.4908	10.29	Q .V . . .
(PEAK DAY 2, HOUR 24.000)			
96.083	126.5666	11.01	Q .V . . .
(PEAK DAY 1, HOUR 0.083)			
96.167	126.6693	14.91	Q .V . . .
(PEAK DAY 1, HOUR 0.167)			
96.250	126.8231	22.33	Q .V . . .
(PEAK DAY 1, HOUR 0.250)			
96.333	127.0401	31.50	Q .V . . .
(PEAK DAY 1, HOUR 0.333)			
96.417	127.3012	37.92	Q .V . . .
(PEAK DAY 1, HOUR 0.417)			
96.500	127.5853	41.24	Q .V . . .
(PEAK DAY 1, HOUR 0.500)			
96.583	127.8812	42.97	Q .V . . .
(PEAK DAY 1, HOUR 0.583)			
96.667	128.1828	43.79	Q .V . . .
(PEAK DAY 1, HOUR 0.667)			
96.750	128.4874	44.23	Q .V . . .
(PEAK DAY 1, HOUR 0.750)			
96.833	128.7947	44.62	Q .V . . .
(PEAK DAY 1, HOUR 0.833)			
96.917	129.1042	44.94	Q .V . . .
(PEAK DAY 1, HOUR 0.917)			
97.000	129.4155	45.20	Q .V . . .
(PEAK DAY 1, HOUR 1.000)			
97.083	129.7283	45.41	Q .V . . .
(PEAK DAY 1, HOUR 1.083)			
97.167	130.0422	45.59	Q .V . . .
(PEAK DAY 1, HOUR 1.167)			
97.250	130.3575	45.77	Q .V . . .
(PEAK DAY 1, HOUR 1.250)			
97.333	130.6740	45.95	Q .V . . .
(PEAK DAY 1, HOUR 1.333)			
97.417	130.9917	46.14	Q .V . . .
(PEAK DAY 1, HOUR 1.417)			
97.500	131.3107	46.32	Q .V . . .
(PEAK DAY 1, HOUR 1.500)			
97.583	131.6310	46.50	Q .V . . .
(PEAK DAY 1, HOUR 1.583)			
97.667	131.9525	46.68	Q .V . . .
(PEAK DAY 1, HOUR 1.667)			
97.750	132.2753	46.87	Q .V . . .
(PEAK DAY 1, HOUR 1.750)			
97.833	132.5993	47.05	Q .V . . .
(PEAK DAY 1, HOUR 1.833)			
97.917	132.9246	47.23	Q .V . . .
(PEAK DAY 1, HOUR 1.917)			
98.000	133.2512	47.42	Q .V . . .
(PEAK DAY 1, HOUR 2.000)			
98.083	133.5791	47.60	Q .V . . .
(PEAK DAY 1, HOUR 2.083)			
98.167	133.9082	47.79	Q .V . . .
(PEAK DAY 1, HOUR 2.167)			
98.250	134.2386	47.97	Q .V . . .
(PEAK DAY 1, HOUR 2.250)			
98.333	134.5703	48.16	Q .V . . .
(PEAK DAY 1, HOUR 2.333)			
98.417	134.9032	48.34	Q .V . . .
(PEAK DAY 1, HOUR 2.417)			
98.500	135.2374	48.53	Q .V . . .
(PEAK DAY 1, HOUR 2.500)			
98.583	135.5729	48.71	Q .V . . .
(PEAK DAY 1, HOUR 2.583)			
98.667	135.9097	48.90	Q .V . . .
(PEAK DAY 1, HOUR 2.667)			
98.750	136.2478	49.09	Q . V . . .
(PEAK DAY 1, HOUR 2.750)			
98.833	136.5872	49.28	Q . V . . .
(PEAK DAY 1, HOUR 2.833)			
98.917	136.9279	49.48	Q . V . . .
(PEAK DAY 1, HOUR 2.917)			
99.000	137.2700	49.67	Q . V . . .
(PEAK DAY 1, HOUR 3.000)			
99.083	137.6135	49.87	Q . V . . .
(PEAK DAY 1, HOUR 3.083)			
99.167	137.9583	50.07	Q . V . . .
(PEAK DAY 1, HOUR 3.167)			
99.250	138.3045	50.27	Q . V . . .
(PEAK DAY 1, HOUR 3.250)			
99.333	138.6522	50.48	Q . V . . .
(PEAK DAY 1, HOUR 3.333)			
99.417	139.0012	50.68	Q . V . . .
(PEAK DAY 1, HOUR 3.417)			
99.500	139.3517	50.89	Q . V . . .
(PEAK DAY 1, HOUR 3.500)			
99.583	139.7036	51.10	Q . V . . .
(PEAK DAY 1, HOUR 3.583)			
99.667	140.0570	51.31	Q . V . . .
(PEAK DAY 1, HOUR 3.667)			
99.750	140.4118	51.52	Q . V . . .
(PEAK DAY 1, HOUR 3.750)			
99.833	140.7682	51.74	Q . V . . .
(PEAK DAY 1, HOUR 3.833)			
99.917	141.1260	51.95	Q . V . . .
(PEAK DAY 1, HOUR 3.917)			
100.000	141.4853	52.18	Q . V . . .
(PEAK DAY 1, HOUR 4.000)			
100.083	141.8462	52.40	Q . V . . .
(PEAK DAY 1, HOUR 4.083)			
100.167	142.2086	52.62	Q . V . . .
(PEAK DAY 1, HOUR 4.167)			
100.250	142.5726	52.85	Q . V . . .
(PEAK DAY 1, HOUR 4.250)			
100.333	142.9381	53.08	Q . V . . .
(PEAK DAY 1, HOUR 4.333)			
100.417	143.3053	53.31	Q . V . . .
(PEAK DAY 1, HOUR 4.417)			
100.500	143.6741	53.55	Q . V . . .
(PEAK DAY 1, HOUR 4.500)			
100.583	144.0445	53.78	Q . V . . .
(PEAK DAY 1, HOUR 4.583)			
100.667	144.4165	54.02	Q . V . . .
(PEAK DAY 1, HOUR 4.667)			
100.750	144.7903	54.27	Q . V . . .
(PEAK DAY 1, HOUR 4.750)			
100.833	145.1657	54.51	Q . V . . .
(PEAK DAY 1, HOUR 4.833)			
100.917	145.5429	54.76	Q . V . . .
(PEAK DAY 1, HOUR 4.917)			
101.000	145.9218	55.02	Q . V . . .
(PEAK DAY 1, HOUR 5.000)			
101.083	146.3024	55.27	Q . V . . .
(PEAK DAY 1, HOUR 5.083)			

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101.167    146.6848     55.53  Q          . V        .          .          .
(PEAK DAY 1, HOUR   5.167)
101.250    147.0691     55.79  Q          . V        .          .          .
(PEAK DAY 1, HOUR   5.250)
101.333    147.4551     56.05  Q          . V        .          .          .
(PEAK DAY 1, HOUR   5.333)
101.417    147.8430     56.32  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   5.417)
101.500    148.2327     56.59  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   5.500)
101.583    148.6244     56.87  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   5.583)
101.667    149.0179     57.14  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   5.667)
101.750    149.4134     57.42  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   5.750)
101.833    149.8109     57.71  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   5.833)
101.917    150.2103     58.00  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   5.917)
102.000    150.6118     58.29  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   6.000)
102.083    151.0152     58.59  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   6.083)
102.167    151.4208     58.89  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   6.167)
102.250    151.8285     59.19  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   6.250)
102.333    152.2383     59.50  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   6.333)
102.417    152.6502     59.81  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   6.417)
102.500    153.0643     60.13  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   6.500)
102.583    153.4807     60.45  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   6.583)
102.667    153.8993     60.78  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   6.667)
102.750    154.3201     61.11  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   6.750)
102.833    154.7433     61.45  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   6.833)
102.917    155.1688     61.78  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   6.917)
103.000    155.5967     62.13  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   7.000)
103.083    156.0270     62.48  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   7.083)
103.167    156.4598     62.84  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   7.167)
103.250    156.8950     63.19  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   7.250)
103.333    157.3327     63.56  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   7.333)
103.417    157.7730     63.93  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   7.417)
103.500    158.2159     64.31  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   7.500)
103.583    158.6615     64.69  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   7.583)
103.667    159.1097     65.08  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   7.667)
103.750    159.5606     65.47  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   7.750)
103.833    160.0143     65.88  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   7.833)
103.917    160.4708     66.28  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   7.917)
104.000    160.9302     66.70  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   8.000)
104.083    161.3924     67.12  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   8.083)
104.167    161.8577     67.55  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   8.167)
104.250    162.3259     67.98  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   8.250)
104.333    162.7971     68.43  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   8.333)
104.417    163.2715     68.88  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   8.417)
104.500    163.7490     69.34  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   8.500)
104.583    164.2297     69.80  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   8.583)
104.667    164.7137     70.28  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   8.667)
104.750    165.2010     70.76  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   8.750)
104.833    165.6917     71.25  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   8.833)
104.917    166.1859     71.75  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   8.917)
105.000    166.6836     72.26  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   9.000)
105.083    167.1848     72.78  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   9.083)
105.167    167.6897     73.31  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   9.167)
105.250    168.1983     73.85  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   9.250)
105.333    168.7106     74.40  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   9.333)
105.417    169.2269     74.96  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   9.417)
105.500    169.7471     75.53  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   9.500)
105.583    170.2712     76.11  .Q         .    V     .          .          .
(PEAK DAY 1, HOUR   9.583)
105.667    170.7995     76.71  .Q         .    V     .          .          .
(PEAK DAY 1, HOUR   9.667)
105.750    171.3320     77.31  .Q         .    V     .          .          .
(PEAK DAY 1, HOUR   9.750)
105.833    171.8687     77.93  .Q         .    V     .          .          .
(PEAK DAY 1, HOUR   9.833)
105.917    172.4097     78.56  .Q         .    V     .          .          .
(PEAK DAY 1, HOUR   9.917)
106.000    172.9553     79.21  .Q         .    V     .          .          .
(PEAK DAY 1, HOUR  10.000)
106.083    173.5053     79.87  .Q         .    V     .          .          .
(PEAK DAY 1, HOUR  10.083)
106.167    174.0600     80.55  .Q         .    V     .          .          .
(PEAK DAY 1, HOUR  10.167)
106.250    174.6195     81.23  .Q         .    V     .          .          .
(PEAK DAY 1, HOUR  10.250)
106.333    175.1838     81.94  .Q         .    V     .          .          .
(PEAK DAY 1, HOUR  10.333)
106.417    175.7531     82.66  .Q         .    V     .          .          .
(PEAK DAY 1, HOUR  10.417)
106.500    176.3275     83.40  .Q         .    V     .          .          .
(PEAK DAY 1, HOUR  10.500)
106.583    176.9070     84.15  .Q         .    V     .          .          .
(PEAK DAY 1, HOUR  10.583)
106.667    177.4919     84.93  .Q         .    V     .          .          .
(PEAK DAY 1, HOUR  10.667)
106.750    178.0822     85.71  .Q         .    V     .          .          .
(PEAK DAY 1, HOUR  10.750)
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106.833    178.6782     86.53  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.833)
106.917    179.2798     87.36  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.917)
107.000    179.8873     88.21  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  11.000)
107.083    180.5009     89.08  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  11.083)
107.167    181.1206     89.99  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  11.167)
107.250    181.7466     90.90  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.250)
107.333    182.3792     91.85  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.333)
107.417    183.0185     92.82  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.417)
107.500    183.6647     93.83  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.500)
107.583    184.3179     94.85  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.583)
107.667    184.9784     95.91  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.667)
107.750    185.6464     96.99  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.750)
107.833    186.3222     98.12  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.833)
107.917    187.0058     99.27  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.917)
108.000    187.6978    100.47  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  12.000)
108.083    188.4071    103.00  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  12.083)
108.167    189.1709    110.90  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  12.167)
108.250    190.0303    124.79  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  12.250)
108.333    191.0077    141.92  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.333)
108.417    192.0742    154.86  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.417)
108.500    193.1971    163.04  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.500)
108.583    194.3594    168.77  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.583)
108.667    195.5523    173.20  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.667)
108.750    196.7720    177.11  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.750)
108.833    198.0194    181.12  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.833)
108.917    199.2942    185.10  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.917)
109.000    200.5969    189.16  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  13.000)
109.083    201.9279    193.26  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  13.083)
109.167    203.2883    197.53  .  Q      .      V  .         .         .
(PEAK DAY 1, HOUR  13.167)
109.250    204.6788    201.90  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.250)
109.333    206.1012    206.52  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.333)
109.417    207.5563    211.28  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.417)
109.500    209.0460    216.31  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.500)
109.583    210.5715    221.50  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.583)
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109.667    212.1349    227.01  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.667)
109.750    213.7376    232.71  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.750)
109.833    215.3821    238.78  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.833)
109.917    217.0699    245.07  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  13.917)
110.000    218.8041    251.80  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  14.000)
110.083    220.5902    259.34  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  14.083)
110.167    222.4465    269.54  .   Q     .        V.         .         .
(PEAK DAY 1, HOUR  14.167)
110.250    224.3919    282.46  .   Q     .        V.         .         .
(PEAK DAY 1, HOUR  14.250)
110.333    226.4383    297.14  .   Q     .        V.         .         .
(PEAK DAY 1, HOUR  14.333)
110.417    228.5758    310.36  .   Q     .         V         .         .
(PEAK DAY 1, HOUR  14.417)
110.500    230.7948    322.20  .   Q     .         V         .         .
(PEAK DAY 1, HOUR  14.500)
110.583    233.0915    333.49  .    Q    .         V         .         .
(PEAK DAY 1, HOUR  14.583)
110.667    235.4680    345.08  .    Q    .         V         .         .
(PEAK DAY 1, HOUR  14.667)
110.750    237.9275    357.12  .    Q    .         V         .         .
(PEAK DAY 1, HOUR  14.750)
110.833    240.4778    370.30  .    Q    .         .V        .         .
(PEAK DAY 1, HOUR  14.833)
110.917    243.1250    384.38  .    Q    .         .V        .         .
(PEAK DAY 1, HOUR  14.917)
111.000    245.8795    399.94  .     Q   .         .V        .         .
(PEAK DAY 1, HOUR  15.000)
111.083    248.7500    416.80  .     Q   .         .V        .         .
(PEAK DAY 1, HOUR  15.083)
111.167    251.7508    435.72  .     Q   .         . V       .         .
(PEAK DAY 1, HOUR  15.167)
111.250    254.8950    456.54  .      Q  .         . V       .         .
(PEAK DAY 1, HOUR  15.250)
111.333    258.2032    480.36  .      Q  .         . V       .         .
(PEAK DAY 1, HOUR  15.333)
111.417    261.6745    504.03  .      Q  .         .  V      .         .
(PEAK DAY 1, HOUR  15.417)
111.500    265.2556    519.98  .      Q  .         .  V      .         .
(PEAK DAY 1, HOUR  15.500)
111.583    268.8864    527.19  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  15.583)
111.667    272.5746    535.52  .       Q .         .   V     .         .
(PEAK DAY 1, HOUR  15.667)
111.750    276.4615    564.39  .       Q .         .   V     .         .
(PEAK DAY 1, HOUR  15.750)
111.833    280.7536    623.20  .        Q.         .   V     .         .
(PEAK DAY 1, HOUR  15.833)
111.917    285.6821    715.63  .         .Q        .    V    .         .
(PEAK DAY 1, HOUR  15.917)
112.000    291.6738    869.99  .          . Q      .    V    .         .
(PEAK DAY 1, HOUR  16.000)
112.083    299.9257   1198.18  .          .       Q .     V   .         .
(PEAK DAY 1, HOUR  16.083)
112.167    312.6125   1842.12  .          .         .      VQ .         .
(PEAK DAY 1, HOUR  16.167)
112.250    329.2037   2409.04  .          .         .        V.      Q  .
(PEAK DAY 1, HOUR  16.250)
112.333    346.6870   2538.58  .          .         .         V        Q.
(PEAK DAY 1, HOUR  16.333)
112.417    360.1437   1953.91  .          .         .         QV       .
(PEAK DAY 1, HOUR  16.417)
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112.500    369.2429   1321.20  .          .          Q          . V        .
(PEAK DAY 1, HOUR  16.500)
112.583    375.7551    945.57  .          .   Q      .          .  V       .
(PEAK DAY 1, HOUR  16.583)
112.667    380.7361    723.23  .          .Q         .          .  V       .
(PEAK DAY 1, HOUR  16.667)
112.750    384.8868    602.69  .        Q.           .          .  V       .
(PEAK DAY 1, HOUR  16.750)
112.833    388.6063    540.07  .       Q .           .          .   V      .
(PEAK DAY 1, HOUR  16.833)
112.917    391.9329    483.02  .      Q  .           .          .   V      .
(PEAK DAY 1, HOUR  16.917)
113.000    394.9217    433.96  .     Q   .           .          .   V      .
(PEAK DAY 1, HOUR  17.000)
113.083    397.6353    394.02  .     Q   .           .          .    V     .
(PEAK DAY 1, HOUR  17.083)
113.167    400.1144    359.97  .    Q    .           .          .    V     .
(PEAK DAY 1, HOUR  17.167)
113.250    402.3992    331.75  .    Q    .           .          .    V     .
(PEAK DAY 1, HOUR  17.250)
113.333    404.5044    305.67  .   Q     .           .          .    V     .
(PEAK DAY 1, HOUR  17.333)
113.417    406.4601    283.98  .   Q     .           .          .    V     .
(PEAK DAY 1, HOUR  17.417)
113.500    408.2940    266.28  .   Q     .           .          .    V     .
(PEAK DAY 1, HOUR  17.500)
113.583    410.0247    251.30  .  Q      .           .          .     V    .
(PEAK DAY 1, HOUR  17.583)
113.667    411.6657    238.27  .  Q      .           .          .     V    .
(PEAK DAY 1, HOUR  17.667)
113.750    413.2271    226.73  .  Q      .           .          .     V    .
(PEAK DAY 1, HOUR  17.750)
113.833    414.7146    215.98  .  Q      .           .          .     V    .
(PEAK DAY 1, HOUR  17.833)
113.917    416.1360    206.38  .  Q      .           .          .     V    .
(PEAK DAY 1, HOUR  17.917)
114.000    417.4958    197.44  .  Q      .           .          .     V    .
(PEAK DAY 1, HOUR  18.000)
114.083    418.7867    187.45  . Q       .           .          .     V    .
(PEAK DAY 1, HOUR  18.083)
114.167    419.9803    173.31  . Q       .           .          .      V   .
(PEAK DAY 1, HOUR  18.167)
114.250    421.0444    154.50  . Q       .           .          .      V   .
(PEAK DAY 1, HOUR  18.250)
114.333    421.9666    133.89  . Q       .           .          .      V   .
(PEAK DAY 1, HOUR  18.333)
114.417    422.7832    118.57  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  18.417)
114.500    423.5391    109.76  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  18.500)
114.583    424.2572    104.27  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  18.583)
114.667    424.9502    100.61  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  18.667)
114.750    425.6237     97.79  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  18.750)
114.833    426.2794     95.21  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  18.833)
114.917    426.9191     92.90  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  18.917)
115.000    427.5446     90.82  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.000)
115.083    428.1571     88.93  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.083)
115.167    428.7575     87.18  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.167)
115.250    429.3465     85.52  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.250)
115.333    429.9244     83.92  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.333)
115.417    430.4919     82.39  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.417)
115.500    431.0491     80.91  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.500)
115.583    431.5964     79.46  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  19.583)
115.667    432.1327     77.87  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  19.667)
115.750    432.6594     76.47  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  19.750)
115.833    433.1776     75.24  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  19.833)
115.917    433.6878     74.08  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  19.917)
116.000    434.1903     72.96  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.000)
116.083    434.6854     71.89  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.083)
116.167    435.1735     70.87  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.167)
116.250    435.6548     69.88  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.250)
116.333    436.1295     68.93  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.333)
116.417    436.5980     68.02  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.417)
116.500    437.0605     67.15  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.500)
116.583    437.5171     66.30  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.583)
116.667    437.9680     65.48  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.667)
116.750    438.4135     64.69  Q         .           .          .       V  .
(PEAK DAY 1, HOUR  20.750)
116.833    438.8538     63.92  Q         .           .          .       V  .
(PEAK DAY 1, HOUR  20.833)
116.917    439.2888     63.18  Q         .           .          .       V  .
(PEAK DAY 1, HOUR  20.917)
117.000    439.7190     62.45  Q         .           .          .       V  .
(PEAK DAY 1, HOUR  21.000)
117.083    440.1443     61.75  Q         .           .          .       V  .
(PEAK DAY 1, HOUR  21.083)
117.167    440.5648     61.07  Q         .           .          .       V  .
(PEAK DAY 1, HOUR  21.167)
117.250    440.9809     60.41  Q         .           .          .       V  .
(PEAK DAY 1, HOUR  21.250)
117.333    441.3925     59.77  Q         .           .          .       V  .
(PEAK DAY 1, HOUR  21.333)
117.417    441.7998     59.14  Q         .           .          .       V  .
(PEAK DAY 1, HOUR  21.417)
117.500    442.2029     58.53  Q         .           .          .       V  .
(PEAK DAY 1, HOUR  21.500)
117.583    442.6020     57.94  Q         .           .          .        V.
(PEAK DAY 1, HOUR  21.583)
117.667    442.9971     57.37  Q         .           .          .        V.
(PEAK DAY 1, HOUR  21.667)
117.750    443.3883     56.81  Q         .           .          .        V.
(PEAK DAY 1, HOUR  21.750)
117.833    443.7758     56.26  Q         .           .          .        V.
(PEAK DAY 1, HOUR  21.833)
117.917    444.1596     55.73  Q         .           .          .        V.
(PEAK DAY 1, HOUR  21.917)
118.000    444.5399     55.21  Q         .           .          .        V.
(PEAK DAY 1, HOUR  22.000)
118.083    444.9166     54.71  Q         .           .          .        V.
(PEAK DAY 1, HOUR  22.083)
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 118.167    445.2900     54.21  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  22.167)
 118.250    445.6600     53.73  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  22.250)
 118.333    446.0268     53.26  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  22.333)
 118.417    446.3904     52.79  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  22.417)
 118.500    446.7509     52.34  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  22.500)
 118.583    447.1083     51.90  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  22.583)
 118.667    447.4628     51.47  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  22.667)
 118.750    447.8144     51.05  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  22.750)
 118.833    448.1631     50.64  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  22.833)
 118.917    448.5091     50.23  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  22.917)
 119.000    448.8523     49.83  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  23.000)
 119.083    449.1928     49.45  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  23.083)
 119.167    449.5307     49.06  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  23.167)
 119.250    449.8661     48.69  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  23.250)
 119.333    450.1989     48.33  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  23.333)
 119.417    450.5292     47.97  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  23.417)
 119.500    450.8572     47.62  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  23.500)
 119.583    451.1827     47.27  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  23.583)
 119.667    451.5060     46.93  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  23.667)
 119.750    451.8269     46.60  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  23.750)
 119.833    452.1455     46.27  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  23.833)
 119.917    452.4620     45.95  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  23.917)
 120.000    452.7763     45.64  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  24.000)
 120.083    453.0815     44.31  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  24.083)
 120.167    453.3494     38.91  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  24.167)
 120.250    453.5494     29.03  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  24.250)
 120.333    453.6667     17.04  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  24.333)
 120.417    453.7269      8.73  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  24.417)
 120.500    453.7581      4.53  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  24.500)
 120.583    453.7749      2.44  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  24.583)
 120.667    453.7856      1.55  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  24.667)
 120.750    453.7936      1.16  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  24.750)
 120.833    453.7993      0.83  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  24.833)
 120.917    453.8034      0.60  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  24.917)
 121.000    453.8066      0.47  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  25.000)
 121.083    453.8093      0.39  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  25.083)
 121.167    453.8117      0.35  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  25.167)
 121.250    453.8139      0.32  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  25.250)
 121.333    453.8159      0.28  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  25.333)
 121.417    453.8176      0.25  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  25.417)
 121.500    453.8192      0.23  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  25.500)
 121.583    453.8205      0.20  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  25.583)
 121.667    453.8217      0.17  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  25.667)
 121.750    453.8228      0.15  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  25.750)
 121.833    453.8237      0.13  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  25.833)
 121.917    453.8244      0.11  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  25.917)
 122.000    453.8251      0.09  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  26.000)
 122.083    453.8256      0.08  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  26.083)
 122.167    453.8261      0.07  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  26.167)
 122.250    453.8265      0.06  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  26.250)
 122.333    453.8268      0.05  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  26.333)
 122.417    453.8271      0.04  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  26.417)
 122.500    453.8274      0.04  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  26.500)
 122.583    453.8277      0.04  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  26.583)
 122.667    453.8279      0.03  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  26.667)
 122.750    453.8281      0.03  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  26.750)
 122.833    453.8283      0.03  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  26.833)
 122.917    453.8285      0.02  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  26.917)
 123.000    453.8286      0.02  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  27.000)
 123.083    453.8288      0.02  Q          .          .          .           V
 (PEAK DAY 1, HOUR  27.083)
 123.167    453.8289      0.02  Q          .          .          .           V
 (PEAK DAY 1, HOUR  27.167)
 123.250    453.8290      0.01  Q          .          .          .           V
 (PEAK DAY 1, HOUR  27.250)
 123.333    453.8290      0.01  Q          .          .          .           V
 (PEAK DAY 1, HOUR  27.333)
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6371.00 TO NODE   6371.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================

        *** Note: This link/process output is based on its ***
```

```
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  6961.5 Ac. ***
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6371.00 TO NODE   6371.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  6961.5 Ac. ***

           STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
       (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.     1150.0    2300.0    3450.0    4600.0
--------------------------------------------------------------------------------
  96.000    735.6683    328.03  . Q      V.          .         .         .
 (PEAK DAY 2, HOUR  24.000)
  96.083    737.9222    327.26  . Q      V.          .         .         .
 (PEAK DAY 1, HOUR   0.083)
  96.167    740.1942    329.90  . Q      V.          .         .         .
 (PEAK DAY 1, HOUR   0.167)
  96.250    742.5139    336.82  . Q      V.          .         .         .
 (PEAK DAY 1, HOUR   0.250)
  96.333    744.9049    347.18  .  Q     V.          .         .         .
 (PEAK DAY 1, HOUR   0.333)
  96.417    747.3643    357.10  .  Q     V.          .         .         .
 (PEAK DAY 1, HOUR   0.417)
  96.500    749.8882    366.48  .  Q     V.          .         .         .
 (PEAK DAY 1, HOUR   0.500)
  96.583    752.4734    375.36  .  Q     V.          .         .         .
 (PEAK DAY 1, HOUR   0.583)
  96.667    755.1055    382.19  .  Q     V.          .         .         .
 (PEAK DAY 1, HOUR   0.667)
  96.750    757.7681    386.60  .  Q     V.          .         .         .
 (PEAK DAY 1, HOUR   0.750)
  96.833    760.4495    389.34  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   0.833)
  96.917    763.1423    391.00  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   0.917)
  97.000    765.8419    391.98  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   1.000)
  97.083    768.5457    392.59  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   1.083)
  97.167    771.2527    393.06  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   1.167)
  97.250    773.9625    393.46  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   1.250)
  97.333    776.6746    393.80  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   1.333)
  97.417    779.3885    394.06  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   1.417)
  97.500    782.1039    394.27  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   1.500)
  97.583    784.8205    394.45  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   1.583)
  97.667    787.5383    394.63  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   1.667)
  97.750    790.2574    394.81  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   1.750)
  97.833    792.9778    395.00  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   1.833)
  97.917    795.6995    395.19  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   1.917)
  98.000    798.4223    395.35  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   2.000)
  98.083    801.1459    395.47  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   2.083)
  98.167    803.8701    395.54  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   2.167)
  98.250    806.5946    395.61  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   2.250)
  98.333    809.3196    395.67  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   2.333)
  98.417    812.0450    395.73  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   2.417)
  98.500    814.7709    395.80  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   2.500)
  98.583    817.4973    395.88  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   2.583)
  98.667    820.2244    395.97  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   2.667)
  98.750    822.9520    396.06  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   2.750)
  98.833    825.6804    396.15  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   2.833)
  98.917    828.4094    396.26  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   2.917)
  99.000    831.1393    396.37  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   3.000)
  99.083    833.8699    396.49  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   3.083)
  99.167    836.6015    396.62  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   3.167)
  99.250    839.3340    396.77  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   3.250)
  99.333    842.0677    396.92  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   3.333)
  99.417    844.8025    397.10  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   3.417)
  99.500    847.5386    397.29  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   3.500)
  99.583    850.2762    397.49  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   3.583)
  99.667    853.0153    397.72  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   3.667)
  99.750    855.7560    397.96  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   3.750)
  99.833    858.4985    398.21  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   3.833)
  99.917    861.2429    398.49  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   3.917)
 100.000    863.9893    398.77  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   4.000)
 100.083    866.7377    399.08  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   4.083)
 100.167    869.4884    399.40  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   4.167)
 100.250    872.2413    399.73  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   4.250)
 100.333    874.9967    400.08  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   4.333)
 100.417    877.7546    400.45  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   4.417)
 100.500    880.5153    400.84  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   4.500)
 100.583    883.2786    401.23  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   4.583)
 100.667    886.0447    401.65  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   4.667)
 100.750    888.8138    402.08  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   4.750)
```

100.833	891.5861	402.52	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	4.833)								
100.917	894.3615	402.99	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	4.917)								
101.000	897.1401	403.47	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	5.000)								
101.083	899.9223	403.97	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	5.083)								
101.167	902.7080	404.48	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	5.167)								
101.250	905.4974	405.02	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	5.250)								
101.333	908.2906	405.57	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	5.333)								
101.417	911.0877	406.14	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.417)								
101.500	913.8889	406.73	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.500)								
101.583	916.6942	407.34	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.583)								
101.667	919.5039	407.96	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.667)								
101.750	922.3180	408.61	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.750)								
101.833	925.1367	409.28	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.833)								
101.917	927.9601	409.96	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.917)								
102.000	930.7885	410.67	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.000)								
102.083	933.6217	411.39	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.083)								
102.167	936.4601	412.14	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.167)								
102.250	939.3038	412.90	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.250)								
102.333	942.1530	413.69	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.333)								
102.417	945.0076	414.50	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.417)								
102.500	947.8680	415.33	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.500)								
102.583	950.7343	416.18	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.583)								
102.667	953.6066	417.06	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.667)								
102.750	956.4850	417.95	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.750)								
102.833	959.3698	418.87	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.833)								
102.917	962.2610	419.81	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.917)								
103.000	965.1589	420.77	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.000)								
103.083	968.0636	421.76	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.083)								
103.167	970.9753	422.77	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.167)								
103.250	973.8940	423.80	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.250)								
103.333	976.8201	424.87	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.333)								
103.417	979.7537	425.95	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.417)								
103.500	982.6949	427.06	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.500)								
103.583	985.6439	428.20	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.583)								
103.667	988.6009	429.36	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.667)								
103.750	991.5661	430.55	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.750)								
103.833	994.5397	431.77	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.833)								
103.917	997.5218	433.01	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.917)								
104.000	1000.5127	434.28	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.000)								
104.083	1003.5126	435.58	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.083)								
104.167	1006.5216	436.91	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.167)								
104.250	1009.5400	438.27	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.250)								
104.333	1012.5679	439.66	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.333)								
104.417	1015.6057	441.08	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.417)								
104.500	1018.6534	442.53	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.500)								
104.583	1021.7113	444.01	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.583)								
104.667	1024.7797	445.53	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.667)								
104.750	1027.8588	447.08	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.750)								
104.833	1030.9487	448.67	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.833)								
104.917	1034.0499	450.29	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.917)								
105.000	1037.1625	451.95	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.000)								
105.083	1040.2866	453.63	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.083)								
105.167	1043.4227	455.37	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.167)								
105.250	1046.5710	457.13	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.250)								
105.333	1049.7318	458.94	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.333)								
105.417	1052.9053	460.79	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.417)								
105.500	1056.0918	462.68	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.500)								
105.583	1059.2915	464.60	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.583)								
105.667	1062.5049	466.58	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.667)								
105.750	1065.7322	468.60	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.750)								
105.833	1068.9736	470.66	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.833)								
105.917	1072.2294	472.73	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.917)								
106.000	1075.4994	474.80	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	10.000)								
106.083	1078.7836	476.86	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	10.083)								
106.167	1082.0820	478.93	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	10.167)								
106.250	1085.3949	481.03	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	10.250)								
106.333	1088.7225	483.18	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	10.333)								
106.417	1092.0652	485.36	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	10.417)								

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 106.500   1095.4233    487.61  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.500)
 106.583   1098.7972    489.89  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.583)
 106.667   1102.1874    492.25  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.667)
 106.750   1105.5940    494.65  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.750)
 106.833   1109.0177    497.12  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.833)
 106.917   1112.4587    499.64  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.917)
 107.000   1115.9177    502.24  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  11.000)
 107.083   1119.3949    504.89  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  11.083)
 107.167   1122.8909    507.62  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  11.167)
 107.250   1126.4061    510.41  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  11.250)
 107.333   1129.9412    513.28  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  11.333)
 107.417   1133.4965    516.22  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  11.417)
 107.500   1137.0726    519.25  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  11.500)
 107.583   1140.6700    522.35  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.583)
 107.667   1144.2896    525.55  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.667)
 107.750   1147.9316    528.83  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.750)
 107.833   1151.5970    532.21  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.833)
 107.917   1155.2863    535.68  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.917)
 108.000   1159.0001    539.26  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  12.000)
 108.083   1162.7483    544.24  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  12.083)
 108.167   1166.5695    554.84  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  12.167)
 108.250   1170.5099    572.15  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  12.250)
 108.333   1174.6024    594.23  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  12.333)
 108.417   1178.8322    614.16  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  12.417)
 108.500   1183.1818    631.57  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  12.500)
 108.583   1187.6412    647.51  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  12.583)
 108.667   1192.1952    661.24  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  12.667)
 108.750   1196.8286    672.77  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  12.750)
 108.833   1201.5333    683.12  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  12.833)
 108.917   1206.3038    692.67  .     Q   .    V    .         .         .
(PEAK DAY 1, HOUR  12.917)
 109.000   1211.1378    701.90  .     Q   .    V    .         .         .
(PEAK DAY 1, HOUR  13.000)
 109.083   1216.0345    711.00  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  13.083)
 109.167   1220.9954    720.30  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  13.167)
 109.250   1226.0214    729.78  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  13.250)
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 109.333   1231.1145    739.52  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  13.333)
 109.417   1236.2758    749.41  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  13.417)
 109.500   1241.5072    759.61  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  13.500)
 109.583   1246.8107    770.06  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  13.583)
 109.667   1252.1893    780.98  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  13.667)
 109.750   1257.6456    792.26  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  13.750)
 109.833   1263.1836    804.12  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  13.833)
 109.917   1268.8064    816.43  .      Q  .     V   .         .         .
(PEAK DAY 1, HOUR  13.917)
 110.000   1274.5187    829.43  .      Q  .     V   .         .         .
(PEAK DAY 1, HOUR  14.000)
 110.083   1280.3280    843.51  .      Q  .     V   .         .         .
(PEAK DAY 1, HOUR  14.083)
 110.167   1286.2550    860.61  .      Q  .     V   .         .         .
(PEAK DAY 1, HOUR  14.167)
 110.250   1292.3221    880.95  .      Q  .      V  .         .         .
(PEAK DAY 1, HOUR  14.250)
 110.333   1298.5469    903.83  .      Q  .      V  .         .         .
(PEAK DAY 1, HOUR  14.333)
 110.417   1304.9248    926.08  .       Q .      V  .         .         .
(PEAK DAY 1, HOUR  14.417)
 110.500   1311.4521    947.78  .       Q .      V  .         .         .
(PEAK DAY 1, HOUR  14.500)
 110.583   1318.1289    969.47  .       Q .      V  .         .         .
(PEAK DAY 1, HOUR  14.583)
 110.667   1324.9597    991.84  .       Q .      V  .         .         .
(PEAK DAY 1, HOUR  14.667)
 110.750   1331.9517   1015.23  .       Q .      V  .         .         .
(PEAK DAY 1, HOUR  14.750)
 110.833   1339.1196   1040.79  .        Q.      V  .         .         .
(PEAK DAY 1, HOUR  14.833)
 110.917   1346.4780   1068.45  .        Q.      V  .         .         .
(PEAK DAY 1, HOUR  14.917)
 111.000   1354.0468   1098.98  .        Q.      V  .         .         .
(PEAK DAY 1, HOUR  15.000)
 111.083   1361.8451   1132.31  .        Q.      V  .         .         .
(PEAK DAY 1, HOUR  15.083)
 111.167   1369.9000   1169.58  .         Q      V  .         .         .
(PEAK DAY 1, HOUR  15.167)
 111.250   1378.2396   1210.92  .         Q      V  .         .         .
(PEAK DAY 1, HOUR  15.250)
 111.333   1386.9027   1257.88  .         Q      V  .         .         .
(PEAK DAY 1, HOUR  15.333)
 111.417   1395.9080   1307.57  .         .Q     V  .         .         .
(PEAK DAY 1, HOUR  15.417)
 111.500   1405.2205   1352.18  .         .Q     V  .         .         .
(PEAK DAY 1, HOUR  15.500)
 111.583   1414.7886   1389.30  .         . Q    V  .         .         .
(PEAK DAY 1, HOUR  15.583)
 111.667   1424.6145   1426.72  .         . Q    V  .         .         .
(PEAK DAY 1, HOUR  15.667)
 111.750   1434.8292   1483.18  .         . Q    V  .         .         .
(PEAK DAY 1, HOUR  15.750)
 111.833   1445.6390   1569.59  .         .  Q    V.         .         .
(PEAK DAY 1, HOUR  15.833)
 111.917   1457.3267   1697.05  .         .   Q   V.         .         .
(PEAK DAY 1, HOUR  15.917)
 112.000   1470.4601   1906.97  .         .    Q  V.         .         .
(PEAK DAY 1, HOUR  16.000)
 112.083   1486.4692   2324.53  .         .       VQ         .         .
(PEAK DAY 1, HOUR  16.083)
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 112.167   1508.0259   3130.02  .          .        V.      Q  .          .
(PEAK DAY 1, HOUR  16.167)
 112.250   1535.3987   3974.52  .          .        V          .   Q      .
(PEAK DAY 1, HOUR  16.250)
 112.333   1566.5618   4524.87  .          .        V          .        Q.
(PEAK DAY 1, HOUR  16.333)
 112.417   1596.9734   4415.77  .          .        .V         .      Q .
(PEAK DAY 1, HOUR  16.417)
 112.500   1625.8770   4196.80  .          .        .V         .    Q   .
(PEAK DAY 1, HOUR  16.500)
 112.583   1652.8608   3918.06  .          .        .V         .   Q      .
(PEAK DAY 1, HOUR  16.583)
 112.667   1676.2968   3402.89  .          .        . V      Q.          .
(PEAK DAY 1, HOUR  16.667)
 112.750   1695.8585   2840.37  .          .        . V Q      .          .
(PEAK DAY 1, HOUR  16.750)
 112.833   1712.3983   2401.58  .          .        Q V        .          .
(PEAK DAY 1, HOUR  16.833)
 112.917   1726.7034   2077.10  .          .      Q . V        .          .
(PEAK DAY 1, HOUR  16.917)
 113.000   1739.3438   1835.38  .          .    Q     . V      .          .
(PEAK DAY 1, HOUR  17.000)
 113.083   1750.7847   1661.22  .          .   Q      .  V     .          .
(PEAK DAY 1, HOUR  17.083)
 113.167   1761.3547   1534.77  .          .  Q       .  V     .          .
(PEAK DAY 1, HOUR  17.167)
 113.250   1771.2345   1434.55  .          . Q        .  V     .          .
(PEAK DAY 1, HOUR  17.250)
 113.333   1780.5006   1345.43  .          .Q         .  V     .          .
(PEAK DAY 1, HOUR  17.333)
 113.417   1789.2406   1269.05  .          .Q         .  V     .          .
(PEAK DAY 1, HOUR  17.417)
 113.500   1797.5564   1207.45  .          Q          .  V     .          .
(PEAK DAY 1, HOUR  17.500)
 113.583   1805.5370   1158.79  .          Q          .  V     .          .
(PEAK DAY 1, HOUR  17.583)
 113.667   1813.2532   1120.38  .        Q.           .  V     .          .
(PEAK DAY 1, HOUR  17.667)
 113.750   1820.7559   1089.38  .        Q.           .   V    .          .
(PEAK DAY 1, HOUR  17.750)
 113.833   1828.0757   1062.84  .        Q.           .   V    .          .
(PEAK DAY 1, HOUR  17.833)
 113.917   1835.2349   1039.52  .        Q.           .   V    .          .
(PEAK DAY 1, HOUR  17.917)
 114.000   1842.2479   1018.29  .       Q .           .   V    .          .
(PEAK DAY 1, HOUR  18.000)
 114.083   1849.1133    996.85  .       Q .           .   V    .          .
(PEAK DAY 1, HOUR  18.083)
 114.167   1855.8058    971.75  .       Q .           .   V    .          .
(PEAK DAY 1, HOUR  18.167)
 114.250   1862.2948    942.21  .       Q .           .   V    .          .
(PEAK DAY 1, HOUR  18.250)
 114.333   1868.5598    909.67  .      Q  .           .   V    .          .
(PEAK DAY 1, HOUR  18.333)
 114.417   1874.6256    880.76  .      Q  .           .   V    .          .
(PEAK DAY 1, HOUR  18.417)
 114.500   1880.5284    857.10  .      Q  .           .   V    .          .
(PEAK DAY 1, HOUR  18.500)
 114.583   1886.2891    836.45  .      Q  .           .   V    .          .
(PEAK DAY 1, HOUR  18.583)
 114.667   1891.9244    818.26  .      Q  .           .   V    .          .
(PEAK DAY 1, HOUR  18.667)
 114.750   1897.4524    802.65  .     Q   .           .    V   .          .
(PEAK DAY 1, HOUR  18.750)
 114.833   1902.8914    789.74  .     Q   .           .    V   .          .
(PEAK DAY 1, HOUR  18.833)
 114.917   1908.2571    779.11  .     Q   .           .    V   .          .
(PEAK DAY 1, HOUR  18.917)
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 115.000   1913.5571    769.57  .     Q   .           .    V   .          .
(PEAK DAY 1, HOUR  19.000)
 115.083   1918.7957    760.63  .     Q   .           .    V   .          .
(PEAK DAY 1, HOUR  19.083)
 115.167   1923.9805    752.84  .     Q   .           .    V   .          .
(PEAK DAY 1, HOUR  19.167)
 115.250   1929.1196    746.21  .     Q   .           .    V   .          .
(PEAK DAY 1, HOUR  19.250)
 115.333   1934.2177    740.23  .     Q   .           .    V   .          .
(PEAK DAY 1, HOUR  19.333)
 115.417   1939.2784    734.83  .     Q   .           .    V   .          .
(PEAK DAY 1, HOUR  19.417)
 115.500   1944.3055    729.94  .     Q   .           .    V   .          .
(PEAK DAY 1, HOUR  19.500)
 115.583   1949.3010    725.35  .     Q   .           .    V   .          .
(PEAK DAY 1, HOUR  19.583)
 115.667   1954.2651    720.79  .     Q   .           .    V   .          .
(PEAK DAY 1, HOUR  19.667)
 115.750   1959.1998    716.51  .     Q   .           .    V   .          .
(PEAK DAY 1, HOUR  19.750)
 115.833   1964.1066    712.45  .     Q   .           .    V   .          .
(PEAK DAY 1, HOUR  19.833)
 115.917   1968.9847    708.31  .     Q   .           .    V   .          .
(PEAK DAY 1, HOUR  19.917)
 116.000   1973.8334    704.02  .     Q   .           .     V  .          .
(PEAK DAY 1, HOUR  20.000)
 116.083   1978.6533    699.86  .     Q   .           .     V  .          .
(PEAK DAY 1, HOUR  20.083)
 116.167   1983.4474    696.09  .     Q   .           .     V  .          .
(PEAK DAY 1, HOUR  20.167)
 116.250   1988.2177    692.64  .     Q   .           .     V  .          .
(PEAK DAY 1, HOUR  20.250)
 116.333   1992.9653    689.37  .    Q    .           .     V  .          .
(PEAK DAY 1, HOUR  20.333)
 116.417   1997.6909    686.16  .    Q    .           .     V  .          .
(PEAK DAY 1, HOUR  20.417)
 116.500   2002.3926    682.68  .    Q    .           .     V  .          .
(PEAK DAY 1, HOUR  20.500)
 116.583   2007.0701    679.17  .    Q    .           .     V  .          .
(PEAK DAY 1, HOUR  20.583)
 116.667   2011.7261    676.05  .    Q    .           .     V  .          .
(PEAK DAY 1, HOUR  20.667)
 116.750   2016.3629    673.27  .    Q    .           .     V  .          .
(PEAK DAY 1, HOUR  20.750)
 116.833   2020.9821    670.69  .    Q    .           .     V  .          .
(PEAK DAY 1, HOUR  20.833)
 116.917   2025.5842    668.24  .    Q    .           .     V  .          .
(PEAK DAY 1, HOUR  20.917)
 117.000   2030.1700    665.86  .    Q    .           .     V  .          .
(PEAK DAY 1, HOUR  21.000)
 117.083   2034.7396    663.50  .    Q    .           .     V  .          .
(PEAK DAY 1, HOUR  21.083)
 117.167   2039.2937    661.26  .    Q    .           .     V  .          .
(PEAK DAY 1, HOUR  21.167)
 117.250   2043.8333    659.14  .    Q    .           .     V  .          .
(PEAK DAY 1, HOUR  21.250)
 117.333   2048.3586    657.10  .    Q    .           .      V .          .
(PEAK DAY 1, HOUR  21.333)
 117.417   2052.8704    655.11  .    Q    .           .      V .          .
(PEAK DAY 1, HOUR  21.417)
 117.500   2057.3689    653.18  .    Q    .           .      V .          .
(PEAK DAY 1, HOUR  21.500)
 117.583   2061.8545    651.30  .    Q    .           .      V .          .
(PEAK DAY 1, HOUR  21.583)
 117.667   2066.3274    649.47  .    Q    .           .      V .          .
(PEAK DAY 1, HOUR  21.667)
 117.750   2070.7881    647.68  .    Q    .           .      V .          .
(PEAK DAY 1, HOUR  21.750)
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117.833   2075.2366    645.93  .    Q    .         .         V  .         .
(PEAK DAY 1, HOUR  21.833)
117.917   2079.6733    644.22  .    Q    .         .         V  .         .
(PEAK DAY 1, HOUR  21.917)
118.000   2084.0986    642.55  .    Q    .         .         V  .         .
(PEAK DAY 1, HOUR  22.000)
118.083   2088.5127    640.93  .    Q    .         .         V  .         .
(PEAK DAY 1, HOUR  22.083)
118.167   2092.9158    639.33  .    Q    .         .         V  .         .
(PEAK DAY 1, HOUR  22.167)
118.250   2097.3081    637.77  .    Q    .         .         V  .         .
(PEAK DAY 1, HOUR  22.250)
118.333   2101.6899    636.24  .    Q    .         .         V  .         .
(PEAK DAY 1, HOUR  22.333)
118.417   2106.0615    634.74  .    Q    .         .         V  .         .
(PEAK DAY 1, HOUR  22.417)
118.500   2110.4229    633.27  .    Q    .         .         V  .         .
(PEAK DAY 1, HOUR  22.500)
118.583   2114.7742    631.83  .    Q    .         .         V  .         .
(PEAK DAY 1, HOUR  22.583)
118.667   2119.1160    630.41  .    Q    .         .         V  .         .
(PEAK DAY 1, HOUR  22.667)
118.750   2123.4480    629.03  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  22.750)
118.833   2127.7708    627.66  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  22.833)
118.917   2132.0842    626.33  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  22.917)
119.000   2136.3887    625.01  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  23.000)
119.083   2140.6843    623.71  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  23.083)
119.167   2144.9712    622.44  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  23.167)
119.250   2149.2493    621.19  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  23.250)
119.333   2153.5188    619.95  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  23.333)
119.417   2157.7800    618.74  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  23.417)
119.500   2162.0330    617.54  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  23.500)
119.583   2166.2778    616.36  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  23.583)
119.667   2170.5146    615.20  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  23.667)
119.750   2174.7437    614.05  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  23.750)
119.833   2178.9648    612.92  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  23.833)
119.917   2183.1785    611.80  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  23.917)
120.000   2187.3845    610.70  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  24.000)
120.083   2191.5759    608.60  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  24.083)
120.167   2195.7229    602.15  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  24.167)
120.250   2199.7878    590.22  .    Q    .         .           V.         .
(PEAK DAY 1, HOUR  24.250)
120.333   2203.7405    573.92  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  24.333)
120.417   2207.5852    558.26  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  24.417)
120.500   2211.3274    543.38  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  24.500)
120.583   2214.9727    529.28  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  24.583)
120.667   2218.5410    518.12  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  24.667)
120.750   2222.0562    510.39  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  24.750)
120.833   2225.5347    505.07  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  24.833)
120.917   2228.9875    501.37  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  24.917)
121.000   2232.4226    498.76  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  25.000)
121.083   2235.8442    496.81  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  25.083)
121.167   2239.2546    495.19  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  25.167)
121.250   2242.6550    493.75  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  25.250)
121.333   2246.0469    492.49  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  25.333)
121.417   2249.4312    491.39  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  25.417)
121.500   2252.8088    490.43  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  25.500)
121.583   2256.1804    489.56  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  25.583)
121.667   2259.5466    488.76  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  25.667)
121.750   2262.9075    488.00  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  25.750)
121.833   2266.2632    487.26  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  25.833)
121.917   2269.6140    486.55  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  25.917)
122.000   2272.9602    485.85  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  26.000)
122.083   2276.3018    485.18  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  26.083)
122.167   2279.6387    484.52  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  26.167)
122.250   2282.9712    483.89  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  26.250)
122.333   2286.2996    483.26  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  26.333)
122.417   2289.6238    482.67  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  26.417)
122.500   2292.9438    482.09  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  26.500)
122.583   2296.2600    481.52  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  26.583)
122.667   2299.5725    480.96  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  26.667)
122.750   2302.8813    480.43  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  26.750)
122.833   2306.1865    479.92  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  26.833)
122.917   2309.4883    479.42  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  26.917)
123.000   2312.7866    478.93  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  27.000)
123.083   2316.0818    478.45  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  27.083)
123.167   2319.3738    477.99  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  27.167)
123.250   2322.6626    477.53  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  27.250)
123.333   2325.9482    477.08  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  27.333)
123.417   2329.2307    476.63  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  27.417)
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 123.500   2332.5103    476.18  .   Q     .         .         V         .
 (PEAK DAY 1, HOUR  27.500)
 123.583   2335.7866    475.73  .   Q     .         .         V         .
 (PEAK DAY 1, HOUR  27.583)
 123.667   2339.0598    475.28  .   Q     .         .         V         .
 (PEAK DAY 1, HOUR  27.667)
 123.750   2342.3301    474.84  .   Q     .         .         V         .
 (PEAK DAY 1, HOUR  27.750)
 123.833   2345.5972    474.39  .   Q     .         .         V         .
 (PEAK DAY 1, HOUR  27.833)
 123.917   2348.8613    473.95  .   Q     .         .         V         .
 (PEAK DAY 1, HOUR  27.917)
 124.000   2352.1223    473.51  .   Q     .         .         .V        .
 (PEAK DAY 1, HOUR  28.000)
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6371.00 TO NODE   6395.00 IS CODE = 5.2
--------------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  6961.5 Ac. ***

         THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
         TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
         INTERVALS(Reference: the National Engineering Handbook,
         Hydrology, Chapter 17, page 17-52, August,1972,
         U.S. Department of Commerce).


         ASSUMED REGULAR CHANNEL INFORMATION:
           BASEWIDTH(FT) =   35.00     CHANNEL Z =  1.00
           UPSTREAM ELEVATION(FT) =     220.00
           DOWNSTREAM ELEVATION(FT) =     213.00
           CHANNEL LENGTH(FT) =     959.00     MANNING'S FACTOR = 0.040
           CONSTANT LOSS RATE(CFS) =    0.00


         CHANNEL ROUTING COEFFICIENT ESTIMATED:
           MAXIMUM INFLOW(CFS) =  4524.87
           AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  3512.94
           CHANNEL NORMAL VELOCITY FOR Q =  3512.94 CFS =  10.37 FPS
           ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.859

         MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
         UNIT INTERVALS IS CSTAR = 0.996


         CONVEX METHOD CHANNEL ROUTING RESULTS:
                                                 OUTFLOW LESS
                CLOCK        INFLOW     ROUTED      LOSS
PEAK    TIME    TIME       (STREAM 1)    FLOW     (STREAM 1)
 DAY   (HRS)   (HRS)         (CFS)       (CFS)      (CFS)
  2   24.000  96.000       328.03      328.45      328.45
  1    0.083  96.083       327.26      327.47      327.47
  1    0.167  96.167       329.90      329.19      329.19
  1    0.250  96.250       336.82      334.96      334.96
  1    0.333  96.333       347.18      344.40      344.40
  1    0.417  96.417       357.10      354.44      354.44
  1    0.500  96.500       366.48      363.96      363.96
  1    0.583  96.583       375.36      372.98      372.98
  1    0.667  96.667       382.19      380.35      380.35
  1    0.750  96.750       386.60      385.41      385.41
  1    0.833  96.833       389.34      388.60      388.60
  1    0.917  96.917       391.00      390.55      390.55
  1    1.000  97.000       391.98      391.72      391.72
  1    1.083  97.083       392.59      392.43      392.43
  1    1.167  97.167       393.06      392.93      392.93
  1    1.250  97.250       393.46      393.35      393.35
  1    1.333  97.333       393.80      393.71      393.71
  1    1.417  97.417       394.06      393.99      393.99
  1    1.500  97.500       394.27      394.21      394.21
  1    1.583  97.583       394.45      394.40      394.40
  1    1.667  97.667       394.63      394.58      394.58
  1    1.750  97.750       394.81      394.76      394.76
  1    1.833  97.833       395.00      394.95      394.95
  1    1.917  97.917       395.19      395.14      395.14
  1    2.000  98.000       395.35      395.31      395.31
  1    2.083  98.083       395.47      395.44      395.44
  1    2.167  98.167       395.54      395.52      395.52
  1    2.250  98.250       395.61      395.59      395.59
  1    2.333  98.333       395.67      395.65      395.65
  1    2.417  98.417       395.73      395.71      395.71
  1    2.500  98.500       395.80      395.78      395.78
  1    2.583  98.583       395.88      395.86      395.86
  1    2.667  98.667       395.97      395.94      395.94
  1    2.750  98.750       396.06      396.03      396.03
  1    2.833  98.833       396.15      396.13      396.13
  1    2.917  98.917       396.26      396.23      396.23
  1    3.000  99.000       396.37      396.34      396.34
  1    3.083  99.083       396.49      396.46      396.46
  1    3.167  99.167       396.62      396.59      396.59
  1    3.250  99.250       396.77      396.73      396.73
  1    3.333  99.333       396.92      396.88      396.88
  1    3.417  99.417       397.10      397.05      397.05
  1    3.500  99.500       397.29      397.24      397.24
  1    3.583  99.583       397.49      397.44      397.44
  1    3.667  99.667       397.72      397.66      397.66
  1    3.750  99.750       397.96      397.89      397.89
  1    3.833  99.833       398.21      398.14      398.14
  1    3.917  99.917       398.49      398.41      398.41
  1    4.000 100.000       398.77      398.70      398.70
  1    4.083 100.083       399.08      398.99      398.99
  1    4.167 100.167       399.40      399.31      399.31
  1    4.250 100.250       399.73      399.64      399.64
  1    4.333 100.333       400.08      399.99      399.99
  1    4.417 100.417       400.45      400.35      400.35
  1    4.500 100.500       400.84      400.73      400.73
  1    4.583 100.583       401.23      401.13      401.13
  1    4.667 100.667       401.65      401.54      401.54
  1    4.750 100.750       402.08      401.96      401.96
  1    4.833 100.833       402.52      402.40      402.40
  1    4.917 100.917       402.99      402.86      402.86
  1    5.000 101.000       403.47      403.34      403.34
  1    5.083 101.083       403.97      403.83      403.83
  1    5.167 101.167       404.48      404.35      404.35
  1    5.250 101.250       405.02      404.87      404.87
  1    5.333 101.333       405.57      405.42      405.42
  1    5.417 101.417       406.14      405.99      405.99
  1    5.500 101.500       406.73      406.57      406.57
  1    5.583 101.583       407.34      407.17      407.17
  1    5.667 101.667       407.96      407.80      407.80
  1    5.750 101.750       408.61      408.44      408.44
  1    5.833 101.833       409.28      409.10      409.10
  1    5.917 101.917       409.96      409.78      409.78
  1    6.000 102.000       410.67      410.48      410.48
  1    6.083 102.083       411.39      411.20      411.20
  1    6.167 102.167       412.14      411.94      411.94
  1    6.250 102.250       412.90      412.70      412.70
  1    6.333 102.333       413.69      413.48      413.48
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1	6.417	102.417	414.50	414.28	414.28
1	6.500	102.500	415.33	415.11	415.11
1	6.583	102.583	416.18	415.95	415.95
1	6.667	102.667	417.06	416.82	416.82
1	6.750	102.750	417.95	417.71	417.71
1	6.833	102.833	418.87	418.62	418.62
1	6.917	102.917	419.81	419.56	419.56
1	7.000	103.000	420.77	420.51	420.51
1	7.083	103.083	421.76	421.49	421.49
1	7.167	103.167	422.77	422.50	422.50
1	7.250	103.250	423.80	423.53	423.53
1	7.333	103.333	424.87	424.58	424.58
1	7.417	103.417	425.95	425.66	425.66
1	7.500	103.500	427.06	426.76	426.76
1	7.583	103.583	428.20	427.89	427.89
1	7.667	103.667	429.36	429.05	429.05
1	7.750	103.750	430.55	430.23	430.23
1	7.833	103.833	431.77	431.44	431.44
1	7.917	103.917	433.01	432.67	432.67
1	8.000	104.000	434.28	433.94	433.94
1	8.083	104.083	435.58	435.23	435.23
1	8.167	104.167	436.91	436.55	436.55
1	8.250	104.250	438.27	437.90	437.90
1	8.333	104.333	439.66	439.29	439.29
1	8.417	104.417	441.08	440.70	440.70
1	8.500	104.500	442.53	442.14	442.14
1	8.583	104.583	444.01	443.62	443.62
1	8.667	104.667	445.53	445.13	445.13
1	8.750	104.750	447.08	446.67	446.67
1	8.833	104.833	448.67	448.24	448.24
1	8.917	104.917	450.29	449.85	449.85
1	9.000	105.000	451.95	451.50	451.50
1	9.083	105.083	453.63	453.18	453.18
1	9.167	105.167	455.37	454.90	454.90
1	9.250	105.250	457.13	456.66	456.66
1	9.333	105.333	458.94	458.46	458.46
1	9.417	105.417	460.79	460.29	460.29
1	9.500	105.500	462.68	462.17	462.17
1	9.583	105.583	464.60	464.09	464.09
1	9.667	105.667	466.58	466.05	466.05
1	9.750	105.750	468.60	468.06	468.06
1	9.833	105.833	470.66	470.10	470.10
1	9.917	105.917	472.73	472.17	472.17
1	10.000	106.000	474.80	474.24	474.24
1	10.083	106.083	476.86	476.31	476.31
1	10.167	106.167	478.93	478.38	478.38
1	10.250	106.250	481.03	480.47	480.47
1	10.333	106.333	483.18	482.60	482.60
1	10.417	106.417	485.36	484.77	484.77
1	10.500	106.500	487.61	487.00	487.00
1	10.583	106.583	489.89	489.28	489.28
1	10.667	106.667	492.25	491.62	491.62
1	10.750	106.750	494.65	494.00	494.00
1	10.833	106.833	497.12	496.46	496.46
1	10.917	106.917	499.64	498.96	498.96
1	11.000	107.000	502.24	501.54	501.54
1	11.083	107.083	504.89	504.18	504.18
1	11.167	107.167	507.62	506.88	506.88
1	11.250	107.250	510.41	509.66	509.66
1	11.333	107.333	513.28	512.51	512.51
1	11.417	107.417	516.22	515.43	515.43
1	11.500	107.500	519.25	518.44	518.44
1	11.583	107.583	522.35	521.52	521.52
1	11.667	107.667	525.55	524.69	524.69
1	11.750	107.750	528.83	527.95	527.95
1	11.833	107.833	532.21	531.30	531.30
1	11.917	107.917	535.68	534.75	534.75
1	12.000	108.000	539.26	538.30	538.30

1	12.083	108.083	544.24	542.90	542.90
1	12.167	108.167	554.84	552.00	552.00
1	12.250	108.250	572.15	567.51	567.51
1	12.333	108.333	594.23	588.30	588.30
1	12.417	108.417	614.16	608.80	608.80
1	12.500	108.500	631.57	626.89	626.89
1	12.583	108.583	647.51	643.23	643.23
1	12.667	108.667	661.24	657.55	657.55
1	12.750	108.750	672.77	669.67	669.67
1	12.833	108.833	683.12	680.34	680.34
1	12.917	108.917	692.67	690.10	690.10
1	13.000	109.000	701.90	699.42	699.42
1	13.083	109.083	711.00	708.56	708.56
1	13.167	109.167	720.30	717.81	717.81
1	13.250	109.250	729.78	727.23	727.23
1	13.333	109.333	739.52	736.91	736.91
1	13.417	109.417	749.41	746.75	746.75
1	13.500	109.500	759.61	756.87	756.87
1	13.583	109.583	770.06	767.25	767.25
1	13.667	109.667	780.98	778.04	778.04
1	13.750	109.750	792.26	789.23	789.23
1	13.833	109.833	804.12	800.93	800.93
1	13.917	109.917	816.43	813.12	813.12
1	14.000	110.000	829.43	825.94	825.94
1	14.083	110.083	843.51	839.73	839.73
1	14.167	110.167	860.61	856.02	856.02
1	14.250	110.250	880.95	875.49	875.49
1	14.333	110.333	903.83	897.69	897.69
1	14.417	110.417	926.08	920.11	920.11
1	14.500	110.500	947.78	941.95	941.95
1	14.583	110.583	969.47	963.64	963.64
1	14.667	110.667	991.84	985.83	985.83
1	14.750	110.750	1015.23	1008.95	1008.95
1	14.833	110.833	1040.79	1033.92	1033.92
1	14.917	110.917	1068.45	1061.02	1061.02
1	15.000	111.000	1098.98	1090.78	1090.78
1	15.083	111.083	1132.31	1123.36	1123.36
1	15.167	111.167	1169.58	1159.57	1159.57
1	15.250	111.250	1210.92	1199.82	1199.82
1	15.333	111.333	1257.88	1245.27	1245.27
1	15.417	111.417	1307.57	1294.23	1294.23
1	15.500	111.500	1352.18	1340.19	1340.19
1	15.583	111.583	1389.30	1379.32	1379.32
1	15.667	111.667	1426.72	1416.67	1416.67
1	15.750	111.750	1483.18	1468.03	1468.03
1	15.833	111.833	1569.59	1546.41	1546.41
1	15.917	111.917	1697.05	1662.85	1662.85
1	16.000	112.000	1906.97	1850.67	1850.67
1	16.083	112.083	2324.53	2212.59	2212.59
1	16.167	112.167	3130.02	2914.07	2914.07
1	16.250	112.250	3974.52	3747.75	3747.75
1	16.333	112.333	4524.87	4376.76	4376.76
1	16.417	112.417	4415.77	4444.41	4444.41
1	16.500	112.500	4196.80	4255.50	4255.50
1	16.583	112.583	3918.06	3992.86	3992.86
1	16.667	112.667	3402.89	3541.01	3541.01
1	16.750	112.750	2840.37	2991.40	2991.40
1	16.833	112.833	2401.58	2519.56	2519.56
1	16.917	112.917	2077.10	2164.36	2164.36
1	17.000	113.000	1835.38	1900.38	1900.38
1	17.083	113.083	1661.22	1708.07	1708.07
1	17.167	113.167	1534.77	1568.78	1568.78
1	17.250	113.250	1434.55	1461.49	1461.49
1	17.333	113.333	1345.43	1369.38	1369.38
1	17.417	113.417	1269.05	1289.58	1289.58
1	17.500	113.500	1207.45	1224.01	1224.01
1	17.583	113.583	1158.79	1171.87	1171.87
1	17.667	113.667	1120.38	1130.71	1130.71

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  1   17.750 113.750      1089.38     1097.72     1097.72
  1   17.833 113.833      1062.84     1069.98     1069.98
  1   17.917 113.917      1039.52     1045.79     1045.79
  1   18.000 114.000      1018.29     1023.99     1023.99
  1   18.083 114.083       996.85     1002.61     1002.61
  1   18.167 114.167       971.75      978.49      978.49
  1   18.250 114.250       942.21      950.14      950.14
  1   18.333 114.333       909.67      918.41      918.41
  1   18.417 114.417       880.76      888.53      888.53
  1   18.500 114.500       857.10      863.46      863.46
  1   18.583 114.583       836.45      841.99      841.99
  1   18.667 114.667       818.26      823.15      823.15
  1   18.750 114.750       802.65      806.85      806.85
  1   18.833 114.833       789.74      793.21      793.21
  1   18.917 114.917       779.11      781.97      781.97
  1   19.000 115.000       769.57      772.13      772.13
  1   19.083 115.083       760.63      763.03      763.03
  1   19.167 115.167       752.84      754.93      754.93
  1   19.250 115.250       746.21      747.99      747.99
  1   19.333 115.333       740.23      741.84      741.84
  1   19.417 115.417       734.83      736.28      736.28
  1   19.500 115.500       729.94      731.25      731.25
  1   19.583 115.583       725.35      726.58      726.58
  1   19.667 115.667       720.79      722.02      722.02
  1   19.750 115.750       716.51      717.66      717.66
  1   19.833 115.833       712.45      713.54      713.54
  1   19.917 115.917       708.31      709.42      709.42
  1   20.000 116.000       704.02      705.17      705.17
  1   20.083 116.083       699.86      700.98      700.98
  1   20.167 116.167       696.09      697.11      697.11
  1   20.250 116.250       692.64      693.57      693.57
  1   20.333 116.333       689.37      690.25      690.25
  1   20.417 116.417       686.16      687.02      687.02
  1   20.500 116.500       682.68      683.62      683.62
  1   20.583 116.583       679.17      680.11      680.11
  1   20.667 116.667       676.05      676.89      676.89
  1   20.750 116.750       673.27      674.01      674.01
  1   20.833 116.833       670.69      671.38      671.38
  1   20.917 116.917       668.24      668.90      668.90
  1   21.000 117.000       665.86      666.50      666.50
  1   21.083 117.083       663.50      664.14      664.14
  1   21.167 117.167       661.26      661.86      661.86
  1   21.250 117.250       659.14      659.71      659.71
  1   21.333 117.333       657.10      657.65      657.65
  1   21.417 117.417       655.11      655.65      655.65
  1   21.500 117.500       653.18      653.70      653.70
  1   21.583 117.583       651.30      651.81      651.81
  1   21.667 117.667       649.47      649.96      649.96
  1   21.750 117.750       647.68      648.16      648.16
  1   21.833 117.833       645.93      646.40      646.40
  1   21.917 117.917       644.22      644.68      644.68
  1   22.000 118.000       642.55      643.00      643.00
  1   22.083 118.083       640.93      641.36      641.36
  1   22.167 118.167       639.33      639.76      639.76
  1   22.250 118.250       637.77      638.19      638.19
  1   22.333 118.333       636.24      636.65      636.65
  1   22.417 118.417       634.74      635.14      635.14
  1   22.500 118.500       633.27      633.66      633.66
  1   22.583 118.583       631.83      632.21      632.21
  1   22.667 118.667       630.41      630.79      630.79
  1   22.750 118.750       629.03      629.40      629.40
  1   22.833 118.833       627.66      628.03      628.03
  1   22.917 118.917       626.33      626.68      626.68
  1   23.000 119.000       625.01      625.36      625.36
  1   23.083 119.083       623.71      624.06      624.06
  1   23.167 119.167       622.44      622.78      622.78
  1   23.250 119.250       621.19      621.52      621.52
  1   23.333 119.333       619.95      620.28      620.28
  1   23.417 119.417       618.74      619.06      619.06
  1   23.500 119.500       617.54      617.86      617.86
  1   23.583 119.583       616.36      616.68      616.68
  1   23.667 119.667       615.20      615.51      615.51
  1   23.750 119.750       614.05      614.36      614.36
  1   23.833 119.833       612.92      613.22      613.22
  1   23.917 119.917       611.80      612.10      612.10
  1   24.000 120.000       610.70      611.00      611.00
  1   24.083 120.083       608.60      609.16      609.16
  1   24.167 120.167       602.15      603.88      603.88
  1   24.250 120.250       590.22      593.42      593.42
  1   24.333 120.333       573.92      578.29      578.29
  1   24.417 120.417       558.26      562.47      562.47
  1   24.500 120.500       543.38      547.38      547.38
  1   24.583 120.583       529.28      533.07      533.07
  1   24.667 120.667       518.12      521.12      521.12
  1   24.750 120.750       510.39      512.47      512.47
  1   24.833 120.833       505.07      506.50      506.50
  1   24.917 120.917       501.37      502.36      502.36
  1   25.000 121.000       498.76      499.47      499.47
  1   25.083 121.083       496.81      497.34      497.34
  1   25.167 121.167       495.19      495.62      495.62
  1   25.250 121.250       493.75      494.14      494.14
  1   25.333 121.333       492.49      492.83      492.83
  1   25.417 121.417       491.39      491.69      491.69
  1   25.500 121.500       490.43      490.69      490.69
  1   25.583 121.583       489.56      489.80      489.80
  1   25.667 121.667       488.76      488.98      488.98
  1   25.750 121.750       488.00      488.20      488.20
  1   25.833 121.833       487.26      487.46      487.46
  1   25.917 121.917       486.55      486.74      486.74
  1   26.000 122.000       485.85      486.04      486.04
  1   26.083 122.083       485.18      485.36      485.36
  1   26.167 122.167       484.52      484.70      484.70
  1   26.250 122.250       483.89      484.06      484.06
  1   26.333 122.333       483.26      483.43      483.43
  1   26.417 122.417       482.67      482.83      482.83
  1   26.500 122.500       482.09      482.24      482.24
  1   26.583 122.583       481.52      481.67      481.67
  1   26.667 122.667       480.96      481.11      481.11
  1   26.750 122.750       480.43      480.58      480.58
  1   26.833 122.833       479.92      480.06      480.06
  1   26.917 122.917       479.42      479.55      479.55
  1   27.000 123.000       478.93      479.06      479.06
  1   27.083 123.083       478.45      478.58      478.58
  1   27.167 123.167       477.99      478.11      478.11
  1   27.250 123.250       477.53      477.66      477.66
  1   27.333 123.333       477.08      477.20      477.20
  1   27.417 123.417       476.63      476.75      476.75
  1   27.500 123.500       476.18      476.30      476.30
  1   27.583 123.583       475.73      475.85      475.85
  1   27.667 123.667       475.28      475.40      475.40
  1   27.750 123.750       474.84      474.96      474.96
  1   27.833 123.833       474.39      474.51      474.51
  1   27.917 123.917       473.95      474.07      474.07
  1   28.000 124.000       473.51      473.63      473.63
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
 ============================================================================
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   3032.779 AF
    OUTFLOW VOLUME =   3032.779 AF
    LOSS    VOLUME =      0.000 AF
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 ****************************************************************************
  FLOW PROCESS FROM NODE   6380.00 TO NODE   6395.00 IS CODE =   1
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        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of   329.6 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
================================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #2)

         WATERSHED AREA =     329.600 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.330 HOURS
          CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
          THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
          MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.900
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:
         +------------------+--------+--------+--------+--------+--------+
         | RAINFALL DEPTHS & |        |        |        |        |        |
         |    LOSS RATES     |  DAY 1 |  DAY 2 |  DAY 3 |  DAY 4 |  DAY 5 |
         |==================+========+========+========+========+========|
         | 5-MINUTE (INCHES) |    0.58|    0.27|    0.12|    0.06|    0.04|
         |30-MINUTE (INCHES) |    1.22|    0.56|    0.24|    0.13|    0.09|
         |   1-HOUR (INCHES) |    1.62|    0.75|    0.33|    0.17|    0.12|
         |   3-HOUR (INCHES) |    2.71|    1.25|    0.54|    0.28|    0.21|
         |   6-HOUR (INCHES) |    3.75|    1.73|    0.75|    0.39|    0.29|
         |  24-HOUR (INCHES) |    6.28|    2.89|    1.26|    0.66|    0.48|
         |==================+========+========+========+========+========|
         | LOSS RATE(IN/HR)  |   0.150|   0.150|   0.150|   0.150|   0.150|
         | LOW LOSS FRACTION |   0.500|   0.750|   0.950|   0.990|   0.990|
         +------------------+--------+--------+--------+--------+--------+
           5-MINUTE FACTOR = 0.985
          30-MINUTE FACTOR = 0.985
           1-HOUR FACTOR = 0.985
           3-HOUR FACTOR = 0.998
           6-HOUR FACTOR = 0.999
          24-HOUR FACTOR = 0.999

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  25.253


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  96.00
         MODEL TIME(HOURS) FOR END OF RESULTS = 124.00


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                      UNIT HYDROGRAPH DETERMINATION

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     INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
      NUMBER         MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------------
         1                1.602               63.859
         2                7.797              246.932
         3               21.404              542.405
         4               39.370              716.138
         5               60.064              824.885
         6               75.891              630.876
         7               85.613              387.515
         8               91.167              221.417
         9               94.489              132.407
        10               96.293               71.884
        11               97.026               29.243
        12               97.665               25.478
        13               98.270               24.118
        14               98.850               23.087
        15               98.984                5.349
        16               99.089                4.176
        17               99.176                3.468
        18               99.236                2.391
        19               99.292                2.234
        20               99.345                2.124
        21               99.396                2.026
        22               99.445                1.965
        23               99.491                1.826
        24               99.536                1.815
        25               99.577                1.639
        26               99.617                1.559
        27               99.656                1.556
        28               99.690                1.365
        29               99.721                1.257
        30               99.753                1.257
        31               99.784                1.254
        32               99.812                1.082
        33               99.830                0.737
        34               99.848                0.724
        35               99.866                0.724
        36               99.885                0.724
        37               99.900                0.614
        38               99.906                0.230
        39               99.911                0.198
        40               99.916                0.197
        41               99.921                0.199
        42               99.926                0.197
        43               99.930                0.197
        44               99.935                0.198
        45               99.940                0.198
        46               99.945                0.197
        47               99.950                0.199
        48               99.955                0.197
        49               99.960                0.197
        50               99.965                0.196
        51               99.970                0.197
        52               99.975                0.197
        53               99.980                0.197
        54               99.985                0.196
        55               99.990                0.197
        56               99.995                0.197
        57              100.000                0.197
        58              100.000                0.013


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    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =     162.7269
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =     154.7721
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5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 200.0 400.0 600.0 800.0
96.000	41.7912	3.86	Q V . . .
(PEAK DAY 2, HOUR 24.000)			
96.083	41.8189	4.03	Q V . . .
(PEAK DAY 1, HOUR 0.083)			
96.167	41.8518	4.78	Q V . . .
(PEAK DAY 1, HOUR 0.167)			
96.250	41.8963	6.45	Q V . . .
(PEAK DAY 1, HOUR 0.250)			
96.333	41.9561	8.68	Q V . . .
(PEAK DAY 1, HOUR 0.333)			
96.417	42.0337	11.27	Q V . . .
(PEAK DAY 1, HOUR 0.417)			
96.500	42.1251	13.26	Q V . . .
(PEAK DAY 1, HOUR 0.500)			
96.583	42.2250	14.51	Q V . . .
(PEAK DAY 1, HOUR 0.583)			
96.667	42.3300	15.24	Q V . . .
(PEAK DAY 1, HOUR 0.667)			
96.750	42.4381	15.70	Q V . . .
(PEAK DAY 1, HOUR 0.750)			
96.833	42.5482	15.98	Q V . . .
(PEAK DAY 1, HOUR 0.833)			
96.917	42.6592	16.12	Q .V . . .
(PEAK DAY 1, HOUR 0.917)			
97.000	42.7712	16.26	Q .V . . .
(PEAK DAY 1, HOUR 1.000)			
97.083	42.8840	16.39	Q .V . . .
(PEAK DAY 1, HOUR 1.083)			
97.167	42.9978	16.51	Q .V . . .
(PEAK DAY 1, HOUR 1.167)			
97.250	43.1120	16.59	Q .V . . .
(PEAK DAY 1, HOUR 1.250)			
97.333	43.2267	16.66	Q .V . . .
(PEAK DAY 1, HOUR 1.333)			
97.417	43.3419	16.73	Q .V . . .
(PEAK DAY 1, HOUR 1.417)			
97.500	43.4576	16.79	Q .V . . .
(PEAK DAY 1, HOUR 1.500)			
97.583	43.5737	16.86	Q .V . . .
(PEAK DAY 1, HOUR 1.583)			
97.667	43.6902	16.92	Q .V . . .
(PEAK DAY 1, HOUR 1.667)			
97.750	43.8072	16.99	Q .V . . .
(PEAK DAY 1, HOUR 1.750)			
97.833	43.9247	17.06	Q .V . . .
(PEAK DAY 1, HOUR 1.833)			
97.917	44.0426	17.12	Q .V . . .
(PEAK DAY 1, HOUR 1.917)			
98.000	44.1610	17.19	Q .V . . .
(PEAK DAY 1, HOUR 2.000)			
98.083	44.2799	17.26	Q .V . . .
(PEAK DAY 1, HOUR 2.083)			
98.167	44.3992	17.33	Q .V . . .
(PEAK DAY 1, HOUR 2.167)			
98.250	44.5190	17.40	Q .V . . .
(PEAK DAY 1, HOUR 2.250)			
98.333	44.6393	17.46	Q .V . . .
(PEAK DAY 1, HOUR 2.333)			
98.417	44.7600	17.53	Q .V . . .
(PEAK DAY 1, HOUR 2.417)			
98.500	44.8812	17.60	Q .V . . .
(PEAK DAY 1, HOUR 2.500)			
98.583	45.0029	17.67	Q .V . . .
(PEAK DAY 1, HOUR 2.583)			
98.667	45.1251	17.74	Q .V . . .
(PEAK DAY 1, HOUR 2.667)			
98.750	45.2478	17.81	Q .V . . .
(PEAK DAY 1, HOUR 2.750)			
98.833	45.3710	17.88	Q .V . . .
(PEAK DAY 1, HOUR 2.833)			
98.917	45.4946	17.95	Q .V . . .
(PEAK DAY 1, HOUR 2.917)			
99.000	45.6188	18.03	Q .V . . .
(PEAK DAY 1, HOUR 3.000)			
99.083	45.7434	18.10	Q .V . . .
(PEAK DAY 1, HOUR 3.083)			
99.167	45.8686	18.17	Q .V . . .
(PEAK DAY 1, HOUR 3.167)			
99.250	45.9942	18.24	Q .V . . .
(PEAK DAY 1, HOUR 3.250)			
99.333	46.1204	18.32	Q .V . . .
(PEAK DAY 1, HOUR 3.333)			
99.417	46.2470	18.39	Q .V . . .
(PEAK DAY 1, HOUR 3.417)			
99.500	46.3742	18.47	Q .V . . .
(PEAK DAY 1, HOUR 3.500)			
99.583	46.5019	18.54	Q . V . . .
(PEAK DAY 1, HOUR 3.583)			
99.667	46.6301	18.62	Q . V . . .
(PEAK DAY 1, HOUR 3.667)			
99.750	46.7589	18.70	Q . V . . .
(PEAK DAY 1, HOUR 3.750)			
99.833	46.8882	18.77	Q . V . . .
(PEAK DAY 1, HOUR 3.833)			
99.917	47.0181	18.85	Q . V . . .
(PEAK DAY 1, HOUR 3.917)			
100.000	47.1484	18.93	Q . V . . .
(PEAK DAY 1, HOUR 4.000)			
100.083	47.2794	19.01	Q . V . . .
(PEAK DAY 1, HOUR 4.083)			
100.167	47.4109	19.09	Q . V . . .
(PEAK DAY 1, HOUR 4.167)			
100.250	47.5430	19.18	Q . V . . .
(PEAK DAY 1, HOUR 4.250)			
100.333	47.6756	19.26	Q . V . . .
(PEAK DAY 1, HOUR 4.333)			
100.417	47.8089	19.35	Q . V . . .
(PEAK DAY 1, HOUR 4.417)			
100.500	47.9427	19.43	Q . V . . .
(PEAK DAY 1, HOUR 4.500)			
100.583	48.0771	19.52	Q . V . . .
(PEAK DAY 1, HOUR 4.583)			
100.667	48.2121	19.60	Q . V . . .
(PEAK DAY 1, HOUR 4.667)			
100.750	48.3477	19.69	Q . V . . .
(PEAK DAY 1, HOUR 4.750)			
100.833	48.4840	19.78	Q . V . . .
(PEAK DAY 1, HOUR 4.833)			
100.917	48.6208	19.87	Q . V . . .
(PEAK DAY 1, HOUR 4.917)			
101.000	48.7583	19.96	Q . V . . .
(PEAK DAY 1, HOUR 5.000)			
101.083	48.8964	20.05	.Q . V . . .
(PEAK DAY 1, HOUR 5.083)			

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101.167     49.0351     20.15  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.167)
101.250     49.1745     20.24  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.250)
101.333     49.3146     20.34  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.333)
101.417     49.4553     20.43  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.417)
101.500     49.5967     20.53  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.500)
101.583     49.7388     20.63  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.583)
101.667     49.8815     20.73  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.667)
101.750     50.0250     20.83  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.750)
101.833     50.1692     20.93  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.833)
101.917     50.3140     21.04  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.917)
102.000     50.4596     21.14  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.000)
102.083     50.6060     21.25  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.083)
102.167     50.7531     21.36  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.167)
102.250     50.9009     21.47  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.250)
102.333     51.0495     21.58  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.333)
102.417     51.1989     21.69  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.417)
102.500     51.3491     21.80  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.500)
102.583     51.5000     21.92  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.583)
102.667     51.6518     22.04  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.667)
102.750     51.8044     22.16  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.750)
102.833     51.9578     22.28  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.833)
102.917     52.1121     22.40  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.917)
103.000     52.2672     22.52  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.000)
103.083     52.4232     22.65  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.083)
103.167     52.5800     22.78  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.167)
103.250     52.7378     22.91  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.250)
103.333     52.8965     23.04  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.333)
103.417     53.0560     23.17  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.417)
103.500     53.2166     23.31  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.500)
103.583     53.3780     23.44  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.583)
103.667     53.5404     23.58  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.667)
103.750     53.7038     23.73  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.750)
103.833     53.8682     23.87  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.833)
103.917     54.0336     24.02  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.917)
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104.000     54.2001     24.16  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.000)
104.083     54.3675     24.32  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.083)
104.167     54.5361     24.47  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.167)
104.250     54.7057     24.63  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.250)
104.333     54.8764     24.78  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.333)
104.417     55.0482     24.95  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.417)
104.500     55.2211     25.11  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.500)
104.583     55.3952     25.28  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.583)
104.667     55.5705     25.45  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.667)
104.750     55.7469     25.62  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.750)
104.833     55.9246     25.80  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.833)
104.917     56.1035     25.98  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.917)
105.000     56.2836     26.16  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.000)
105.083     56.4651     26.35  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.083)
105.167     56.6478     26.53  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.167)
105.250     56.8319     26.73  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.250)
105.333     57.0173     26.92  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.333)
105.417     57.2041     27.13  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.417)
105.500     57.3923     27.33  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.500)
105.583     57.5820     27.54  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.583)
105.667     57.7731     27.75  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.667)
105.750     57.9657     27.97  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.750)
105.833     58.1598     28.19  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.833)
105.917     58.3555     28.41  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.917)
106.000     58.5528     28.64  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.000)
106.083     58.7517     28.88  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.083)
106.167     58.9523     29.12  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.167)
106.250     59.1545     29.37  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.250)
106.333     59.3585     29.62  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.333)
106.417     59.5643     29.88  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.417)
106.500     59.7718     30.14  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.500)
106.583     59.9813     30.41  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.583)
106.667     60.1926     30.68  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.667)
106.750     60.4058     30.97  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.750)
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106.833     60.6211     31.25  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.833)
106.917     60.8384     31.55  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.917)
107.000     61.0578     31.85  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  11.000)
107.083     61.2793     32.17  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  11.083)
107.167     61.5030     32.48  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  11.167)
107.250     61.7290     32.81  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  11.250)
107.333     61.9573     33.15  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.333)
107.417     62.1880     33.50  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.417)
107.500     62.4211     33.85  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.500)
107.583     62.6567     34.21  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.583)
107.667     62.8950     34.59  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.667)
107.750     63.1358     34.98  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.750)
107.833     63.3794     35.37  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.833)
107.917     63.6259     35.78  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.917)
108.000     63.8752     36.20  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  12.000)
108.083     64.1287     36.80  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  12.083)
108.167     64.3896     37.88  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  12.167)
108.250     64.6632     39.74  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  12.250)
108.333     64.9529     42.06  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.333)
108.417     65.2611     44.75  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.417)
108.500     65.5850     47.04  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.500)
108.583     65.9215     48.85  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.583)
108.667     66.2684     50.37  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.667)
108.750     66.6252     51.80  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.750)
108.833     66.9912     53.15  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.833)
108.917     67.3665     54.49  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.917)
109.000     67.7512     55.86  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  13.000)
109.083     68.1459     57.30  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  13.083)
109.167     68.5507     58.79  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  13.167)
109.250     68.9661     60.31  .  Q      .      V  .         .         .
(PEAK DAY 1, HOUR  13.250)
109.333     69.3921     61.87  .  Q      .      V  .         .         .
(PEAK DAY 1, HOUR  13.333)
109.417     69.8296     63.52  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.417)
109.500     70.2787     65.21  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.500)
109.583     70.7402     67.01  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.583)
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109.667     71.2144     68.86  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.667)
109.750     71.7022     70.83  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.750)
109.833     72.2041     72.87  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.833)
109.917     72.7209     75.04  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.917)
110.000     73.2533     77.30  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  14.000)
110.083     73.8026     79.76  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  14.083)
110.167     74.3704     82.45  .   Q     .        V.         .         .
(PEAK DAY 1, HOUR  14.167)
110.250     74.9596     85.54  .   Q     .        V.         .         .
(PEAK DAY 1, HOUR  14.250)
110.333     75.5717     88.89  .   Q     .        V.         .         .
(PEAK DAY 1, HOUR  14.333)
110.417     76.2090     92.53  .   Q     .        V.         .         .
(PEAK DAY 1, HOUR  14.417)
110.500     76.8715     96.20  .   Q     .        V.         .         .
(PEAK DAY 1, HOUR  14.500)
110.583     77.5600     99.96  .   Q     .         V         .         .
(PEAK DAY 1, HOUR  14.583)
110.667     78.2749    103.81  .    Q    .         V         .         .
(PEAK DAY 1, HOUR  14.667)
110.750     79.0182    107.93  .    Q    .         V         .         .
(PEAK DAY 1, HOUR  14.750)
110.833     79.7914    112.27  .    Q    .         V         .         .
(PEAK DAY 1, HOUR  14.833)
110.917     80.5973    117.01  .    Q    .         V         .         .
(PEAK DAY 1, HOUR  14.917)
111.000     81.4383    122.11  .     Q   .         .V        .         .
(PEAK DAY 1, HOUR  15.000)
111.083     82.3183    127.78  .     Q   .         .V        .         .
(PEAK DAY 1, HOUR  15.083)
111.167     83.2408    133.95  .     Q   .         .V        .         .
(PEAK DAY 1, HOUR  15.167)
111.250     84.2112    140.89  .      Q  .         .V        .         .
(PEAK DAY 1, HOUR  15.250)
111.333     85.2343    148.56  .      Q  .         . V       .         .
(PEAK DAY 1, HOUR  15.333)
111.417     86.3140    156.77  .      Q  .         . V       .         .
(PEAK DAY 1, HOUR  15.417)
111.500     87.4461    164.38  .       Q .         . V       .         .
(PEAK DAY 1, HOUR  15.500)
111.583     88.6237    170.99  .       Q .         . V       .         .
(PEAK DAY 1, HOUR  15.583)
111.667     89.8487    177.87  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  15.667)
111.750     91.1366    187.00  .        Q.         .  V      .         .
(PEAK DAY 1, HOUR  15.750)
111.833     92.5291    202.19  .         Q         .  V      .         .
(PEAK DAY 1, HOUR  15.833)
111.917     94.0982    227.84  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  15.917)
112.000     95.9486    268.68  .         .  Q      .   V     .         .
(PEAK DAY 1, HOUR  16.000)
112.083     98.3970    355.50  .         .      Q  .    V    .         .
(PEAK DAY 1, HOUR  16.083)
112.167    101.8439    500.50  .         .         .    QV   .         .
(PEAK DAY 1, HOUR  16.167)
112.250    106.5117    677.76  .         .         .      V  .  Q      .
(PEAK DAY 1, HOUR  16.250)
112.333    111.8129    769.73  .         .         .       V .       Q .
(PEAK DAY 1, HOUR  16.333)
112.417    117.2284    786.33  .         .         .         V        Q.
(PEAK DAY 1, HOUR  16.417)
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112.500    121.6811    646.54  .          .          .          .VQ        .
(PEAK DAY 1, HOUR  16.500)
112.583    124.9948    481.15  .          .          .   Q      . V        .
(PEAK DAY 1, HOUR  16.583)
112.667    127.4627    358.33  .          .      Q   .          . V        .
(PEAK DAY 1, HOUR  16.667)
112.750    129.3967    280.83  .          .   Q      .          .  V       .
(PEAK DAY 1, HOUR  16.750)
112.833    130.9455    224.88  .          .Q         .          .  V       .
(PEAK DAY 1, HOUR  16.833)
112.917    132.2140    184.19  .        Q.           .          .   V      .
(PEAK DAY 1, HOUR  16.917)
113.000    133.3513    165.13  .       Q .           .          .   V      .
(PEAK DAY 1, HOUR  17.000)
113.083    134.3849    150.08  .      Q  .           .          .   V      .
(PEAK DAY 1, HOUR  17.083)
113.167    135.3235    136.28  .     Q   .           .          .   V      .
(PEAK DAY 1, HOUR  17.167)
113.250    136.1315    117.32  .    Q    .           .          .    V     .
(PEAK DAY 1, HOUR  17.250)
113.333    136.8693    107.13  .    Q    .           .          .    V     .
(PEAK DAY 1, HOUR  17.333)
113.417    137.5491     98.70  .   Q     .           .          .    V     .
(PEAK DAY 1, HOUR  17.417)
113.500    138.1786     91.40  .   Q     .           .          .    V     .
(PEAK DAY 1, HOUR  17.500)
113.583    138.7664     85.36  .   Q     .           .          .    V     .
(PEAK DAY 1, HOUR  17.583)
113.667    139.3183     80.13  .   Q     .           .          .     V    .
(PEAK DAY 1, HOUR  17.667)
113.750    139.8382     75.50  .  Q      .           .          .     V    .
(PEAK DAY 1, HOUR  17.750)
113.833    140.3296     71.35  .  Q      .           .          .     V    .
(PEAK DAY 1, HOUR  17.833)
113.917    140.7949     67.57  .  Q      .           .          .     V    .
(PEAK DAY 1, HOUR  17.917)
114.000    141.2367     64.15  .  Q      .           .          .     V    .
(PEAK DAY 1, HOUR  18.000)
114.083    141.6554     60.80  .  Q      .           .          .     V    .
(PEAK DAY 1, HOUR  18.083)
114.167    142.0503     57.33  . Q       .           .          .     V    .
(PEAK DAY 1, HOUR  18.167)
114.250    142.4188     53.51  . Q       .           .          .     V    .
(PEAK DAY 1, HOUR  18.250)
114.333    142.7600     49.55  . Q       .           .          .     V    .
(PEAK DAY 1, HOUR  18.333)
114.417    143.0749     45.72  . Q       .           .          .     V    .
(PEAK DAY 1, HOUR  18.417)
114.500    143.3691     42.72  . Q       .           .          .      V   .
(PEAK DAY 1, HOUR  18.500)
114.583    143.6481     40.51  . Q       .           .          .      V   .
(PEAK DAY 1, HOUR  18.583)
114.667    143.9151     38.78  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  18.667)
114.750    144.1721     37.31  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  18.750)
114.833    144.4216     36.23  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  18.833)
114.917    144.6648     35.31  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  18.917)
115.000    144.9020     34.45  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.000)
115.083    145.1332     33.56  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.083)
115.167    145.3579     32.63  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.167)
115.250    145.5779     31.94  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.250)
115.333    145.7936     31.32  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.333)
115.417    146.0053     30.74  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.417)
115.500    146.2132     30.18  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.500)
115.583    146.4174     29.65  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.583)
115.667    146.6181     29.15  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.667)
115.750    146.8156     28.67  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.750)
115.833    147.0098     28.20  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.833)
115.917    147.2010     27.76  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  19.917)
116.000    147.3893     27.34  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.000)
116.083    147.5748     26.93  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.083)
116.167    147.7575     26.54  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.167)
116.250    147.9377     26.16  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.250)
116.333    148.1153     25.80  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.333)
116.417    148.2906     25.44  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.417)
116.500    148.4634     25.10  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.500)
116.583    148.6340     24.76  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.583)
116.667    148.8022     24.43  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.667)
116.750    148.9682     24.10  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.750)
116.833    149.1315     23.71  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.833)
116.917    149.2927     23.41  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.917)
117.000    149.4519     23.12  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  21.000)
117.083    149.6093     22.85  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  21.083)
117.167    149.7649     22.59  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  21.167)
117.250    149.9187     22.34  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  21.250)
117.333    150.0708     22.09  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  21.333)
117.417    150.2213     21.85  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  21.417)
117.500    150.3702     21.62  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  21.500)
117.583    150.5176     21.40  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  21.583)
117.667    150.6634     21.18  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  21.667)
117.750    150.8078     20.96  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  21.750)
117.833    150.9508     20.76  .Q        .           .          .        V.
(PEAK DAY 1, HOUR  21.833)
117.917    151.0923     20.56  .Q        .           .          .        V.
(PEAK DAY 1, HOUR  21.917)
118.000    151.2325     20.36  .Q        .           .          .        V.
(PEAK DAY 1, HOUR  22.000)
118.083    151.3714     20.17  .Q        .           .          .        V.
(PEAK DAY 1, HOUR  22.083)
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118.167	151.5090	19.98	Q	.	.	.	V.
(PEAK DAY 1, HOUR 22.167)								
118.250	151.6454	19.80	Q	.	.	.	V.
(PEAK DAY 1, HOUR 22.250)								
118.333	151.7805	19.62	Q	.	.	.	V.
(PEAK DAY 1, HOUR 22.333)								
118.417	151.9144	19.45	Q	.	.	.	V.
(PEAK DAY 1, HOUR 22.417)								
118.500	152.0472	19.28	Q	.	.	.	V.
(PEAK DAY 1, HOUR 22.500)								
118.583	152.1788	19.11	Q	.	.	.	V.
(PEAK DAY 1, HOUR 22.583)								
118.667	152.3093	18.95	Q	.	.	.	V.
(PEAK DAY 1, HOUR 22.667)								
118.750	152.4387	18.79	Q	.	.	.	V.
(PEAK DAY 1, HOUR 22.750)								
118.833	152.5670	18.63	Q	.	.	.	V.
(PEAK DAY 1, HOUR 22.833)								
118.917	152.6943	18.48	Q	.	.	.	V.
(PEAK DAY 1, HOUR 22.917)								
119.000	152.8205	18.33	Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.000)								
119.083	152.9458	18.19	Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.083)								
119.167	153.0701	18.05	Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.167)								
119.250	153.1934	17.91	Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.250)								
119.333	153.3158	17.77	Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.333)								
119.417	153.4372	17.64	Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.417)								
119.500	153.5578	17.50	Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.500)								
119.583	153.6774	17.38	Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.583)								
119.667	153.7962	17.25	Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.667)								
119.750	153.9142	17.12	Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.750)								
119.833	154.0313	17.00	Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.833)								
119.917	154.1475	16.88	Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.917)								
120.000	154.2630	16.77	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.000)								
120.083	154.3759	16.39	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.083)								
120.167	154.4811	15.28	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.167)								
120.250	154.5705	12.98	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.250)								
120.333	154.6393	9.99	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.333)								
120.417	154.6846	6.58	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.417)								
120.500	154.7121	3.98	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.500)								
120.583	154.7285	2.38	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.583)								
120.667	154.7386	1.47	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.667)								
120.750	154.7450	0.92	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.750)								
120.833	154.7493	0.63	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.833)								
120.917	154.7528	0.50	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.917)								

121.000	154.7555	0.40	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.000)								
121.083	154.7576	0.30	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.083)								
121.167	154.7589	0.20	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.167)								
121.250	154.7602	0.18	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.250)								
121.333	154.7613	0.16	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.333)								
121.417	154.7623	0.14	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.417)								
121.500	154.7632	0.13	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.500)								
121.583	154.7640	0.12	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.583)								
121.667	154.7648	0.11	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.667)								
121.750	154.7655	0.11	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.750)								
121.833	154.7662	0.10	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.833)								
121.917	154.7668	0.09	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.917)								
122.000	154.7674	0.08	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.000)								
122.083	154.7679	0.07	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.083)								
122.167	154.7683	0.07	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.167)								
122.250	154.7688	0.06	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.250)								
122.333	154.7691	0.05	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.333)								
122.417	154.7695	0.05	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.417)								
122.500	154.7697	0.04	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.500)								
122.583	154.7700	0.04	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.583)								
122.667	154.7702	0.03	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.667)								
122.750	154.7704	0.03	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.750)								
122.833	154.7706	0.03	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.833)								
122.917	154.7708	0.02	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.917)								
123.000	154.7709	0.02	Q	.	.	.	V.
(PEAK DAY 1, HOUR 27.000)								
123.083	154.7710	0.02	Q	.	.	.	V.
(PEAK DAY 1, HOUR 27.083)								
123.167	154.7711	0.02	Q	.	.	.	V.
(PEAK DAY 1, HOUR 27.167)								
123.250	154.7712	0.02	Q	.	.	.	V.
(PEAK DAY 1, HOUR 27.250)								
123.333	154.7713	0.01	Q	.	.	.	V.
(PEAK DAY 1, HOUR 27.333)								
123.417	154.7714	0.01	Q	.	.	.	V.
(PEAK DAY 1, HOUR 27.417)								
123.500	154.7715	0.01	Q	.	.	.	V.
(PEAK DAY 1, HOUR 27.500)								
123.583	154.7716	0.01	Q	.	.	.	V.
(PEAK DAY 1, HOUR 27.583)								
123.667	154.7717	0.01	Q	.	.	.	V.
(PEAK DAY 1, HOUR 27.667)								
123.750	154.7718	0.01	Q	.	.	.	V.
(PEAK DAY 1, HOUR 27.750)								

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 123.833    154.7718      0.01  Q          .          .          .        V.
 (PEAK DAY 1, HOUR  27.833)
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6395.00 TO NODE   6395.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  7291.1 Ac. ***
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6395.00 TO NODE   6395.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  7291.1 Ac. ***

            STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
        (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.     1325.0    2650.0    3975.0    5300.0
--------------------------------------------------------------------------------
  96.000    776.8526    332.31  . Q      V.          .          .          .
 (PEAK DAY 2, HOUR  24.000)
  96.083    779.1357    331.50  . Q      V.          .          .          .
 (PEAK DAY 1, HOUR   0.083)
  96.167    781.4358    333.97  . Q      V.          .          .          .
 (PEAK DAY 1, HOUR   0.167)
  96.250    783.7872    341.42  . Q      V.          .          .          .
 (PEAK DAY 1, HOUR   0.250)
  96.333    786.2189    353.08  . Q      V.          .          .          .
 (PEAK DAY 1, HOUR   0.333)
  96.417    788.7375    365.71  . Q      V.          .          .          .
 (PEAK DAY 1, HOUR   0.417)
  96.500    791.3354    377.22  . Q      V.          .          .          .
 (PEAK DAY 1, HOUR   0.500)
  96.583    794.0041    387.49  . Q      V.          .          .          .
 (PEAK DAY 1, HOUR   0.583)
  96.667    796.7286    395.60  . Q      V.          .          .          .
 (PEAK DAY 1, HOUR   0.667)
  96.750    799.4911    401.12  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   0.750)
  96.833    802.2775    404.58  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   0.833)
  96.917    805.0783    406.68  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   0.917)
  97.000    807.8881    407.97  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.000)
  97.083    810.7036    408.81  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.083)
  97.167    813.5235    409.45  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.167)
  97.250    816.3467    409.94  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.250)
  97.333    819.1729    410.36  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.333)
  97.417    822.0015    410.71  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.417)
  97.500    824.8322    411.01  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.500)
  97.583    827.6646    411.26  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.583)
  97.667    830.4986    411.51  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.667)
  97.750    833.3344    411.75  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.750)
  97.833    836.1719    412.01  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.833)
  97.917    839.0112    412.26  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.917)
  98.000    841.8521    412.50  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   2.000)
  98.083    844.6944    412.70  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   2.083)
  98.167    847.5377    412.85  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   2.167)
  98.250    850.3820    412.98  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   2.250)
  98.333    853.2271    413.11  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   2.333)
  98.417    856.0731    413.24  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   2.417)
  98.500    858.9201    413.38  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   2.500)
  98.583    861.7681    413.53  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   2.583)
  98.667    864.6171    413.69  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   2.667)
  98.750    867.4673    413.84  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   2.750)
  98.833    870.3186    414.01  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   2.833)
  98.917    873.1711    414.18  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   2.917)
  99.000    876.0248    414.37  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   3.000)
  99.083    878.8799    414.56  .  Q      .V         .          .          .
 (PEAK DAY 1, HOUR   3.083)
  99.167    881.7364    414.76  .  Q      .V         .          .          .
 (PEAK DAY 1, HOUR   3.167)
  99.250    884.5943    414.97  .  Q      .V         .          .          .
 (PEAK DAY 1, HOUR   3.250)
  99.333    887.4538    415.20  .  Q      .V         .          .          .
 (PEAK DAY 1, HOUR   3.333)
  99.417    890.3149    415.44  .  Q      .V         .          .          .
 (PEAK DAY 1, HOUR   3.417)
  99.500    893.1779    415.70  .  Q      .V         .          .          .
 (PEAK DAY 1, HOUR   3.500)
  99.583    896.0428    415.98  .  Q      .V         .          .          .
 (PEAK DAY 1, HOUR   3.583)
  99.667    898.9097    416.28  .  Q      .V         .          .          .
 (PEAK DAY 1, HOUR   3.667)
  99.750    901.7787    416.59  .  Q      .V         .          .          .
 (PEAK DAY 1, HOUR   3.750)
  99.833    904.6501    416.92  .  Q      .V         .          .          .
 (PEAK DAY 1, HOUR   3.833)
  99.917    907.5238    417.27  .  Q      .V         .          .          .
 (PEAK DAY 1, HOUR   3.917)
 100.000    910.4000    417.63  .  Q      .V         .          .          .
 (PEAK DAY 1, HOUR   4.000)
 100.083    913.2789    418.01  .  Q      .V         .          .          .
 (PEAK DAY 1, HOUR   4.083)
 100.167    916.1605    418.40  .  Q      .V         .          .          .
 (PEAK DAY 1, HOUR   4.167)
 100.250    919.0449    418.82  .  Q      .V         .          .          .
 (PEAK DAY 1, HOUR   4.250)
```

100.333	921.9323	419.25	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	4.333)								
100.417	924.8228	419.70	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	4.417)								
100.500	927.7164	420.16	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	4.500)								
100.583	930.6134	420.64	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	4.583)								
100.667	933.5138	421.14	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	4.667)								
100.750	936.4177	421.65	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	4.750)								
100.833	939.3253	422.18	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	4.833)								
100.917	942.2367	422.73	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	4.917)								
101.000	945.1520	423.30	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	5.000)								
101.083	948.0713	423.89	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	5.083)								
101.167	950.9948	424.49	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	5.167)								
101.250	953.9225	425.11	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	5.250)								
101.333	956.8547	425.76	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.333)								
101.417	959.7915	426.42	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.417)								
101.500	962.7330	427.10	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.500)								
101.583	965.6793	427.80	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.583)								
101.667	968.6306	428.52	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.667)								
101.750	971.5869	429.27	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.750)								
101.833	974.5486	430.03	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.833)								
101.917	977.5156	430.81	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.917)								
102.000	980.4882	431.62	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.000)								
102.083	983.4665	432.45	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.083)								
102.167	986.4506	433.30	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.167)								
102.250	989.4407	434.17	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.250)								
102.333	992.4370	435.06	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.333)								
102.417	995.4396	435.97	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.417)								
102.500	998.4486	436.91	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.500)								
102.583	1001.4643	437.87	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.583)								
102.667	1004.4868	438.86	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.667)								
102.750	1007.5161	439.87	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.750)								
102.833	1010.5526	440.90	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.833)								
102.917	1013.5964	441.96	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.917)								
103.000	1016.6476	443.04	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.000)								
103.083	1019.7064	444.14	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.083)								
103.167	1022.7731	445.28	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.167)								
103.250	1025.8477	446.43	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.250)								
103.333	1028.9304	447.62	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.333)								
103.417	1032.0215	448.83	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.417)								
103.500	1035.1211	450.07	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.500)								
103.583	1038.2295	451.34	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.583)								
103.667	1041.3468	452.63	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.667)								
103.750	1044.4733	453.95	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.750)								
103.833	1047.6090	455.31	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.833)								
103.917	1050.7543	456.69	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.917)								
104.000	1053.9093	458.10	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.000)								
104.083	1057.0742	459.55	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.083)								
104.167	1060.2493	461.02	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.167)								
104.250	1063.4347	462.53	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.250)								
104.333	1066.6307	464.07	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.333)								
104.417	1069.8376	465.64	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.417)								
104.500	1073.0557	467.25	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.500)								
104.583	1076.2849	468.89	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.583)								
104.667	1079.5258	470.57	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.667)								
104.750	1082.7784	472.29	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.750)								
104.833	1086.0432	474.04	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.833)								
104.917	1089.3203	475.83	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.917)								
105.000	1092.6100	477.66	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.000)								
105.083	1095.9125	479.53	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.083)								
105.167	1099.2281	481.44	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.167)								
105.250	1102.5573	483.39	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.250)								
105.333	1105.9001	485.38	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.333)								
105.417	1109.2570	487.42	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.417)								
105.500	1112.6282	489.50	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.500)								
105.583	1116.0140	491.63	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.583)								
105.667	1119.4149	493.80	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.667)								
105.750	1122.8311	496.02	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.750)								
105.833	1126.2628	498.29	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.833)								
105.917	1129.7103	500.59	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.917)								

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106.000   1133.1737    502.89  .  Q      .   V     .        .        .
(PEAK DAY 1, HOUR  10.000)
106.083   1136.6530    505.19  .  Q      .   V     .        .        .
(PEAK DAY 1, HOUR  10.083)
106.167   1140.1481    507.50  .  Q      .   V     .        .        .
(PEAK DAY 1, HOUR  10.167)
106.250   1143.6593    509.83  .  Q      .   V     .        .        .
(PEAK DAY 1, HOUR  10.250)
106.333   1147.1870    512.22  .  Q      .   V     .        .        .
(PEAK DAY 1, HOUR  10.333)
106.417   1150.7314    514.65  .  Q      .   V     .        .        .
(PEAK DAY 1, HOUR  10.417)
106.500   1154.2930    517.14  .  Q      .   V     .        .        .
(PEAK DAY 1, HOUR  10.500)
106.583   1157.8721    519.69  .  Q      .   V     .        .        .
(PEAK DAY 1, HOUR  10.583)
106.667   1161.4691    522.30  .  Q      .   V     .        .        .
(PEAK DAY 1, HOUR  10.667)
106.750   1165.0846    524.97  .  Q      .   V     .        .        .
(PEAK DAY 1, HOUR  10.750)
106.833   1168.7190    527.71  .  Q      .   V     .        .        .
(PEAK DAY 1, HOUR  10.833)
106.917   1172.3727    530.52  .   Q      .   V     .        .        .
(PEAK DAY 1, HOUR  10.917)
107.000   1176.0461    533.39  .   Q      .   V     .        .        .
(PEAK DAY 1, HOUR  11.000)
107.083   1179.7400    536.34  .   Q      .   V     .        .        .
(PEAK DAY 1, HOUR  11.083)
107.167   1183.4547    539.37  .   Q      .   V     .        .        .
(PEAK DAY 1, HOUR  11.167)
107.250   1187.1908    542.47  .   Q      .   V     .        .        .
(PEAK DAY 1, HOUR  11.250)
107.333   1190.9487    545.66  .   Q      .   V     .        .        .
(PEAK DAY 1, HOUR  11.333)
107.417   1194.7292    548.93  .   Q      .   V     .        .        .
(PEAK DAY 1, HOUR  11.417)
107.500   1198.5328    552.29  .   Q      .    V    .        .        .
(PEAK DAY 1, HOUR  11.500)
107.583   1202.3602    555.73  .   Q      .    V    .        .        .
(PEAK DAY 1, HOUR  11.583)
107.667   1206.2120    559.28  .   Q      .    V    .        .        .
(PEAK DAY 1, HOUR  11.667)
107.750   1210.0889    562.92  .   Q      .    V    .        .        .
(PEAK DAY 1, HOUR  11.750)
107.833   1213.9916    566.67  .   Q      .    V    .        .        .
(PEAK DAY 1, HOUR  11.833)
107.917   1217.9208    570.53  .   Q      .    V    .        .        .
(PEAK DAY 1, HOUR  11.917)
108.000   1221.8773    574.50  .   Q      .    V    .        .        .
(PEAK DAY 1, HOUR  12.000)
108.083   1225.8698    579.71  .   Q      .    V    .        .        .
(PEAK DAY 1, HOUR  12.083)
108.167   1229.9323    589.88  .   Q      .    V    .        .        .
(PEAK DAY 1, HOUR  12.167)
108.250   1234.1144    607.24  .   Q      .    V    .        .        .
(PEAK DAY 1, HOUR  12.250)
108.333   1238.4558    630.37  .   Q      .    V    .        .        .
(PEAK DAY 1, HOUR  12.333)
108.417   1242.9568    653.55  .   Q      .    V    .        .        .
(PEAK DAY 1, HOUR  12.417)
108.500   1247.5981    673.93  .    Q     .    V    .        .        .
(PEAK DAY 1, HOUR  12.500)
108.583   1252.3645    692.08  .    Q     .    V    .        .        .
(PEAK DAY 1, HOUR  12.583)
108.667   1257.2400    707.92  .    Q     .    V    .        .        .
(PEAK DAY 1, HOUR  12.667)
108.750   1262.2089    721.47  .    Q     .    V    .        .        .
(PEAK DAY 1, HOUR  12.750)
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108.833   1267.2605    733.49  .    Q     .    V    .        .        .
(PEAK DAY 1, HOUR  12.833)
108.917   1272.3885    744.59  .    Q     .    V    .        .        .
(PEAK DAY 1, HOUR  12.917)
109.000   1277.5902    755.28  .    Q     .     V   .        .        .
(PEAK DAY 1, HOUR  13.000)
109.083   1282.8647    765.86  .    Q     .     V   .        .        .
(PEAK DAY 1, HOUR  13.083)
109.167   1288.2131    776.59  .    Q     .     V   .        .        .
(PEAK DAY 1, HOUR  13.167)
109.250   1293.6370    787.54  .    Q     .     V   .        .        .
(PEAK DAY 1, HOUR  13.250)
109.333   1299.1382    798.77  .     Q    .     V   .        .        .
(PEAK DAY 1, HOUR  13.333)
109.417   1304.7185    810.27  .     Q    .     V   .        .        .
(PEAK DAY 1, HOUR  13.417)
109.500   1310.3802    822.08  .     Q    .     V   .        .        .
(PEAK DAY 1, HOUR  13.500)
109.583   1316.1259    834.26  .     Q    .     V   .        .        .
(PEAK DAY 1, HOUR  13.583)
109.667   1321.9585    846.91  .     Q    .     V   .        .        .
(PEAK DAY 1, HOUR  13.667)
109.750   1327.8818    860.06  .     Q    .     V   .        .        .
(PEAK DAY 1, HOUR  13.750)
109.833   1333.8998    873.80  .     Q    .     V   .        .        .
(PEAK DAY 1, HOUR  13.833)
109.917   1340.0166    888.16  .     Q    .     V   .        .        .
(PEAK DAY 1, HOUR  13.917)
110.000   1346.2372    903.23  .     Q    .     V   .        .        .
(PEAK DAY 1, HOUR  14.000)
110.083   1352.5697    919.48  .     Q    .     V   .        .        .
(PEAK DAY 1, HOUR  14.083)
110.167   1359.0330    938.47  .      Q   .      V  .        .        .
(PEAK DAY 1, HOUR  14.167)
110.250   1365.6516    961.03  .      Q   .      V  .        .        .
(PEAK DAY 1, HOUR  14.250)
110.333   1372.4462    986.58  .      Q   .      V  .        .        .
(PEAK DAY 1, HOUR  14.333)
110.417   1379.4203   1012.64  .      Q   .      V  .        .        .
(PEAK DAY 1, HOUR  14.417)
110.500   1386.5701   1038.15  .      Q   .      V  .        .        .
(PEAK DAY 1, HOUR  14.500)
110.583   1393.8951   1063.60  .       Q  .      V  .        .        .
(PEAK DAY 1, HOUR  14.583)
110.667   1401.3995   1089.64  .       Q  .      V  .        .        .
(PEAK DAY 1, HOUR  14.667)
110.750   1409.0916   1116.88  .       Q  .      V  .        .        .
(PEAK DAY 1, HOUR  14.750)
110.833   1416.9855   1146.19  .       Q  .      V  .        .        .
(PEAK DAY 1, HOUR  14.833)
110.917   1425.0986   1178.03  .       Q  .      V  .        .        .
(PEAK DAY 1, HOUR  14.917)
111.000   1433.4519   1212.89  .        Q.      V  .        .        .
(PEAK DAY 1, HOUR  15.000)
111.083   1442.0686   1251.15  .        Q.       V .        .        .
(PEAK DAY 1, HOUR  15.083)
111.167   1450.9772   1293.52  .        Q.       V .        .        .
(PEAK DAY 1, HOUR  15.167)
111.250   1460.2107   1340.71  .         Q       V .        .        .
(PEAK DAY 1, HOUR  15.250)
111.333   1469.8101   1393.83  .         Q       V .        .        .
(PEAK DAY 1, HOUR  15.333)
111.417   1479.8032   1451.00  .         Q       V .        .        .
(PEAK DAY 1, HOUR  15.417)
111.500   1490.1653   1504.57  .         .Q      V .        .        .
(PEAK DAY 1, HOUR  15.500)
111.583   1500.8424   1550.31  .         .Q      V .        .        .
(PEAK DAY 1, HOUR  15.583)
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 111.667   1511.8241   1594.54  .         . Q     V .         .         .
(PEAK DAY 1, HOUR  15.667)
 111.750   1523.2224   1655.03  .         . Q      V.         .         .
(PEAK DAY 1, HOUR  15.750)
 111.833   1535.2651   1748.60  .         .  Q     V.         .         .
(PEAK DAY 1, HOUR  15.833)
 111.917   1548.2864   1890.69  .         .   Q    V.         .         .
(PEAK DAY 1, HOUR  15.917)
 112.000   1562.8824   2119.35  .         .    Q   V.         .         .
(PEAK DAY 1, HOUR  16.000)
 112.083   1580.5690   2568.09  .         .        Q.         .         .
(PEAK DAY 1, HOUR  16.083)
 112.167   1604.0853   3414.57  .         .         V    Q    .         .
(PEAK DAY 1, HOUR  16.167)
 112.250   1634.5641   4425.51  .         .         V         .  Q      .
(PEAK DAY 1, HOUR  16.250)
 112.333   1670.0083   5146.50  .         .         V         .       Q .
(PEAK DAY 1, HOUR  16.333)
 112.417   1706.0327   5230.75  .         .         .V        .        Q.
(PEAK DAY 1, HOUR  16.417)
 112.500   1739.7933   4902.04  .         .         .V        .     Q   .
(PEAK DAY 1, HOUR  16.500)
 112.583   1770.6061   4474.01  .         .         . V       .  Q      .
(PEAK DAY 1, HOUR  16.583)
 112.667   1797.4611   3899.34  .         .         . V      Q.         .
(PEAK DAY 1, HOUR  16.667)
 112.750   1819.9971   3272.23  .         .         . V Q     .         .
(PEAK DAY 1, HOUR  16.750)
 112.833   1838.8982   2744.44  .         .         Q  V      .         .
(PEAK DAY 1, HOUR  16.833)
 112.917   1855.0728   2348.55  .         .      Q  .  V      .         .
(PEAK DAY 1, HOUR  16.917)
 113.000   1869.2981   2065.52  .         .    Q     .  V      .         .
(PEAK DAY 1, HOUR  17.000)
 113.083   1882.0952   1858.14  .         .   Q      .  V      .         .
(PEAK DAY 1, HOUR  17.083)
 113.167   1893.8380   1705.06  .         . Q        .  V      .         .
(PEAK DAY 1, HOUR  17.167)
 113.250   1904.7113   1578.81  .         .Q         .  V      .         .
(PEAK DAY 1, HOUR  17.250)
 113.333   1914.8801   1476.51  .         .Q         .   V     .         .
(PEAK DAY 1, HOUR  17.333)
 113.417   1924.4413   1388.28  .         Q          .   V     .         .
(PEAK DAY 1, HOUR  17.417)
 113.500   1933.5006   1315.41  .        Q.          .   V     .         .
(PEAK DAY 1, HOUR  17.500)
 113.583   1942.1592   1257.23  .        Q.          .   V     .         .
(PEAK DAY 1, HOUR  17.583)
 113.667   1950.4983   1210.84  .        Q.          .   V     .         .
(PEAK DAY 1, HOUR  17.667)
 113.750   1958.5782   1173.21  .       Q .          .   V     .         .
(PEAK DAY 1, HOUR  17.750)
 113.833   1966.4386   1141.32  .       Q .          .   V     .         .
(PEAK DAY 1, HOUR  17.833)
 113.917   1974.1063   1113.35  .       Q .          .   V     .         .
(PEAK DAY 1, HOUR  17.917)
 114.000   1981.6003   1088.14  .       Q .          .   V     .         .
(PEAK DAY 1, HOUR  18.000)
 114.083   1988.9241   1063.41  .       Q .          .   V     .         .
(PEAK DAY 1, HOUR  18.083)
 114.167   1996.0579   1035.82  .      Q  .          .    V    .         .
(PEAK DAY 1, HOUR  18.167)
 114.250   2002.9701   1003.65  .      Q  .          .    V    .         .
(PEAK DAY 1, HOUR  18.250)
 114.333   2009.6365    967.96  .      Q  .          .    V    .         .
(PEAK DAY 1, HOUR  18.333)
 114.417   2016.0707    934.25  .      Q  .          .    V    .         .
(PEAK DAY 1, HOUR  18.417)
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 114.500   2022.3115    906.17  .      Q  .          .    V    .         .
(PEAK DAY 1, HOUR  18.500)
 114.583   2028.3894    882.51  .      Q  .          .    V    .         .
(PEAK DAY 1, HOUR  18.583)
 114.667   2034.3256    861.93  .      Q  .          .    V    .         .
(PEAK DAY 1, HOUR  18.667)
 114.750   2040.1393    844.16  .      Q  .          .    V    .         .
(PEAK DAY 1, HOUR  18.750)
 114.833   2045.8517    829.44  .      Q  .          .    V    .         .
(PEAK DAY 1, HOUR  18.833)
 114.917   2051.4805    817.28  .      Q  .          .    V    .         .
(PEAK DAY 1, HOUR  18.917)
 115.000   2057.0354    806.58  .      Q  .          .    V    .         .
(PEAK DAY 1, HOUR  19.000)
 115.083   2062.5215    796.59  .      Q  .          .    V    .         .
(PEAK DAY 1, HOUR  19.083)
 115.167   2067.9456    787.56  .    Q    .          .    V    .         .
(PEAK DAY 1, HOUR  19.167)
 115.250   2073.3169    779.94  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  19.250)
 115.333   2078.6416    773.16  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  19.333)
 115.417   2083.9241    767.02  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  19.417)
 115.500   2089.1682    761.43  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  19.500)
 115.583   2094.3765    756.24  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  19.583)
 115.667   2099.5498    751.16  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  19.667)
 115.750   2104.6897    746.33  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  19.750)
 115.833   2109.7981    741.75  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  19.833)
 115.917   2114.8752    737.19  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  19.917)
 116.000   2119.9202    732.51  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  20.000)
 116.083   2124.9333    727.91  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  20.083)
 116.167   2129.9172    723.64  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  20.167)
 116.250   2134.8740    719.73  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  20.250)
 116.333   2139.8054    716.05  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  20.333)
 116.417   2144.7122    712.47  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  20.417)
 116.500   2149.5930    708.71  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  20.500)
 116.583   2154.4475    704.88  .    Q    .          .      V  .         .
(PEAK DAY 1, HOUR  20.583)
 116.667   2159.2776    701.32  .    Q    .          .      V  .         .
(PEAK DAY 1, HOUR  20.667)
 116.750   2164.0854    698.11  .    Q    .          .      V  .         .
(PEAK DAY 1, HOUR  20.750)
 116.833   2168.8726    695.09  .    Q    .          .      V  .         .
(PEAK DAY 1, HOUR  20.833)
 116.917   2173.6406    692.31  .    Q    .          .      V  .         .
(PEAK DAY 1, HOUR  20.917)
 117.000   2178.3901    689.62  .    Q    .          .      V  .         .
(PEAK DAY 1, HOUR  21.000)
 117.083   2183.1213    686.99  .    Q    .          .      V  .         .
(PEAK DAY 1, HOUR  21.083)
 117.167   2187.8352    684.45  .    Q    .          .      V  .         .
(PEAK DAY 1, HOUR  21.167)
 117.250   2192.5325    682.04  .    Q    .          .      V  .         .
(PEAK DAY 1, HOUR  21.250)
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117.333	2197.2139	679.74	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 21.333)										
117.417	2201.8799	677.50	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 21.417)										
117.500	2206.5308	675.32	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 21.500)										
117.583	2211.1672	673.20	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 21.583)										
117.667	2215.7893	671.14	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 21.667)										
117.750	2220.3977	669.12	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 21.750)										
117.833	2224.9924	667.16	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 21.833)										
117.917	2229.5740	665.24	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 21.917)										
118.000	2234.1426	663.36	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 22.000)										
118.083	2238.6985	661.53	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 22.083)										
118.167	2243.2422	659.74	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 22.167)										
118.250	2247.7737	657.99	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 22.250)										
118.333	2252.2935	656.27	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 22.333)										
118.417	2256.8015	654.58	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 22.417)										
118.500	2261.2983	652.94	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 22.500)										
118.583	2265.7839	651.32	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 22.583)										
118.667	2270.2588	649.74	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 22.667)										
118.750	2274.7229	648.19	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 22.750)										
118.833	2279.1765	646.66	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 22.833)										
118.917	2283.6199	645.17	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 22.917)										
119.000	2288.0530	643.70	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 23.000)										
119.083	2292.4761	642.25	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 23.083)										
119.167	2296.8894	640.83	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 23.167)										
119.250	2301.2932	639.43	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 23.250)										
119.333	2305.6875	638.05	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 23.333)										
119.417	2310.0725	636.70	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 23.417)										
119.500	2314.4482	635.37	.	Q	.	.	V.	.	.	
(PEAK DAY 1, HOUR 23.500)										
119.583	2318.8149	634.05	.	Q	.	.	V.	.	.	
(PEAK DAY 1, HOUR 23.583)										
119.667	2323.1729	632.76	.	Q	.	.	V.	.	.	
(PEAK DAY 1, HOUR 23.667)										
119.750	2327.5220	631.48	.	Q	.	.	V.	.	.	
(PEAK DAY 1, HOUR 23.750)										
119.833	2331.8623	630.23	.	Q	.	.	V.	.	.	
(PEAK DAY 1, HOUR 23.833)										
119.917	2336.1941	628.99	.	Q	.	.	V.	.	.	
(PEAK DAY 1, HOUR 23.917)										
120.000	2340.5176	627.77	.	Q	.	.	V.	.	.	
(PEAK DAY 1, HOUR 24.000)										
120.083	2344.8259	625.56	.	Q	.	.	V.	.	.	
(PEAK DAY 1, HOUR 24.083)										
120.167	2349.0901	619.16	.	Q	.	.	V.	.	.	
(PEAK DAY 1, HOUR 24.167)										
120.250	2353.2664	606.40	.	Q	.	.	V.	.	.	
(PEAK DAY 1, HOUR 24.250)										
120.333	2357.3179	588.28	.	Q	.	.	V.	.	.	
(PEAK DAY 1, HOUR 24.333)										
120.417	2361.2371	569.05	.	Q	.	.	V.	.	.	
(PEAK DAY 1, HOUR 24.417)										
120.500	2365.0342	551.36	.	Q	.	.	V.	.	.	
(PEAK DAY 1, HOUR 24.500)										
120.583	2368.7219	535.45	.	Q	.	.	V.	.	.	
(PEAK DAY 1, HOUR 24.583)										
120.667	2372.3210	522.60	.	Q	.	.	V.	.	.	
(PEAK DAY 1, HOUR 24.667)										
120.750	2375.8569	513.40	.	Q	.	.	V.	.	.	
(PEAK DAY 1, HOUR 24.750)										
120.833	2379.3496	507.13	.	Q	.	.	V.	.	.	
(PEAK DAY 1, HOUR 24.833)										
120.917	2382.8130	502.87	.	Q	.	.	V.	.	.	
(PEAK DAY 1, HOUR 24.917)										
121.000	2386.2556	499.86	.	Q	.	.	V.	.	.	
(PEAK DAY 1, HOUR 25.000)										
121.083	2389.6829	497.63	.	Q	.	.	V.	.	.	
(PEAK DAY 1, HOUR 25.083)										
121.167	2393.0977	495.82	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 25.167)										
121.250	2396.5020	494.31	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 25.250)										
121.333	2399.8972	492.99	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 25.333)										
121.417	2403.2844	491.83	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 25.417)										
121.500	2406.6648	490.82	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 25.500)										
121.583	2410.0388	489.92	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 25.583)										
121.667	2413.4072	489.09	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 25.667)										
121.750	2416.7703	488.31	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 25.750)										
121.833	2420.1282	487.56	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 25.833)										
121.917	2423.4810	486.83	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 25.917)										
122.000	2426.8289	486.12	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 26.000)										
122.083	2430.1721	485.43	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 26.083)										
122.167	2433.5107	484.77	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 26.167)										
122.250	2436.8450	484.12	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 26.250)										
122.333	2440.1748	483.48	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 26.333)										
122.417	2443.5005	482.88	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 26.417)										
122.500	2446.8220	482.29	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 26.500)										
122.583	2450.1396	481.71	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 26.583)										
122.667	2453.4534	481.15	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 26.667)										
122.750	2456.7634	480.61	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 26.750)										
122.833	2460.0698	480.09	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 26.833)										
122.917	2463.3728	479.58	.	Q	.	.	V	.	.	
(PEAK DAY 1, HOUR 26.917)										

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 123.000   2466.6724    479.08  .  Q      .         .         V         .
 (PEAK DAY 1, HOUR  27.000)
 123.083   2469.9685    478.60  .  Q      .         .         V         .
 (PEAK DAY 1, HOUR  27.083)
 123.167   2473.2615    478.13  .  Q      .         .         .V        .
 (PEAK DAY 1, HOUR  27.167)
 123.250   2476.5513    477.67  .  Q      .         .         .V        .
 (PEAK DAY 1, HOUR  27.250)
 123.333   2479.8379    477.21  .  Q      .         .         .V        .
 (PEAK DAY 1, HOUR  27.333)
 123.417   2483.1213    476.76  .  Q      .         .         .V        .
 (PEAK DAY 1, HOUR  27.417)
 123.500   2486.4016    476.31  .  Q      .         .         .V        .
 (PEAK DAY 1, HOUR  27.500)
 123.583   2489.6790    475.86  .  Q      .         .         .V        .
 (PEAK DAY 1, HOUR  27.583)
 123.667   2492.9531    475.41  .  Q      .         .         .V        .
 (PEAK DAY 1, HOUR  27.667)
 123.750   2496.2241    474.97  .  Q      .         .         .V        .
 (PEAK DAY 1, HOUR  27.750)
 123.833   2499.4922    474.52  .  Q      .         .         .V        .
 (PEAK DAY 1, HOUR  27.833)
 123.917   2502.7571    474.08  .  Q      .         .         .V        .
 (PEAK DAY 1, HOUR  27.917)
 124.000   2506.0190    473.63  .  Q      .         .         .V        .
 (PEAK DAY 1, HOUR  28.000)
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
============================================================================
____________________________________________________________________________
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             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
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                         Analysis prepared by:

                         Huitt - Zollars, Inc.
                        430 Exchange, Suite 200
                         Irvine, CA. 92602-1309
                            714 - 734 - 5100

----------------------------------------------------------------------------
  FILE NAME: CP63CHO5.FLD
  TIME/DATE OF STUDY: 13:25 04/01/2004


****************************************************************************
  FLOW PROCESS FROM NODE    100.00 TO NODE    780.00 IS CODE =   1
----------------------------------------------------------------------------

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  4741.3 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
============================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    4741.300 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.480 HOURS
          CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
          THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
          MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
         VALLEY(DEVELOPED):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  1.000
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         VALLEY(UNDEVELOPED)/DESERT:
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:
         +------------------+--------+--------+--------+--------+--------+
         | RAINFALL DEPTHS & |        |        |        |        |        |
         |    LOSS RATES     |  DAY 1 |  DAY 2 |  DAY 3 |  DAY 4 |  DAY 5 |
         |==================+========+========+========+========+========|
         | 5-MINUTE (INCHES) |   0.58|    0.27|    0.12|    0.06|    0.04|
         |30-MINUTE (INCHES) |   1.22|    0.56|    0.24|    0.13|    0.09|
         |   1-HOUR (INCHES) |   1.62|    0.75|    0.33|    0.17|    0.12|
         |   3-HOUR (INCHES) |   2.71|    1.25|    0.54|    0.28|    0.21|
         |   6-HOUR (INCHES) |   3.75|    1.73|    0.75|    0.39|    0.29|
         |  24-HOUR (INCHES) |   6.28|    2.89|    1.26|    0.66|    0.48|
         |==================+========+========+========+========+========|
         | LOSS RATE(IN/HR)  |   0.190|   0.190|   0.190|   0.190|   0.190|
         | LOW LOSS FRACTION |   0.550|   0.750|   0.900|   0.970|   0.990|
         +------------------+--------+--------+--------+--------+--------+
           5-MINUTE FACTOR = 0.793
          30-MINUTE FACTOR = 0.793
           1-HOUR FACTOR = 0.793
           3-HOUR FACTOR = 0.969
           6-HOUR FACTOR = 0.984
          24-HOUR FACTOR = 0.990

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  17.361


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  96.00
         MODEL TIME(HOURS) FOR END OF RESULTS = 124.00


============================================================================
                      UNIT HYDROGRAPH DETERMINATION

----------------------------------------------------------------------------
     INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
      NUMBER          MEAN VALUES          ORDINATES(CFS)
----------------------------------------------------------------------------
         1                1.137               652.130
         2                4.082              1688.625
         3                8.525              2547.514
         4               14.577              3470.279
         5               24.203              5519.575
         6               43.203             10894.611
         7               57.937              8448.228
         8               65.484              4327.674
         9               70.911              3111.621
        10               75.443              2599.076
        11               78.982              2029.171
        12               82.133              1806.516
        13               84.749              1499.854
        14               87.075              1334.078
        15               88.974              1088.566
        16               90.645               958.165
        17               92.163               870.854
        18               93.467               747.418
        19               94.550               621.273
        20               95.489               538.119
        21               96.255               439.106
        22               96.815               321.374
        23               97.375               321.055
        24               97.900               301.316
```

25	98.079	102.631
26	98.169	51.477
27	98.259	51.411
28	98.349	51.608
29	98.439	51.604
30	98.528	51.219
31	98.618	51.477
32	98.708	51.477
33	98.798	51.608
34	98.887	51.346
35	98.977	51.608
36	99.067	51.604
37	99.157	51.604
38	99.247	51.604
39	99.337	51.604
40	99.427	51.604
41	99.517	51.604
42	99.607	51.604
43	99.697	51.604
44	99.787	51.604
45	99.877	51.604
46	99.967	51.604
47	100.000	18.785

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 2535.6968

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1991.0461

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5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	2025.0	4050.0	6075.0	8100.0
96.000	524.3721	57.05	Q	V	.	.	.
(PEAK DAY 2, HOUR 24.000)							
96.083	524.7745	58.43	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.083)							
96.167	525.2059	62.64	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.167)							
96.250	525.6828	69.24	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.250)							
96.333	526.2228	78.41	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.333)							
96.417	526.8649	93.23	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.417)							
96.500	527.7108	122.82	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.500)							
96.583	528.7158	145.93	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.583)							
96.667	529.8037	157.97	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.667)							
96.750	530.9523	166.77	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.750)							
96.833	532.1523	174.25	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.833)							
96.917	533.3935	180.21	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.917)							
97.000	534.6719	185.62	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.000)							
97.083	535.9819	190.22	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.083)							
97.167	537.3209	194.42	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.167)							
97.250	538.6843	197.97	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.250)							
97.333	540.0699	201.20	Q	V	.	.	.
(PEAK DAY 1, HOUR 1.333)							
97.417	541.4763	204.20	.Q	V	.	.	.
(PEAK DAY 1, HOUR 1.417)							
97.500	542.9012	206.90	.Q	V	.	.	.
(PEAK DAY 1, HOUR 1.500)							
97.583	544.3423	209.26	.Q	V	.	.	.
(PEAK DAY 1, HOUR 1.583)							
97.667	545.7985	211.43	.Q	V	.	.	.
(PEAK DAY 1, HOUR 1.667)							
97.750	547.2676	213.33	.Q	V	.	.	.
(PEAK DAY 1, HOUR 1.750)							
97.833	548.7479	214.94	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.833)							
97.917	550.2393	216.54	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.917)							
98.000	551.7415	218.12	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.000)							
98.083	553.2509	219.16	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.083)							
98.167	554.7665	220.08	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.167)							
98.250	556.2885	220.99	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.250)							
98.333	557.8170	221.93	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.333)							
98.417	559.3518	222.86	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.417)							
98.500	560.8932	223.82	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.500)							
98.583	562.4412	224.77	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.583)							
98.667	563.9959	225.74	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.667)							
98.750	565.5573	226.71	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.750)							
98.833	567.1254	227.70	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.833)							
98.917	568.7004	228.68	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.917)							
99.000	570.2823	229.69	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.000)							
99.083	571.8711	230.70	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.083)							
99.167	573.4670	231.73	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.167)							
99.250	575.0699	232.75	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.250)							
99.333	576.6802	233.80	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.333)							
99.417	578.2975	234.84	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.417)							
99.500	579.9223	235.92	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.500)							
99.583	581.5544	236.98	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.583)							
99.667	583.1940	238.07	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.667)							
99.750	584.8411	239.16	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.750)							
99.833	586.4959	240.27	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.833)							
99.917	588.1577	241.29	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.917)							
100.000	589.8264	242.29	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.000)							
100.083	591.5018	243.27	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.083)							
100.167	593.1842	244.29	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.167)							
100.250	594.8736	245.30	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.250)							
100.333	596.5702	246.34	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 4.333)							
100.417	598.2739	247.37	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.417)							
100.500	599.9849	248.44	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.500)							
100.583	601.7031	249.49	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.583)							
100.667	603.4288	250.58	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.667)							
100.750	605.1620	251.66	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.750)							
100.833	606.9028	252.77	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.833)							
100.917	608.6512	253.87	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.917)							
101.000	610.4075	255.01	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 5.000)							
101.083	612.1716	256.14	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 5.083)							

```
101.167    613.9436    257.30  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.167)
101.250    615.7236    258.46  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.250)
101.333    617.5119    259.65  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.333)
101.417    619.3083    260.84  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.417)
101.500    621.1131    262.06  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.500)
101.583    622.9263    263.27  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.583)
101.667    624.7480    264.52  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.667)
101.750    626.5784    265.76  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.750)
101.833    628.4175    267.05  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.833)
101.917    630.2655    268.32  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.917)
102.000    632.1225    269.64  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   6.000)
102.083    633.9885    270.94  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   6.083)
102.167    635.8638    272.29  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   6.167)
102.250    637.7483    273.63  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   6.250)
102.333    639.6423    275.02  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   6.333)
102.417    641.5458    276.39  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   6.417)
102.500    643.4592    277.81  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   6.500)
102.583    645.3822    279.23  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   6.583)
102.667    647.3153    280.69  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.667)
102.750    649.2584    282.14  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.750)
102.833    651.2119    283.64  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.833)
102.917    653.1755    285.13  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.917)
103.000    655.1499    286.67  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.000)
103.083    657.1348    288.21  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.083)
103.167    659.1306    289.79  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.167)
103.250    661.1373    291.37  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.250)
103.333    663.1552    293.00  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.333)
103.417    665.1843    294.63  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.417)
103.500    667.2250    296.31  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.500)
103.583    669.2772    297.98  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.583)
103.667    671.3414    299.71  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.667)
103.750    673.4174    301.43  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.750)
103.833    675.5057    303.22  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.833)
103.917    677.6062    305.00  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.917)
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104.000    679.7194    306.84  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   8.000)
104.083    681.8453    308.67  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   8.083)
104.167    683.9842    310.57  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   8.167)
104.250    686.1362    312.46  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   8.250)
104.333    688.3016    314.43  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   8.333)
104.417    690.4805    316.38  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   8.417)
104.500    692.6734    318.41  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   8.500)
104.583    694.8802    320.42  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   8.583)
104.667    697.1014    322.52  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.667)
104.750    699.3370    324.61  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.750)
104.833    701.5876    326.78  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.833)
104.917    703.8530    328.94  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.917)
105.000    706.1339    331.18  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.000)
105.083    708.4301    333.42  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.083)
105.167    710.7424    335.75  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.167)
105.250    713.0707    338.07  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.250)
105.333    715.4156    340.48  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.333)
105.417    717.7772    342.89  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.417)
105.500    720.1559    345.39  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.500)
105.583    722.5518    347.89  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.583)
105.667    724.9657    350.49  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.667)
105.750    727.3975    353.09  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.750)
105.833    729.8478    355.80  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.833)
105.917    732.3168    358.50  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.917)
106.000    734.8052    361.31  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR  10.000)
106.083    737.3130    364.13  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR  10.083)
106.167    739.8409    367.06  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR  10.167)
106.250    742.3892    370.00  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR  10.250)
106.333    744.9584    373.06  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR  10.333)
106.417    747.5488    376.12  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.417)
106.500    750.1611    379.32  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.500)
106.583    752.7955    382.51  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.583)
106.667    755.4529    385.85  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.667)
106.750    758.1334    389.20  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.750)
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106.833    760.8378    392.69  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.833)
106.917    763.5665    396.19  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.917)
107.000    766.3203    399.86  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  11.000)
107.083    769.0995    403.53  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  11.083)
107.167    771.9052    407.38  . Q       .    V    .         .         .
(PEAK DAY 1, HOUR  11.167)
107.250    774.7374    411.24  . Q       .    V    .         .         .
(PEAK DAY 1, HOUR  11.250)
107.333    777.5974    415.28  . Q       .    V    .         .         .
(PEAK DAY 1, HOUR  11.333)
107.417    780.4854    419.34  . Q       .    V    .         .         .
(PEAK DAY 1, HOUR  11.417)
107.500    783.4028    423.60  . Q       .    V    .         .         .
(PEAK DAY 1, HOUR  11.500)
107.583    786.3495    427.88  . Q       .    V    .         .         .
(PEAK DAY 1, HOUR  11.583)
107.667    789.3273    432.36  . Q       .    V    .         .         .
(PEAK DAY 1, HOUR  11.667)
107.750    792.3361    436.88  . Q       .    V    .         .         .
(PEAK DAY 1, HOUR  11.750)
107.833    795.3776    441.62  . Q       .    V    .         .         .
(PEAK DAY 1, HOUR  11.833)
107.917    798.4520    446.40  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  11.917)
108.000    801.5609    451.42  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.000)
108.083    804.7167    458.21  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.083)
108.167    807.9401    468.03  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.167)
108.250    811.2471    480.19  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.250)
108.333    814.6569    495.10  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.333)
108.417    818.2075    515.54  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.417)
108.500    821.9995    550.61  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.500)
108.583    825.9893    579.32  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.583)
108.667    830.1044    597.50  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.667)
108.750    834.3231    612.56  .  Q      .     V   .         .         .
(PEAK DAY 1, HOUR  12.750)
108.833    838.6390    626.67  .  Q      .     V   .         .         .
(PEAK DAY 1, HOUR  12.833)
108.917    843.0424    639.37  .  Q      .     V   .         .         .
(PEAK DAY 1, HOUR  12.917)
109.000    847.5322    651.92  .  Q      .      V  .         .         .
(PEAK DAY 1, HOUR  13.000)
109.083    852.1049    663.96  .  Q      .      V  .         .         .
(PEAK DAY 1, HOUR  13.083)
109.167    856.7635    676.43  .  Q      .      V  .         .         .
(PEAK DAY 1, HOUR  13.167)
109.250    861.5088    689.01  .  Q      .      V  .         .         .
(PEAK DAY 1, HOUR  13.250)
109.333    866.3477    702.61  .  Q      .      V  .         .         .
(PEAK DAY 1, HOUR  13.333)
109.417    871.2896    717.55  .  Q      .      V  .         .         .
(PEAK DAY 1, HOUR  13.417)
109.500    876.3552    735.54  .  Q      .      V  .         .         .
(PEAK DAY 1, HOUR  13.500)
109.583    881.5556    755.09  .  Q      .      V  .         .         .
(PEAK DAY 1, HOUR  13.583)
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109.667    886.9045    776.66  .  Q      .      V  .         .         .
(PEAK DAY 1, HOUR  13.667)
109.750    892.4076    799.06  .  Q      .      V  .         .         .
(PEAK DAY 1, HOUR  13.750)
109.833    898.0772    823.23  .   Q     .       V .         .         .
(PEAK DAY 1, HOUR  13.833)
109.917    903.9202    848.40  .   Q     .       V .         .         .
(PEAK DAY 1, HOUR  13.917)
110.000    909.9514    875.72  .   Q     .       V .         .         .
(PEAK DAY 1, HOUR  14.000)
110.083    916.2261    911.09  .   Q     .       V .         .         .
(PEAK DAY 1, HOUR  14.083)
110.167    922.8422    960.67  .   Q     .       V .         .         .
(PEAK DAY 1, HOUR  14.167)
110.250    929.8752   1021.19  .    Q    .       V .         .         .
(PEAK DAY 1, HOUR  14.250)
110.333    937.4159   1094.90  .    Q    .       V .         .         .
(PEAK DAY 1, HOUR  14.333)
110.417    945.6345   1193.34  .    Q    .       V .         .         .
(PEAK DAY 1, HOUR  14.417)
110.500    954.9769   1356.53  .     Q   .        V.         .         .
(PEAK DAY 1, HOUR  14.500)
110.583    965.2540   1492.23  .      Q  .        V.         .         .
(PEAK DAY 1, HOUR  14.583)
110.667    976.1564   1583.02  .      Q  .        V.         .         .
(PEAK DAY 1, HOUR  14.667)
110.750    987.5969   1661.17  .       Q .        V.         .         .
(PEAK DAY 1, HOUR  14.750)
110.833    999.5599   1737.02  .       Q .         V         .         .
(PEAK DAY 1, HOUR  14.833)
110.917   1012.0135   1808.27  .       Q .         V         .         .
(PEAK DAY 1, HOUR  14.917)
111.000   1024.9714   1881.49  .        Q.         V         .         .
(PEAK DAY 1, HOUR  15.000)
111.083   1038.4275   1953.82  .        Q.         V         .         .
(PEAK DAY 1, HOUR  15.083)
111.167   1052.4082   2029.99  .         Q         .V        .         .
(PEAK DAY 1, HOUR  15.167)
111.250   1066.9198   2107.09  .         Q         .V        .         .
(PEAK DAY 1, HOUR  15.250)
111.333   1082.0043   2190.26  .         Q         .V        .         .
(PEAK DAY 1, HOUR  15.333)
111.417   1097.5770   2261.16  .         .Q        . V       .         .
(PEAK DAY 1, HOUR  15.417)
111.500   1113.5178   2314.61  .         .Q        . V       .         .
(PEAK DAY 1, HOUR  15.500)
111.583   1129.7285   2353.79  .         .Q        . V       .         .
(PEAK DAY 1, HOUR  15.583)
111.667   1146.1561   2385.29  .         .Q        .  V      .         .
(PEAK DAY 1, HOUR  15.667)
111.750   1162.5571   2381.42  .         .Q        .  V      .         .
(PEAK DAY 1, HOUR  15.750)
111.833   1178.1958   2270.74  .         .Q        .  V      .         .
(PEAK DAY 1, HOUR  15.833)
111.917   1193.8363   2271.00  .         .Q        .  V      .         .
(PEAK DAY 1, HOUR  15.917)
112.000   1210.8542   2471.00  .         . Q       .   V     .         .
(PEAK DAY 1, HOUR  16.000)
112.083   1231.4600   2991.95  .         .   Q     .   V     .         .
(PEAK DAY 1, HOUR  16.083)
112.167   1257.0110   3710.00  .         .       Q .    V    .         .
(PEAK DAY 1, HOUR  16.167)
112.250   1287.2900   4396.52  .         .         .Q   V    .         .
(PEAK DAY 1, HOUR  16.250)
112.333   1323.0471   5191.94  .         .         .    QV   .         .
(PEAK DAY 1, HOUR  16.333)
112.417   1366.6873   6336.55  .         .         .      V  .Q        .
(PEAK DAY 1, HOUR  16.417)
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 112.500   1422.4481   8096.49  .          .          .       V .        Q.
(PEAK DAY 1, HOUR  16.500)
 112.583   1469.5847   6844.24  .          .          .       V.  Q      .
(PEAK DAY 1, HOUR  16.583)
 112.667   1503.8654   4977.55  .          .          .   Q     V          .
(PEAK DAY 1, HOUR  16.667)
 112.750   1533.0299   4234.69  .          .          Q         V          .
(PEAK DAY 1, HOUR  16.750)
 112.833   1560.4061   3975.03  .          .         Q.         .V         .
(PEAK DAY 1, HOUR  16.833)
 112.917   1585.9252   3705.36  .          .        Q .         .V         .
(PEAK DAY 1, HOUR  16.917)
 113.000   1609.9448   3487.65  .          .       Q  .         . V        .
(PEAK DAY 1, HOUR  17.000)
 113.083   1632.2296   3235.76  .          .     Q    .         . V        .
(PEAK DAY 1, HOUR  17.083)
 113.167   1653.0839   3028.04  .          .    Q     .         .  V       .
(PEAK DAY 1, HOUR  17.167)
 113.250   1672.3000   2790.18  .          .  Q       .         .  V       .
(PEAK DAY 1, HOUR  17.250)
 113.333   1690.1511   2591.97  .          . Q        .         .  V       .
(PEAK DAY 1, HOUR  17.333)
 113.417   1706.6302   2392.77  .          .Q         .         .   V      .
(PEAK DAY 1, HOUR  17.417)
 113.500   1721.2643   2124.86  .          Q          .         .   V      .
(PEAK DAY 1, HOUR  17.500)
 113.583   1734.2581   1886.69  .         Q.          .         .   V      .
(PEAK DAY 1, HOUR  17.583)
 113.667   1746.0696   1715.04  .        Q .          .         .    V     .
(PEAK DAY 1, HOUR  17.667)
 113.750   1756.8064   1558.98  .       Q  .          .         .    V     .
(PEAK DAY 1, HOUR  17.750)
 113.833   1766.5392   1413.20  .      Q   .          .         .    V     .
(PEAK DAY 1, HOUR  17.833)
 113.917   1775.6035   1316.13  .      Q   .          .         .    V     .
(PEAK DAY 1, HOUR  17.917)
 114.000   1783.9698   1214.79  .     Q    .          .         .    V     .
(PEAK DAY 1, HOUR  18.000)
 114.083   1791.3156   1066.59  .     Q    .          .         .    V     .
(PEAK DAY 1, HOUR  18.083)
 114.167   1798.0677    980.42  .    Q     .          .         .     V    .
(PEAK DAY 1, HOUR  18.167)
 114.250   1804.4373    924.85  .    Q     .          .         .     V    .
(PEAK DAY 1, HOUR  18.250)
 114.333   1810.4688    875.77  .    Q     .          .         .     V    .
(PEAK DAY 1, HOUR  18.333)
 114.417   1816.1316    822.24  .    Q     .          .         .     V    .
(PEAK DAY 1, HOUR  18.417)
 114.500   1821.3540    758.30  .   Q      .          .         .     V    .
(PEAK DAY 1, HOUR  18.500)
 114.583   1826.2140    705.67  .   Q      .          .         .     V    .
(PEAK DAY 1, HOUR  18.583)
 114.667   1830.8105    667.42  .   Q      .          .         .     V    .
(PEAK DAY 1, HOUR  18.667)
 114.750   1835.1884    635.65  .   Q      .          .         .     V    .
(PEAK DAY 1, HOUR  18.750)
 114.833   1839.3772    608.22  .   Q      .          .         .     V    .
(PEAK DAY 1, HOUR  18.833)
 114.917   1843.3987    583.92  . Q        .          .         .      V   .
(PEAK DAY 1, HOUR  18.917)
 115.000   1847.2664    561.58  . Q        .          .         .      V   .
(PEAK DAY 1, HOUR  19.000)
 115.083   1851.0087    543.39  . Q        .          .         .      V   .
(PEAK DAY 1, HOUR  19.083)
 115.167   1854.6389    527.11  . Q        .          .         .      V   .
(PEAK DAY 1, HOUR  19.167)
 115.250   1858.1722    513.04  . Q        .          .         .      V   .
(PEAK DAY 1, HOUR  19.250)
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 115.333   1861.6184    500.38  . Q        .          .         .      V   .
(PEAK DAY 1, HOUR  19.333)
 115.417   1864.9816    488.33  . Q        .          .         .      V   .
(PEAK DAY 1, HOUR  19.417)
 115.500   1868.2661    476.91  . Q        .          .         .      V   .
(PEAK DAY 1, HOUR  19.500)
 115.583   1871.4744    465.84  . Q        .          .         .      V   .
(PEAK DAY 1, HOUR  19.583)
 115.667   1874.6071    454.86  . Q        .          .         .      V   .
(PEAK DAY 1, HOUR  19.667)
 115.750   1877.6595    443.22  . Q        .          .         .      V   .
(PEAK DAY 1, HOUR  19.750)
 115.833   1880.6226    430.23  . Q        .          .         .      V   .
(PEAK DAY 1, HOUR  19.833)
 115.917   1883.4233    406.68  . Q        .          .         .      V   .
(PEAK DAY 1, HOUR  19.917)
 116.000   1886.1075    389.75  .Q         .          .         .      V   .
(PEAK DAY 1, HOUR  20.000)
 116.083   1888.7346    381.46  .Q         .          .         .      V   .
(PEAK DAY 1, HOUR  20.083)
 116.167   1891.3137    374.48  .Q         .          .         .      V   .
(PEAK DAY 1, HOUR  20.167)
 116.250   1893.8436    367.34  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  20.250)
 116.333   1896.3243    360.20  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  20.333)
 116.417   1898.7587    353.47  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  20.417)
 116.500   1901.1489    347.07  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  20.500)
 116.583   1903.4972    340.98  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  20.583)
 116.667   1905.8054    335.15  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  20.667)
 116.750   1908.0751    329.56  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  20.750)
 116.833   1910.3079    324.20  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  20.833)
 116.917   1912.5077    319.41  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  20.917)
 117.000   1914.6774    315.04  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  21.000)
 117.083   1916.8182    310.85  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  21.083)
 117.167   1918.9313    306.82  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  21.167)
 117.250   1921.0177    302.95  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  21.250)
 117.333   1923.0785    299.22  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  21.333)
 117.417   1925.1145    295.63  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  21.417)
 117.500   1927.1267    292.16  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  21.500)
 117.583   1929.1157    288.80  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  21.583)
 117.667   1931.0822    285.53  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  21.667)
 117.750   1933.0267    282.35  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  21.750)
 117.833   1934.9500    279.25  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  21.833)
 117.917   1936.8530    276.33  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  21.917)
 118.000   1938.7368    273.53  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  22.000)
 118.083   1940.6019    270.81  .Q         .          .         .       V  .
(PEAK DAY 1, HOUR  22.083)
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118.167	1942.4487	268.16	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.167)								
118.250	1944.2778	265.58	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.250)								
118.333	1946.0896	263.06	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.333)								
118.417	1947.8844	260.61	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.417)								
118.500	1949.6627	258.22	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.500)								
118.583	1951.4249	255.88	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.583)								
118.667	1953.1715	253.60	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.667)								
118.750	1954.9027	251.37	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.750)								
118.833	1956.6189	249.19	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.833)								
118.917	1958.3204	247.06	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.917)								
119.000	1960.0077	244.98	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.000)								
119.083	1961.6809	242.95	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.083)								
119.167	1963.3403	240.95	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.167)								
119.250	1964.9863	239.01	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.250)								
119.333	1966.6193	237.10	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.333)								
119.417	1968.2393	235.23	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.417)								
119.500	1969.8467	233.40	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.500)								
119.583	1971.4418	231.61	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.583)								
119.667	1973.0248	229.85	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.667)								
119.750	1974.5959	228.13	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.750)								
119.833	1976.1555	226.44	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.833)								
119.917	1977.7036	224.79	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.917)								
120.000	1979.2406	223.16	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.000)								
120.083	1980.7501	219.19	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.083)								
120.167	1982.2065	211.46	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.167)								
120.250	1983.5886	200.67	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.250)								
120.333	1984.8737	186.59	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.333)								
120.417	1986.0109	165.13	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.417)								
120.500	1986.8660	124.17	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.500)								
120.583	1987.5026	92.43	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.583)								
120.667	1988.0258	75.96	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.667)								
120.750	1988.4669	64.06	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.750)								
120.833	1988.8396	54.11	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.833)								
120.917	1989.1586	46.31	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.917)								
121.000	1989.4298	39.39	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.000)								
121.083	1989.6614	33.63	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.083)								
121.167	1989.8578	28.51	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.167)								
121.250	1990.0254	24.33	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.250)								
121.333	1990.1677	20.66	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.333)								
121.417	1990.2871	17.33	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.417)								
121.500	1990.3868	14.48	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.500)								
121.583	1990.4702	12.10	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.583)								
121.667	1990.5394	10.05	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.667)								
121.750	1990.5970	8.37	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.750)								
121.833	1990.6462	7.14	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.833)								
121.917	1990.6870	5.91	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.917)								
122.000	1990.7198	4.77	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.000)								
122.083	1990.7499	4.36	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.083)								
122.167	1990.7784	4.14	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.167)								
122.250	1990.8054	3.92	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.250)								
122.333	1990.8309	3.70	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.333)								
122.417	1990.8550	3.49	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.417)								
122.500	1990.8776	3.28	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.500)								
122.583	1990.8987	3.07	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.583)								
122.667	1990.9183	2.86	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.667)								
122.750	1990.9365	2.65	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.750)								
122.833	1990.9534	2.44	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.833)								
122.917	1990.9688	2.24	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.917)								
123.000	1990.9828	2.03	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.000)								
123.083	1990.9954	1.83	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.083)								
123.167	1991.0066	1.63	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.167)								
123.250	1991.0165	1.43	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.250)								
123.333	1991.0249	1.23	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.333)								
123.417	1991.0320	1.03	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.417)								
123.500	1991.0377	0.84	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.500)								
123.583	1991.0421	0.64	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.583)								
123.667	1991.0452	0.45	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.667)								
123.750	1991.0470	0.26	Q	.	.	.	V	
(PEAK DAY 1, HOUR 27.750)								

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 123.833   1991.0475      0.07  Q          .          .          .          V
 (PEAK DAY 1, HOUR  27.833)
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE    780.00 TO NODE    780.00 IS CODE = 3.1
--------------------------------------------------------------------------------
  >>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #1<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  4741.3 Ac. ***

                   INFLOW
                  (STREAM 1)
                       |
                       |
                       V                __effective depth
                   -----------          |   (and volume)
                  |           |    |    |
                  |           |    |....V........
                  | detention |<-->|           outflow
                  |   basin   |    |.........._______
                   -----------     |    ^    |  \
                       |           |  dead   |   basin outlet
                       V           | storage |
                    OUTFLOW         ---------
                   (STREAM 1)



        ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 1
        THROUGH A FLOW-THROUGH DETENTION BASIN
        SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
          DEAD STORAGE(AF) =      0.000
          SPECIFIED DEAD STORAGE(AF) FILLED =      0.000
          SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET =      0.000
          DETENTION BASIN CONSTANT LOSS RATE(CFS) =    0.00


        BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

         INTERVAL    DEPTH      OUTFLOW     STORAGE
          NUMBER      (FT)       (CFS)       (AF)
              1        0.00         0.00       0.000
              2        4.00       175.20       1.000
              3        5.00       199.20       3.100
              4        6.00       220.50       7.800
              5        7.00       240.40      15.800
              6        9.00       276.50      44.300
              7       11.00       308.80      83.700
              8       13.00       338.30     125.900
              9       15.00       365.70     202.000
             10       17.00       391.10     290.900
             11       19.00       415.40     382.300
             12       21.00       438.20     476.600
             13       23.00       460.70     573.700
             14       25.00       472.30     673.700
             15       27.00       485.40     777.000
             16       29.00       500.00     883.200
             17       31.00       515.60     992.200


================================================================================
 MODIFIED-PULS BASIN ROUTING MODEL RESULTS(5-MINUTE COMPUTATION INTERVALS):
 (Note: Computed EFFECTIVE DEPTH and VOLUME are estimated at the clock time;
        MEAN OUTFLOW is the average value during the unit interval.)
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PEAK DAY	TIME (HRS)	CLOCK TIME (HRS)	DEAD-STORAGE FILLED(AF)	INFLOW (CFS)	LOSS (CFS)	EFFECTIVE DEPTH(FT)	MEAN OUTFLOW (CFS)	EFFECTIVE VOLUME(AF)
1	0.001	96.001	0.000	57.05	0.00	9.83	290.6	60.746
1	0.084	96.084	0.000	58.43	0.00	9.75	289.3	59.156
1	0.167	96.167	0.000	62.64	0.00	9.68	288.0	57.604
1	0.251	96.251	0.000	69.24	0.00	9.60	286.8	56.105
1	0.334	96.334	0.000	78.41	0.00	9.53	285.6	54.678
1	0.417	96.417	0.000	93.23	0.00	9.46	284.5	53.361
1	0.501	96.501	0.000	122.82	0.00	9.40	283.5	52.255
1	0.584	96.584	0.000	145.93	0.00	9.36	282.6	51.314
1	0.667	96.667	0.000	157.97	0.00	9.31	281.9	50.460
1	0.751	96.751	0.000	166.77	0.00	9.27	281.2	49.672
1	0.834	96.834	0.000	174.25	0.00	9.24	280.6	48.939
1	0.917	96.917	0.000	180.21	0.00	9.20	280.0	48.252
1	1.001	97.001	0.000	185.62	0.00	9.17	279.5	47.605
1	1.084	97.084	0.000	190.22	0.00	9.14	279.0	46.994
1	1.167	97.167	0.000	194.42	0.00	9.11	278.5	46.416
1	1.251	97.251	0.000	197.97	0.00	9.08	278.0	45.864
1	1.334	97.334	0.000	201.20	0.00	9.05	277.6	45.338
1	1.417	97.417	0.000	204.20	0.00	9.03	277.1	44.836
1	1.501	97.501	0.000	206.90	0.00	9.00	276.7	44.355
1	1.584	97.584	0.000	209.26	0.00	8.97	276.3	43.893
1	1.667	97.667	0.000	211.43	0.00	8.94	275.7	43.451
1	1.751	97.751	0.000	213.33	0.00	8.91	275.2	43.025
1	1.834	97.834	0.000	214.94	0.00	8.88	274.6	42.614
1	1.917	97.917	0.000	216.54	0.00	8.85	274.1	42.217
1	2.001	98.001	0.000	218.12	0.00	8.83	273.6	41.835
1	2.084	98.084	0.000	219.16	0.00	8.80	273.1	41.463
1	2.167	98.167	0.000	220.08	0.00	8.78	272.7	41.101
1	2.251	98.251	0.000	220.99	0.00	8.75	272.2	40.748
1	2.334	98.334	0.000	221.93	0.00	8.73	271.8	40.405
1	2.417	98.417	0.000	222.86	0.00	8.70	271.4	40.071
1	2.501	98.501	0.000	223.82	0.00	8.68	270.9	39.746
1	2.584	98.584	0.000	224.77	0.00	8.66	270.5	39.431
1	2.667	98.667	0.000	225.74	0.00	8.64	270.1	39.126
1	2.751	98.751	0.000	226.71	0.00	8.62	269.8	38.829
1	2.834	98.834	0.000	227.70	0.00	8.60	269.4	38.542
1	2.917	98.917	0.000	228.68	0.00	8.58	269.0	38.264
1	3.001	99.001	0.000	229.69	0.00	8.56	268.7	37.995
1	3.084	99.084	0.000	230.70	0.00	8.54	268.3	37.736
1	3.167	99.167	0.000	231.73	0.00	8.52	268.0	37.486
1	3.251	99.251	0.000	232.75	0.00	8.50	267.7	37.245
1	3.334	99.334	0.000	233.80	0.00	8.49	267.4	37.014
1	3.417	99.417	0.000	234.84	0.00	8.47	267.1	36.791
1	3.501	99.501	0.000	235.92	0.00	8.46	266.9	36.578
1	3.584	99.584	0.000	236.98	0.00	8.44	266.6	36.374
1	3.667	99.667	0.000	238.07	0.00	8.43	266.3	36.180
1	3.751	99.751	0.000	239.16	0.00	8.42	266.1	35.994
1	3.834	99.834	0.000	240.27	0.00	8.40	265.9	35.818
1	3.917	99.917	0.000	241.29	0.00	8.39	265.6	35.650
1	4.001	100.001	0.000	242.29	0.00	8.38	265.4	35.491
1	4.084	100.084	0.000	243.27	0.00	8.37	265.2	35.339
1	4.167	100.167	0.000	244.29	0.00	8.36	265.1	35.196
1	4.251	100.251	0.000	245.30	0.00	8.35	264.9	35.062
1	4.334	100.334	0.000	246.34	0.00	8.34	264.7	34.935
1	4.417	100.417	0.000	247.37	0.00	8.33	264.6	34.817
1	4.501	100.501	0.000	248.44	0.00	8.33	264.4	34.707
1	4.584	100.584	0.000	249.49	0.00	8.32	264.3	34.605
1	4.667	100.667	0.000	250.58	0.00	8.31	264.2	34.511
1	4.751	100.751	0.000	251.66	0.00	8.31	264.0	34.426
1	4.834	100.834	0.000	252.77	0.00	8.30	263.9	34.349
1	4.917	100.917	0.000	253.87	0.00	8.30	263.9	34.280
1	5.001	101.001	0.000	255.01	0.00	8.29	263.8	34.220
1	5.084	101.084	0.000	256.14	0.00	8.29	263.7	34.168

1	5.167	101.167	0.000	257.30	0.00	8.29	263.6	34.124
1	5.251	101.251	0.000	258.46	0.00	8.28	263.6	34.089
1	5.334	101.334	0.000	259.65	0.00	8.28	263.5	34.062
1	5.417	101.417	0.000	260.84	0.00	8.28	263.5	34.043
1	5.501	101.501	0.000	262.06	0.00	8.28	263.5	34.033
1	5.584	101.584	0.000	263.27	0.00	8.28	263.5	34.032
1	5.667	101.667	0.000	264.52	0.00	8.28	263.5	34.039
1	5.751	101.751	0.000	265.76	0.00	8.28	263.5	34.055
1	5.834	101.834	0.000	267.05	0.00	8.28	263.5	34.079
1	5.917	101.917	0.000	268.32	0.00	8.29	263.6	34.111
1	6.001	102.001	0.000	269.64	0.00	8.29	263.6	34.153
1	6.084	102.084	0.000	270.94	0.00	8.29	263.7	34.203
1	6.167	102.167	0.000	272.29	0.00	8.30	263.7	34.262
1	6.251	102.251	0.000	273.63	0.00	8.30	263.8	34.329
1	6.334	102.334	0.000	275.02	0.00	8.31	263.9	34.406
1	6.417	102.417	0.000	276.39	0.00	8.31	264.0	34.491
1	6.501	102.501	0.000	277.81	0.00	8.32	264.1	34.585
1	6.584	102.584	0.000	279.23	0.00	8.33	264.3	34.688
1	6.667	102.667	0.000	280.69	0.00	8.33	264.4	34.800
1	6.751	102.751	0.000	282.14	0.00	8.34	264.5	34.921
1	6.834	102.834	0.000	283.64	0.00	8.35	264.7	35.052
1	6.917	102.917	0.000	285.13	0.00	8.36	264.9	35.191
1	7.001	103.001	0.000	286.67	0.00	8.37	265.1	35.340
1	7.084	103.084	0.000	288.21	0.00	8.38	265.3	35.498
1	7.167	103.167	0.000	289.79	0.00	8.39	265.5	35.666
1	7.251	103.251	0.000	291.37	0.00	8.41	265.7	35.843
1	7.334	103.334	0.000	293.00	0.00	8.42	265.9	36.030
1	7.417	103.417	0.000	294.63	0.00	8.43	266.1	36.226
1	7.501	103.501	0.000	296.31	0.00	8.45	266.4	36.432
1	7.584	103.584	0.000	297.98	0.00	8.46	266.7	36.647
1	7.667	103.667	0.000	299.71	0.00	8.48	266.9	36.873
1	7.751	103.751	0.000	301.43	0.00	8.50	267.2	37.108
1	7.834	103.834	0.000	303.22	0.00	8.51	267.5	37.354
1	7.917	103.917	0.000	305.00	0.00	8.53	267.9	37.610
1	8.001	104.001	0.000	306.84	0.00	8.55	268.2	37.876
1	8.084	104.084	0.000	308.67	0.00	8.57	268.5	38.152
1	8.167	104.167	0.000	310.57	0.00	8.59	268.9	38.439
1	8.251	104.251	0.000	312.46	0.00	8.61	269.3	38.737
1	8.334	104.334	0.000	314.43	0.00	8.63	269.6	39.045
1	8.418	104.418	0.000	316.38	0.00	8.65	270.0	39.364
1	8.501	104.501	0.000	318.41	0.00	8.68	270.5	39.695
1	8.584	104.584	0.000	320.42	0.00	8.70	270.9	40.036
1	8.668	104.668	0.000	322.52	0.00	8.73	271.3	40.388
1	8.751	104.751	0.000	324.61	0.00	8.75	271.8	40.752
1	8.834	104.834	0.000	326.78	0.00	8.78	272.2	41.128
1	8.918	104.918	0.000	328.94	0.00	8.80	272.7	41.515
1	9.001	105.001	0.000	331.18	0.00	8.83	273.2	41.914
1	9.084	105.084	0.000	333.42	0.00	8.86	273.7	42.325
1	9.168	105.168	0.000	335.75	0.00	8.89	274.3	42.749
1	9.251	105.251	0.000	338.07	0.00	8.92	274.8	43.184
1	9.334	105.334	0.000	340.48	0.00	8.95	275.4	43.633
1	9.418	105.418	0.000	342.89	0.00	8.99	275.9	44.094
1	9.501	105.501	0.000	345.39	0.00	9.01	276.5	44.568
1	9.584	105.584	0.000	347.89	0.00	9.04	276.9	45.057
1	9.668	105.668	0.000	350.49	0.00	9.06	277.3	45.561
1	9.751	105.751	0.000	353.09	0.00	9.09	277.7	46.080
1	9.834	105.834	0.000	355.80	0.00	9.12	278.2	46.614
1	9.918	105.918	0.000	358.50	0.00	9.15	278.6	47.165
1	10.001	106.001	0.000	361.31	0.00	9.17	279.1	47.731
1	10.084	106.084	0.000	364.13	0.00	9.20	279.6	48.313
1	10.168	106.168	0.000	367.06	0.00	9.23	280.0	48.913
1	10.251	106.251	0.000	370.00	0.00	9.27	280.5	49.529
1	10.334	106.334	0.000	373.06	0.00	9.30	281.0	50.163
1	10.418	106.418	0.000	376.12	0.00	9.33	281.6	50.814
1	10.501	106.501	0.000	379.32	0.00	9.36	282.1	51.483
1	10.584	106.584	0.000	382.51	0.00	9.40	282.7	52.171
1	10.668	106.668	0.000	385.85	0.00	9.44	283.2	52.877
1	10.751	106.751	0.000	389.20	0.00	9.47	283.8	53.603
1	10.834	106.834	0.000	392.69	0.00	9.51	284.4	54.349
1	10.918	106.918	0.000	396.19	0.00	9.55	285.1	55.114
1	11.001	107.001	0.000	399.86	0.00	9.59	285.7	55.900
1	11.084	107.084	0.000	403.53	0.00	9.63	286.3	56.708
1	11.168	107.168	0.000	407.38	0.00	9.67	287.0	57.537
1	11.251	107.251	0.000	411.24	0.00	9.72	287.7	58.387
1	11.334	107.334	0.000	415.28	0.00	9.76	288.4	59.261
1	11.418	107.418	0.000	419.34	0.00	9.80	289.1	60.158
1	11.501	107.501	0.000	423.60	0.00	9.85	289.9	61.079
1	11.584	107.584	0.000	427.88	0.00	9.90	290.6	62.024
1	11.668	107.668	0.000	432.36	0.00	9.95	291.4	62.995
1	11.751	107.751	0.000	436.88	0.00	10.00	292.2	63.991
1	11.834	107.834	0.000	441.62	0.00	10.05	293.1	65.014
1	11.918	107.918	0.000	446.40	0.00	10.10	293.9	66.064
1	12.001	108.001	0.000	451.42	0.00	10.16	294.8	67.143
1	12.084	108.084	0.000	458.21	0.00	10.22	295.7	68.262
1	12.168	108.168	0.000	468.03	0.00	10.28	296.6	69.443
1	12.251	108.251	0.000	480.19	0.00	10.34	297.6	70.700
1	12.334	108.334	0.000	495.10	0.00	10.41	298.7	72.053
1	12.418	108.418	0.000	515.54	0.00	10.48	299.9	73.538
1	12.501	108.501	0.000	550.61	0.00	10.57	301.2	75.256
1	12.584	108.584	0.000	579.32	0.00	10.67	302.7	77.161
1	12.668	108.668	0.000	597.50	0.00	10.77	304.3	79.181
1	12.751	108.751	0.000	612.56	0.00	10.88	306.0	81.292
1	12.834	108.834	0.000	626.67	0.00	10.99	307.7	83.489
1	12.918	108.918	0.000	639.37	0.00	11.10	309.4	85.761
1	13.001	109.001	0.000	651.92	0.00	11.21	311.1	88.109
1	13.084	109.084	0.000	663.96	0.00	11.32	312.7	90.528
1	13.168	109.168	0.000	676.43	0.00	11.44	314.4	93.021
1	13.251	109.251	0.000	689.01	0.00	11.56	316.2	95.588
1	13.334	109.334	0.000	702.61	0.00	11.69	318.0	98.237
1	13.418	109.418	0.000	717.55	0.00	11.82	319.9	100.975
1	13.501	109.501	0.000	735.54	0.00	11.95	321.9	103.824
1	13.584	109.584	0.000	755.09	0.00	12.09	323.9	106.794
1	13.668	109.668	0.000	776.66	0.00	12.24	326.0	109.897
1	13.751	109.751	0.000	799.06	0.00	12.40	328.2	113.140
1	13.834	109.834	0.000	823.23	0.00	12.56	330.6	116.533
1	13.918	109.918	0.000	848.40	0.00	12.72	333.0	120.083
1	14.001	110.001	0.000	875.72	0.00	12.90	335.5	123.803
1	14.084	110.084	0.000	911.09	0.00	13.05	337.9	127.750
1	14.168	110.168	0.000	960.67	0.00	13.16	339.7	132.027
1	14.251	110.251	0.000	1021.19	0.00	13.28	341.3	136.709
1	14.334	110.334	0.000	1094.90	0.00	13.42	343.1	141.886
1	14.418	110.418	0.000	1193.34	0.00	13.57	345.1	147.728
1	14.501	110.501	0.000	1356.53	0.00	13.76	347.4	154.678
1	14.584	110.584	0.000	1492.23	0.00	13.96	350.1	162.544
1	14.668	110.668	0.000	1583.02	0.00	14.19	353.0	171.015
1	14.751	110.751	0.000	1661.17	0.00	14.42	356.2	180.003
1	14.834	110.834	0.000	1737.02	0.00	14.67	359.5	189.490
1	14.918	110.918	0.000	1808.27	0.00	14.93	363.0	199.444
1	15.001	111.001	0.000	1881.49	0.00	15.18	366.4	209.879
1	15.084	111.084	0.000	1953.82	0.00	15.42	369.5	220.790
1	15.168	111.168	0.000	2029.99	0.00	15.68	372.7	232.204
1	15.251	111.251	0.000	2107.09	0.00	15.95	376.0	244.126
1	15.334	111.334	0.000	2190.26	0.00	16.23	379.5	256.596
1	15.418	111.418	0.000	2261.16	0.00	16.52	383.1	269.530
1	15.501	111.501	0.000	2314.61	0.00	16.82	386.9	282.806
1	15.584	111.584	0.000	2353.79	0.00	17.12	390.7	296.327
1	15.668	111.668	0.000	2385.29	0.00	17.42	394.4	310.038
1	15.751	111.751	0.000	2381.42	0.00	17.72	398.0	323.698
1	15.834	111.834	0.000	2270.74	0.00	18.00	401.5	336.571
1	15.918	111.918	0.000	2271.00	0.00	18.28	405.0	349.423
1	16.001	112.001	0.000	2471.00	0.00	18.59	408.5	363.627
1	16.084	112.084	0.000	2991.95	0.00	18.98	412.8	381.390
1	16.168	112.168	0.000	3710.00	0.00	19.46	417.9	404.063
1	16.251	112.251	0.000	4396.52	0.00	20.04	424.0	431.422
1	16.334	112.334	0.000	5191.94	0.00	20.74	431.2	464.209
1	16.418	112.418	0.000	6336.55	0.00	21.58	440.0	504.819

1	16.501	112.501	0.000	8096.49	0.00	22.67	450.8	557.475
1	16.584	112.584	0.000	6844.24	0.00	23.55	460.4	601.441
1	16.668	112.668	0.000	4977.55	0.00	24.18	465.7	632.514
1	16.751	112.751	0.000	4234.69	0.00	24.69	469.0	658.448
1	16.834	112.834	0.000	3975.03	0.00	25.17	472.0	682.574
1	16.918	112.918	0.000	3705.36	0.00	25.60	474.8	704.823
1	17.001	113.001	0.000	3487.65	0.00	26.00	477.6	725.553
1	17.084	113.084	0.000	3235.76	0.00	26.37	480.1	744.532
1	17.168	113.168	0.000	3028.04	0.00	26.71	482.4	762.064
1	17.251	113.251	0.000	2790.18	0.00	27.02	484.5	777.943
1	17.334	113.334	0.000	2591.97	0.00	27.29	486.5	792.443
1	17.418	113.418	0.000	2392.77	0.00	27.54	488.4	805.558
1	17.501	113.501	0.000	2124.86	0.00	27.75	490.1	816.817
1	17.584	113.584	0.000	1886.69	0.00	27.93	491.5	826.426
1	17.668	113.668	0.000	1715.04	0.00	28.09	492.8	834.844
1	17.751	113.751	0.000	1558.98	0.00	28.23	493.9	842.179
1	17.834	113.834	0.000	1413.20	0.00	28.35	494.8	848.504
1	17.918	113.918	0.000	1316.13	0.00	28.45	495.6	854.155
1	18.001	114.001	0.000	1214.79	0.00	28.55	496.3	859.103
1	18.084	114.084	0.000	1066.59	0.00	28.62	497.0	863.026
1	18.168	114.168	0.000	980.42	0.00	28.68	497.5	866.353
1	18.251	114.251	0.000	924.85	0.00	28.74	497.9	869.293
1	18.334	114.334	0.000	875.77	0.00	28.79	498.3	871.893
1	18.418	114.418	0.000	822.24	0.00	28.83	498.6	874.122
1	18.501	114.501	0.000	758.30	0.00	28.86	498.9	875.909
1	18.584	114.584	0.000	705.67	0.00	28.89	499.1	877.331
1	18.668	114.668	0.000	667.42	0.00	28.91	499.3	878.489
1	18.751	114.751	0.000	635.65	0.00	28.93	499.4	879.428
1	18.834	114.834	0.000	608.22	0.00	28.94	499.5	880.176
1	18.918	114.918	0.000	583.92	0.00	28.95	499.6	880.757
1	19.001	115.001	0.000	561.58	0.00	28.96	499.7	881.183
1	19.084	115.084	0.000	543.39	0.00	28.97	499.7	881.484
1	19.168	115.168	0.000	527.11	0.00	28.97	499.8	881.672
1	19.251	115.251	0.000	513.04	0.00	28.97	499.8	881.763
1	19.335	115.335	0.000	500.38	0.00	28.97	499.8	881.767
1	19.418	115.418	0.000	488.33	0.00	28.97	499.8	881.688
1	19.501	115.501	0.000	476.91	0.00	28.97	499.8	881.531
1	19.585	115.585	0.000	465.84	0.00	28.96	499.8	881.297
1	19.668	115.668	0.000	454.86	0.00	28.96	499.7	880.988
1	19.751	115.751	0.000	443.22	0.00	28.95	499.7	880.599
1	19.835	115.835	0.000	430.23	0.00	28.94	499.6	880.122
1	19.918	115.918	0.000	406.68	0.00	28.93	499.5	879.482
1	20.001	116.001	0.000	389.75	0.00	28.92	499.4	878.727
1	20.085	116.085	0.000	381.46	0.00	28.90	499.3	877.915
1	20.168	116.168	0.000	374.48	0.00	28.88	499.2	877.056
1	20.251	116.251	0.000	367.34	0.00	28.87	499.1	876.149
1	20.335	116.335	0.000	360.20	0.00	28.85	499.0	875.193
1	20.418	116.418	0.000	353.47	0.00	28.83	498.8	874.192
1	20.501	116.501	0.000	347.07	0.00	28.81	498.7	873.148
1	20.585	116.585	0.000	340.98	0.00	28.79	498.5	872.063
1	20.668	116.668	0.000	335.15	0.00	28.77	498.4	870.938
1	20.751	116.751	0.000	329.56	0.00	28.75	498.2	869.777
1	20.835	116.835	0.000	324.20	0.00	28.72	498.1	868.579
1	20.918	116.918	0.000	319.41	0.00	28.70	497.9	867.350
1	21.001	117.001	0.000	315.04	0.00	28.68	497.7	866.092
1	21.085	117.085	0.000	310.85	0.00	28.65	497.6	864.806
1	21.168	117.168	0.000	306.82	0.00	28.63	497.4	863.494
1	21.251	117.251	0.000	302.95	0.00	28.60	497.2	862.156
1	21.335	117.335	0.000	299.22	0.00	28.58	497.0	860.794
1	21.418	117.418	0.000	295.63	0.00	28.55	496.8	859.408
1	21.501	117.501	0.000	292.16	0.00	28.53	496.6	858.000
1	21.585	117.585	0.000	288.80	0.00	28.50	496.4	856.570
1	21.668	117.668	0.000	285.53	0.00	28.47	496.2	855.118
1	21.751	117.751	0.000	282.35	0.00	28.44	496.0	853.647
1	21.835	117.835	0.000	279.25	0.00	28.42	495.8	852.155
1	21.918	117.918	0.000	276.33	0.00	28.39	495.6	850.645
1	22.001	118.001	0.000	273.53	0.00	28.36	495.4	849.117
1	22.085	118.085	0.000	270.81	0.00	28.33	495.2	847.571

1	22.168	118.168	0.000	268.16	0.00	28.30	495.0	846.009
1	22.251	118.251	0.000	265.58	0.00	28.27	494.8	844.430
1	22.335	118.335	0.000	263.06	0.00	28.24	494.6	842.836
1	22.418	118.418	0.000	260.61	0.00	28.21	494.3	841.226
1	22.501	118.501	0.000	258.22	0.00	28.18	494.1	839.602
1	22.585	118.585	0.000	255.88	0.00	28.15	493.9	837.963
1	22.668	118.668	0.000	253.60	0.00	28.12	493.7	836.309
1	22.751	118.751	0.000	251.37	0.00	28.09	493.4	834.642
1	22.835	118.835	0.000	249.19	0.00	28.05	493.2	832.961
1	22.918	118.918	0.000	247.06	0.00	28.02	493.0	831.268
1	23.001	119.001	0.000	244.98	0.00	27.99	492.7	829.561
1	23.085	119.085	0.000	242.95	0.00	27.96	492.5	827.843
1	23.168	119.168	0.000	240.95	0.00	27.92	492.3	826.112
1	23.251	119.251	0.000	239.01	0.00	27.89	492.0	824.369
1	23.335	119.335	0.000	237.10	0.00	27.86	491.8	822.615
1	23.418	119.418	0.000	235.23	0.00	27.83	491.5	820.850
1	23.501	119.501	0.000	233.40	0.00	27.79	491.3	819.074
1	23.585	119.585	0.000	231.61	0.00	27.76	491.1	817.287
1	23.668	119.668	0.000	229.85	0.00	27.72	490.8	815.490
1	23.751	119.751	0.000	228.13	0.00	27.69	490.6	813.682
1	23.835	119.835	0.000	226.44	0.00	27.66	490.3	811.865
1	23.918	119.918	0.000	224.79	0.00	27.62	490.1	810.038
1	24.001	120.001	0.000	223.16	0.00	27.59	489.8	808.201
1	24.085	120.085	0.000	219.19	0.00	27.55	489.6	806.339
1	24.168	120.168	0.000	211.46	0.00	27.52	489.3	804.426
1	24.251	120.251	0.000	200.67	0.00	27.48	489.0	802.440
1	24.335	120.335	0.000	186.59	0.00	27.44	488.8	800.359
1	24.418	120.418	0.000	165.13	0.00	27.40	488.5	798.132
1	24.501	120.501	0.000	124.17	0.00	27.35	488.1	795.625
1	24.585	120.585	0.000	92.43	0.00	27.30	487.8	792.902
1	24.668	120.668	0.000	75.96	0.00	27.25	487.4	790.069
1	24.751	120.751	0.000	64.06	0.00	27.19	487.0	787.156
1	24.835	120.835	0.000	54.11	0.00	27.14	486.6	784.178
1	24.918	120.918	0.000	46.31	0.00	27.08	486.2	781.148
1	25.001	121.001	0.000	39.39	0.00	27.02	485.8	778.074
1	25.085	121.085	0.000	33.63	0.00	26.96	485.3	774.963
1	25.168	121.168	0.000	28.51	0.00	26.90	484.9	771.820
1	25.251	121.251	0.000	24.33	0.00	26.84	484.5	768.650
1	25.335	121.335	0.000	20.66	0.00	26.78	484.1	765.458
1	25.418	121.418	0.000	17.33	0.00	26.71	483.7	762.246
1	25.501	121.501	0.000	14.48	0.00	26.65	483.3	759.017
1	25.585	121.585	0.000	12.10	0.00	26.59	482.9	755.774
1	25.668	121.668	0.000	10.05	0.00	26.53	482.5	752.521
1	25.751	121.751	0.000	8.37	0.00	26.46	482.1	749.258
1	25.835	121.835	0.000	7.14	0.00	26.40	481.7	745.990
1	25.918	121.918	0.000	5.91	0.00	26.34	481.3	742.716
1	26.001	122.001	0.000	4.77	0.00	26.27	480.8	739.437
1	26.085	122.085	0.000	4.36	0.00	26.21	480.4	736.159
1	26.168	122.168	0.000	4.14	0.00	26.15	480.0	732.881
1	26.251	122.251	0.000	3.92	0.00	26.08	479.6	729.605
1	26.335	122.335	0.000	3.70	0.00	26.02	479.2	726.331
1	26.418	122.418	0.000	3.49	0.00	25.96	478.8	723.057
1	26.501	122.501	0.000	3.28	0.00	25.89	478.4	719.785
1	26.585	122.585	0.000	3.07	0.00	25.83	477.9	716.515
1	26.668	122.668	0.000	2.86	0.00	25.77	477.5	713.246
1	26.751	122.751	0.000	2.65	0.00	25.70	477.1	709.978
1	26.835	122.835	0.000	2.44	0.00	25.64	476.7	706.712
1	26.918	122.918	0.000	2.24	0.00	25.58	476.3	703.447
1	27.001	123.001	0.000	2.03	0.00	25.51	475.9	700.184
1	27.085	123.085	0.000	1.83	0.00	25.45	475.5	696.922
1	27.168	123.168	0.000	1.63	0.00	25.39	475.0	693.661
1	27.251	123.251	0.000	1.43	0.00	25.32	474.6	690.403
1	27.335	123.335	0.000	1.23	0.00	25.26	474.2	687.145
1	27.418	123.418	0.000	1.03	0.00	25.20	473.8	683.889
1	27.501	123.501	0.000	0.84	0.00	25.13	473.4	680.635
1	27.585	123.585	0.000	0.64	0.00	25.07	473.0	677.382
1	27.668	123.668	0.000	0.45	0.00	25.01	472.6	674.130
1	27.751	123.751	0.000	0.26	0.00	24.94	472.2	670.880

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 1  27.835 123.835        0.000     0.07     0.00     24.88    471.8    667.631
 1  27.918 123.918        0.000     0.00     0.00     24.81    471.4    664.385
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
--------------------------------------------------------------------------------
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   1991.048 AF
    BASIN  STORAGE =      0.000 AF (WITH      0.000 AF INITIALLY FILLED)
    OUTFLOW VOLUME =   1991.047 AF
    LOSS    VOLUME =      0.000 AF
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE    780.00 TO NODE    780.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  4741.3 Ac. ***

            STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
        (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      125.0     250.0     375.0     500.0
--------------------------------------------------------------------------------
  96.000    463.6258    290.64  .        V.          .  Q      .         .
 (PEAK DAY 2, HOUR  24.000)
  96.083    465.6184    289.33  .        V.          .  Q      .         .
 (PEAK DAY 1, HOUR   0.083)
  96.167    467.6022    288.04  .        V.          .  Q      .         .
 (PEAK DAY 1, HOUR   0.167)
  96.250    469.5773    286.79  .        V.          . Q       .         .
 (PEAK DAY 1, HOUR   0.250)
  96.333    471.5442    285.59  .        V.          . Q       .         .
 (PEAK DAY 1, HOUR   0.333)
  96.417    473.5034    284.47  .        V.          . Q       .         .
 (PEAK DAY 1, HOUR   0.417)
  96.500    475.4557    283.48  .        V.          . Q       .         .
 (PEAK DAY 1, HOUR   0.500)
  96.583    477.4022    282.64  .        V.          . Q       .         .
 (PEAK DAY 1, HOUR   0.583)
  96.667    479.3437    281.90  .        V.          . Q       .         .
 (PEAK DAY 1, HOUR   0.667)
  96.750    481.2805    281.23  .        V.          . Q       .         .
 (PEAK DAY 1, HOUR   0.750)
  96.833    483.2130    280.60  .        V.          . Q       .         .
 (PEAK DAY 1, HOUR   0.833)
  96.917    485.1415    280.02  .        V.          . Q       .         .
 (PEAK DAY 1, HOUR   0.917)
  97.000    487.0663    279.47  .        V.          . Q       .         .
 (PEAK DAY 1, HOUR   1.000)
  97.083    488.9875    278.96  .        V.          . Q       .         .
 (PEAK DAY 1, HOUR   1.083)
  97.167    490.9053    278.47  .        V.          . Q       .         .
 (PEAK DAY 1, HOUR   1.167)
  97.250    492.8200    278.01  .        V.          . Q       .         .
 (PEAK DAY 1, HOUR   1.250)
  97.333    494.7316    277.57  .        V.          . Q       .         .
 (PEAK DAY 1, HOUR   1.333)
  97.417    496.6404    277.15  .        V.          . Q       .         .
 (PEAK DAY 1, HOUR   1.417)
  97.500    498.5463    276.74  .         V          . Q       .         .
 (PEAK DAY 1, HOUR   1.500)
  97.583    500.4489    276.26  .         V          . Q       .         .
 (PEAK DAY 1, HOUR   1.583)
  97.667    502.3477    275.70  .         V          . Q       .         .
 (PEAK DAY 1, HOUR   1.667)
  97.750    504.2427    275.15  .         V          . Q       .         .
 (PEAK DAY 1, HOUR   1.750)
  97.833    506.1341    274.62  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   1.833)
  97.917    508.0219    274.11  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   1.917)
  98.000    509.9063    273.62  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   2.000)
  98.083    511.7875    273.14  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   2.083)
  98.167    513.6654    272.68  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   2.167)
  98.250    515.5402    272.22  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   2.250)
  98.333    517.4120    271.78  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   2.333)
  98.417    519.2808    271.35  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   2.417)
  98.500    521.1468    270.94  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   2.500)
  98.583    523.0099    270.53  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   2.583)
  98.667    524.8704    270.14  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   2.667)
  98.750    526.7283    269.76  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   2.750)
  98.833    528.5836    269.39  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   2.833)
  98.917    530.4364    269.03  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   2.917)
  99.000    532.2869    268.68  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   3.000)
  99.083    534.1350    268.35  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   3.083)
  99.167    535.9810    268.03  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   3.167)
  99.250    537.8247    267.72  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   3.250)
  99.333    539.6664    267.42  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   3.333)
  99.417    541.5062    267.13  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   3.417)
  99.500    543.3440    266.85  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   3.500)
  99.583    545.1800    266.59  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   3.583)
  99.667    547.0143    266.34  .         V          .Q        .         .
 (PEAK DAY 1, HOUR   3.667)
  99.750    548.8469    266.10  .         .V         .Q        .         .
 (PEAK DAY 1, HOUR   3.750)
  99.833    550.6780    265.87  .         .V         .Q        .         .
 (PEAK DAY 1, HOUR   3.833)
  99.917    552.5075    265.65  .         .V         .Q        .         .
 (PEAK DAY 1, HOUR   3.917)
 100.000    554.3356    265.44  .         .V         .Q        .         .
 (PEAK DAY 1, HOUR   4.000)
 100.083    556.1624    265.25  .         .V         .Q        .         .
 (PEAK DAY 1, HOUR   4.083)
 100.167    557.9879    265.06  .         .V         .Q        .         .
 (PEAK DAY 1, HOUR   4.167)
 100.250    559.8122    264.88  .         .V         .Q        .         .
 (PEAK DAY 1, HOUR   4.250)
 100.333    561.6353    264.72  .         .V         .Q        .         .
 (PEAK DAY 1, HOUR   4.333)
 100.417    563.4574    264.56  .         .V         .Q        .         .
 (PEAK DAY 1, HOUR   4.417)
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 100.500    565.2784    264.42  .          .V        .Q        .         .
(PEAK DAY 1, HOUR   4.500)
 100.583    567.0986    264.28  .          .V        .Q        .         .
(PEAK DAY 1, HOUR   4.583)
 100.667    568.9178    264.16  .          .V        .Q        .         .
(PEAK DAY 1, HOUR   4.667)
 100.750    570.7363    264.05  .          .V        .Q        .         .
(PEAK DAY 1, HOUR   4.750)
 100.833    572.5541    263.94  .          .V        .Q        .         .
(PEAK DAY 1, HOUR   4.833)
 100.917    574.3713    263.85  .          .V        .Q        .         .
(PEAK DAY 1, HOUR   4.917)
 101.000    576.1879    263.77  .          .V        .Q        .         .
(PEAK DAY 1, HOUR   5.000)
 101.083    578.0040    263.70  .          .V        .Q        .         .
(PEAK DAY 1, HOUR   5.083)
 101.167    579.8196    263.64  .          .V        .Q        .         .
(PEAK DAY 1, HOUR   5.167)
 101.250    581.6350    263.59  .          .V        .Q        .         .
(PEAK DAY 1, HOUR   5.250)
 101.333    583.4501    263.55  .          .V        .Q        .         .
(PEAK DAY 1, HOUR   5.333)
 101.417    585.2650    263.52  .          .V        .Q        .         .
(PEAK DAY 1, HOUR   5.417)
 101.500    587.0797    263.50  .          .V        .Q        .         .
(PEAK DAY 1, HOUR   5.500)
 101.583    588.8944    263.49  .          .V        .Q        .         .
(PEAK DAY 1, HOUR   5.583)
 101.667    590.7091    263.50  .          .V        .Q        .         .
(PEAK DAY 1, HOUR   5.667)
 101.750    592.5239    263.51  .          .V        .Q        .         .
(PEAK DAY 1, HOUR   5.750)
 101.833    594.3389    263.54  .          .V        .Q        .         .
(PEAK DAY 1, HOUR   5.833)
 101.917    596.1542    263.57  .          .V        .Q        .         .
(PEAK DAY 1, HOUR   5.917)
 102.000    597.9697    263.62  .          . V       .Q        .         .
(PEAK DAY 1, HOUR   6.000)
 102.083    599.7857    263.68  .          . V       .Q        .         .
(PEAK DAY 1, HOUR   6.083)
 102.167    601.6022    263.75  .          . V       .Q        .         .
(PEAK DAY 1, HOUR   6.167)
 102.250    603.4192    263.83  .          . V       .Q        .         .
(PEAK DAY 1, HOUR   6.250)
 102.333    605.2368    263.92  .          . V       .Q        .         .
(PEAK DAY 1, HOUR   6.333)
 102.417    607.0551    264.02  .          . V       .Q        .         .
(PEAK DAY 1, HOUR   6.417)
 102.500    608.8742    264.13  .          . V       .Q        .         .
(PEAK DAY 1, HOUR   6.500)
 102.583    610.6942    264.26  .          . V       .Q        .         .
(PEAK DAY 1, HOUR   6.583)
 102.667    612.5151    264.40  .          . V       .Q        .         .
(PEAK DAY 1, HOUR   6.667)
 102.750    614.3370    264.54  .          . V       .Q        .         .
(PEAK DAY 1, HOUR   6.750)
 102.833    616.1600    264.70  .          . V       .Q        .         .
(PEAK DAY 1, HOUR   6.833)
 102.917    617.9842    264.87  .          . V       .Q        .         .
(PEAK DAY 1, HOUR   6.917)
 103.000    619.8096    265.06  .          . V       .Q        .         .
(PEAK DAY 1, HOUR   7.000)
 103.083    621.6364    265.25  .          . V       .Q        .         .
(PEAK DAY 1, HOUR   7.083)
 103.167    623.4647    265.46  .          . V       .Q        .         .
(PEAK DAY 1, HOUR   7.167)
 103.250    625.2944    265.68  .          . V       .Q        .         .
(PEAK DAY 1, HOUR   7.250)
 103.333    627.1257    265.91  .          . V       .Q        .         .
(PEAK DAY 1, HOUR   7.333)
 103.417    628.9587    266.15  .          . V       .Q        .         .
(PEAK DAY 1, HOUR   7.417)
 103.500    630.7934    266.40  .          . V       .Q        .         .
(PEAK DAY 1, HOUR   7.500)
 103.583    632.6299    266.67  .          . V       .Q        .         .
(PEAK DAY 1, HOUR   7.583)
 103.667    634.4684    266.95  .          . V       .Q        .         .
(PEAK DAY 1, HOUR   7.667)
 103.750    636.3090    267.24  .          . V       .Q        .         .
(PEAK DAY 1, HOUR   7.750)
 103.833    638.1516    267.55  .          . V       .Q        .         .
(PEAK DAY 1, HOUR   7.833)
 103.917    639.9963    267.86  .          . V       .Q        .         .
(PEAK DAY 1, HOUR   7.917)
 104.000    641.8434    268.19  .          . V       .Q        .         .
(PEAK DAY 1, HOUR   8.000)
 104.083    643.6928    268.54  .          . V       .Q        .         .
(PEAK DAY 1, HOUR   8.083)
 104.167    645.5447    268.89  .          . V       .Q        .         .
(PEAK DAY 1, HOUR   8.167)
 104.250    647.3991    269.27  .          .  V      .Q        .         .
(PEAK DAY 1, HOUR   8.250)
 104.333    649.2562    269.65  .          .  V      .Q        .         .
(PEAK DAY 1, HOUR   8.333)
 104.417    651.1160    270.05  .          .  V      .Q        .         .
(PEAK DAY 1, HOUR   8.417)
 104.500    652.9786    270.46  .          .  V      .Q        .         .
(PEAK DAY 1, HOUR   8.500)
 104.583    654.8442    270.88  .          .  V      .Q        .         .
(PEAK DAY 1, HOUR   8.583)
 104.667    656.7128    271.32  .          .  V      .Q        .         .
(PEAK DAY 1, HOUR   8.667)
 104.750    658.5845    271.78  .          .  V      .Q        .         .
(PEAK DAY 1, HOUR   8.750)
 104.833    660.4595    272.24  .          .  V      .Q        .         .
(PEAK DAY 1, HOUR   8.833)
 104.917    662.3378    272.73  .          .  V      .Q        .         .
(PEAK DAY 1, HOUR   8.917)
 105.000    664.2195    273.23  .          .  V      .Q        .         .
(PEAK DAY 1, HOUR   9.000)
 105.083    666.1047    273.74  .          .  V      .Q        .         .
(PEAK DAY 1, HOUR   9.083)
 105.167    667.9937    274.27  .          .  V      .Q        .         .
(PEAK DAY 1, HOUR   9.167)
 105.250    669.8863    274.81  .          .  V      .Q        .         .
(PEAK DAY 1, HOUR   9.250)
 105.333    671.7828    275.37  .          .  V      . Q       .         .
(PEAK DAY 1, HOUR   9.333)
 105.417    673.6832    275.95  .          .  V      . Q       .         .
(PEAK DAY 1, HOUR   9.417)
 105.500    675.5873    276.48  .          .  V      . Q       .         .
(PEAK DAY 1, HOUR   9.500)
 105.583    677.4945    276.92  .          .  V      . Q       .         .
(PEAK DAY 1, HOUR   9.583)
 105.667    679.4045    277.33  .          .  V      . Q       .         .
(PEAK DAY 1, HOUR   9.667)
 105.750    681.3173    277.75  .          .  V      . Q       .         .
(PEAK DAY 1, HOUR   9.750)
 105.833    683.2332    278.18  .          .  V      . Q       .         .
(PEAK DAY 1, HOUR   9.833)
 105.917    685.1520    278.62  .          .  V      . Q       .         .
(PEAK DAY 1, HOUR   9.917)
 106.000    687.0741    279.08  .          .  V      . Q       .         .
(PEAK DAY 1, HOUR  10.000)
 106.083    688.9994    279.55  .          .  V      . Q       .         .
(PEAK DAY 1, HOUR  10.083)
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 106.167    690.9280    280.04  .         .  V      . Q       .         .
(PEAK DAY 1, HOUR  10.167)
 106.250    692.8601    280.53  .         .  V      . Q       .         .
(PEAK DAY 1, HOUR  10.250)
 106.333    694.7957    281.05  .         .  V      . Q       .         .
(PEAK DAY 1, HOUR  10.333)
 106.417    696.7349    281.57  .         .  V      . Q       .         .
(PEAK DAY 1, HOUR  10.417)
 106.500    698.6779    282.11  .         .   V     . Q       .         .
(PEAK DAY 1, HOUR  10.500)
 106.583    700.6246    282.67  .         .   V     . Q       .         .
(PEAK DAY 1, HOUR  10.583)
 106.667    702.5753    283.24  .         .   V     . Q       .         .
(PEAK DAY 1, HOUR  10.667)
 106.750    704.5301    283.83  .         .   V     . Q       .         .
(PEAK DAY 1, HOUR  10.750)
 106.833    706.4890    284.43  .         .   V     . Q       .         .
(PEAK DAY 1, HOUR  10.833)
 106.917    708.4522    285.05  .         .   V     . Q       .         .
(PEAK DAY 1, HOUR  10.917)
 107.000    710.4197    285.69  .         .   V     . Q       .         .
(PEAK DAY 1, HOUR  11.000)
 107.083    712.3918    286.34  .         .   V     . Q       .         .
(PEAK DAY 1, HOUR  11.083)
 107.167    714.3685    287.01  .         .   V     . Q       .         .
(PEAK DAY 1, HOUR  11.167)
 107.250    716.3499    287.70  .         .   V     .  Q      .         .
(PEAK DAY 1, HOUR  11.250)
 107.333    718.3361    288.41  .         .   V     .  Q      .         .
(PEAK DAY 1, HOUR  11.333)
 107.417    720.3274    289.13  .         .   V     .  Q      .         .
(PEAK DAY 1, HOUR  11.417)
 107.500    722.3238    289.88  .         .   V     .  Q      .         .
(PEAK DAY 1, HOUR  11.500)
 107.583    724.3254    290.64  .         .   V     .  Q      .         .
(PEAK DAY 1, HOUR  11.583)
 107.667    726.3325    291.43  .         .   V     .  Q      .         .
(PEAK DAY 1, HOUR  11.667)
 107.750    728.3452    292.23  .         .   V     .  Q      .         .
(PEAK DAY 1, HOUR  11.750)
 107.833    730.3635    293.06  .         .   V     .  Q      .         .
(PEAK DAY 1, HOUR  11.833)
 107.917    732.3876    293.91  .         .   V     .  Q      .         .
(PEAK DAY 1, HOUR  11.917)
 108.000    734.4178    294.78  .         .   V     .  Q      .         .
(PEAK DAY 1, HOUR  12.000)
 108.083    736.4542    295.69  .         .   V     .  Q      .         .
(PEAK DAY 1, HOUR  12.083)
 108.167    738.4971    296.63  .         .   V     .  Q      .         .
(PEAK DAY 1, HOUR  12.167)
 108.250    740.5469    297.63  .         .   V     .  Q      .         .
(PEAK DAY 1, HOUR  12.250)
 108.333    742.6041    298.70  .         .   V     .  Q      .         .
(PEAK DAY 1, HOUR  12.333)
 108.417    744.6692    299.86  .         .   V     .  Q      .         .
(PEAK DAY 1, HOUR  12.417)
 108.500    746.7434    301.17  .         .    V    .   Q     .         .
(PEAK DAY 1, HOUR  12.500)
 108.583    748.8278    302.66  .         .    V    .   Q     .         .
(PEAK DAY 1, HOUR  12.583)
 108.667    750.9233    304.27  .         .    V    .   Q     .         .
(PEAK DAY 1, HOUR  12.667)
 108.750    753.0305    305.96  .         .    V    .   Q     .         .
(PEAK DAY 1, HOUR  12.750)
 108.833    755.1498    307.73  .         .    V    .   Q     .         .
(PEAK DAY 1, HOUR  12.833)
 108.917    757.2809    309.43  .         .    V    .   Q     .         .
(PEAK DAY 1, HOUR  12.917)
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 109.000    759.4232    311.06  .         .   V     .  Q      .         .
(PEAK DAY 1, HOUR  13.000)
 109.083    761.5770    312.73  .         .   V     .   Q     .         .
(PEAK DAY 1, HOUR  13.083)
 109.167    763.7426    314.44  .         .   V     .   Q     .         .
(PEAK DAY 1, HOUR  13.167)
 109.250    765.9203    316.21  .         .   V     .   Q     .         .
(PEAK DAY 1, HOUR  13.250)
 109.333    768.1107    318.04  .         .   V     .   Q     .         .
(PEAK DAY 1, HOUR  13.333)
 109.417    770.3140    319.92  .         .   V     .   Q     .         .
(PEAK DAY 1, HOUR  13.417)
 109.500    772.5307    321.87  .         .   V     .   Q     .         .
(PEAK DAY 1, HOUR  13.500)
 109.583    774.7615    323.91  .         .   V     .   Q     .         .
(PEAK DAY 1, HOUR  13.583)
 109.667    777.0068    326.03  .         .   V     .    Q    .         .
(PEAK DAY 1, HOUR  13.667)
 109.750    779.2675    328.25  .         .   V     .    Q    .         .
(PEAK DAY 1, HOUR  13.750)
 109.833    781.5441    330.57  .         .   V     .    Q    .         .
(PEAK DAY 1, HOUR  13.833)
 109.917    783.8375    332.99  .         .   V     .    Q    .         .
(PEAK DAY 1, HOUR  13.917)
 110.000    786.1483    335.53  .         .   V     .    Q    .         .
(PEAK DAY 1, HOUR  14.000)
 110.083    788.4755    337.90  .         .   V     .     Q   .         .
(PEAK DAY 1, HOUR  14.083)
 110.167    790.8152    339.74  .         .   V     .     Q   .         .
(PEAK DAY 1, HOUR  14.167)
 110.250    793.1661    341.35  .         .   V     .     Q   .         .
(PEAK DAY 1, HOUR  14.250)
 110.333    795.5292    343.12  .         .   V     .     Q   .         .
(PEAK DAY 1, HOUR  14.333)
 110.417    797.9060    345.11  .         .    V    .     Q   .         .
(PEAK DAY 1, HOUR  14.417)
 110.500    800.2986    347.41  .         .    V    .     Q   .         .
(PEAK DAY 1, HOUR  14.500)
 110.583    802.7097    350.08  .         .    V    .      Q  .         .
(PEAK DAY 1, HOUR  14.583)
 110.667    805.1409    353.02  .         .    V    .      Q  .         .
(PEAK DAY 1, HOUR  14.667)
 110.750    807.5938    356.16  .         .    V    .      Q  .         .
(PEAK DAY 1, HOUR  14.750)
 110.833    810.0696    359.49  .         .    V    .      Q  .         .
(PEAK DAY 1, HOUR  14.833)
 110.917    812.5696    362.99  .         .    V    .       Q.         .
(PEAK DAY 1, HOUR  14.917)
 111.000    815.0928    366.37  .         .    V    .       Q.         .
(PEAK DAY 1, HOUR  15.000)
 111.083    817.6376    369.51  .         .    V    .       Q.         .
(PEAK DAY 1, HOUR  15.083)
 111.167    820.2044    372.70  .         .    V    .       Q.         .
(PEAK DAY 1, HOUR  15.167)
 111.250    822.7942    376.03  .         .    V    .        Q         .
(PEAK DAY 1, HOUR  15.250)
 111.333    825.4080    379.52  .         .    V    .        Q         .
(PEAK DAY 1, HOUR  15.333)
 111.417    828.0467    383.15  .         .    V    .        Q         .
(PEAK DAY 1, HOUR  15.417)
 111.500    830.7112    386.89  .         .    V    .        Q         .
(PEAK DAY 1, HOUR  15.500)
 111.583    833.4018    390.67  .         .    V    .        .Q        .
(PEAK DAY 1, HOUR  15.583)
 111.667    836.1178    394.37  .         .    V    .        .Q        .
(PEAK DAY 1, HOUR  15.667)
 111.750    838.8589    398.00  .         .    V    .        .Q        .
(PEAK DAY 1, HOUR  15.750)
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111.833    841.6243    401.53  .          .     V   .          . Q        .
(PEAK DAY 1, HOUR  15.833)
111.917    844.4132    404.95  .          .     V   .          . Q        .
(PEAK DAY 1, HOUR  15.917)
112.000    847.2269    408.55  .          .      V  .          . Q        .
(PEAK DAY 1, HOUR  16.000)
112.083    850.0698    412.80  .          .      V  .          .  Q       .
(PEAK DAY 1, HOUR  16.083)
112.167    852.9480    417.91  .          .      V  .          .  Q       .
(PEAK DAY 1, HOUR  16.167)
112.250    855.8679    423.97  .          .      V  .          .  Q       .
(PEAK DAY 1, HOUR  16.250)
112.333    858.8379    431.24  .          .      V  .          .   Q      .
(PEAK DAY 1, HOUR  16.333)
112.417    861.8680    439.97  .          .      V  .          .    Q     .
(PEAK DAY 1, HOUR  16.417)
112.500    864.9730    450.84  .          .      V  .          .     Q    .
(PEAK DAY 1, HOUR  16.500)
112.583    868.1440    460.43  .          .      V  .          .     Q    .
(PEAK DAY 1, HOUR  16.583)
112.667    871.3514    465.72  .          .      V  .          .      Q   .
(PEAK DAY 1, HOUR  16.667)
112.750    874.5817    469.03  .          .      V  .          .      Q   .
(PEAK DAY 1, HOUR  16.750)
112.833    877.8322    471.98  .          .      V  .          .      Q   .
(PEAK DAY 1, HOUR  16.833)
112.917    881.1024    474.84  .          .      V  .          .      Q   .
(PEAK DAY 1, HOUR  16.917)
113.000    884.3914    477.56  .          .      V  .          .       Q  .
(PEAK DAY 1, HOUR  17.000)
113.083    887.6978    480.08  .          .      V  .          .       Q  .
(PEAK DAY 1, HOUR  17.083)
113.167    891.0200    482.39  .          .      V  .          .       Q  .
(PEAK DAY 1, HOUR  17.167)
113.250    894.3569    484.52  .          .      V  .          .       Q  .
(PEAK DAY 1, HOUR  17.250)
113.333    897.7076    486.53  .          .       V .          .       Q  .
(PEAK DAY 1, HOUR  17.333)
113.417    901.0715    488.42  .          .       V .          .        Q.
(PEAK DAY 1, HOUR  17.417)
113.500    904.4468    490.10  .          .       V .          .        Q.
(PEAK DAY 1, HOUR  17.500)
113.583    907.8320    491.53  .          .       V .          .        Q.
(PEAK DAY 1, HOUR  17.583)
113.667    911.2258    492.77  .          .       V .          .        Q.
(PEAK DAY 1, HOUR  17.667)
113.750    914.6270    493.86  .          .       V .          .        Q.
(PEAK DAY 1, HOUR  17.750)
113.833    918.0346    494.80  .          .       V .          .        Q.
(PEAK DAY 1, HOUR  17.833)
113.917    921.4479    495.62  .          .       V .          .        Q.
(PEAK DAY 1, HOUR  17.917)
114.000    924.8663    496.35  .          .       V .          .        Q.
(PEAK DAY 1, HOUR  18.000)
114.083    928.2889    496.96  .          .       V .          .        Q.
(PEAK DAY 1, HOUR  18.083)
114.167    931.7149    497.46  .          .       V .          .        Q.
(PEAK DAY 1, HOUR  18.167)
114.250    935.1439    497.89  .          .       V .          .        Q.
(PEAK DAY 1, HOUR  18.250)
114.333    938.5754    498.27  .          .       V .          .        Q.
(PEAK DAY 1, HOUR  18.333)
114.417    942.0093    498.60  .          .       V .          .        Q.
(PEAK DAY 1, HOUR  18.417)
114.500    945.4451    498.87  .          .       V .          .        Q.
(PEAK DAY 1, HOUR  18.500)
114.583    948.8824    499.10  .          .        V.          .        Q.
(PEAK DAY 1, HOUR  18.583)
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114.667    952.3210    499.27  .          .        V.          .        Q.
(PEAK DAY 1, HOUR  18.667)
114.750    955.7605    499.42  .          .        V.          .        Q.
(PEAK DAY 1, HOUR  18.750)
114.833    959.2008    499.53  .          .        V.          .        Q.
(PEAK DAY 1, HOUR  18.833)
114.917    962.6417    499.62  .          .        V.          .        Q.
(PEAK DAY 1, HOUR  18.917)
115.000    966.0831    499.69  .          .        V.          .        Q.
(PEAK DAY 1, HOUR  19.000)
115.083    969.5249    499.74  .          .        V.          .        Q.
(PEAK DAY 1, HOUR  19.083)
115.167    972.9669    499.78  .          .        V.          .        Q.
(PEAK DAY 1, HOUR  19.167)
115.250    976.4091    499.80  .          .        V.          .        Q.
(PEAK DAY 1, HOUR  19.250)
115.333    979.8512    499.80  .          .        V.          .        Q.
(PEAK DAY 1, HOUR  19.333)
115.417    983.2933    499.80  .          .        V.          .        Q.
(PEAK DAY 1, HOUR  19.417)
115.500    986.7354    499.78  .          .        V.          .        Q.
(PEAK DAY 1, HOUR  19.500)
115.583    990.1772    499.75  .          .        V.          .        Q.
(PEAK DAY 1, HOUR  19.583)
115.667    993.6188    499.72  .          .        V.          .        Q.
(PEAK DAY 1, HOUR  19.667)
115.750    997.0600    499.67  .          .         V          .        Q.
(PEAK DAY 1, HOUR  19.750)
115.833   1000.5009    499.61  .          .         V          .        Q.
(PEAK DAY 1, HOUR  19.833)
115.917   1003.9412    499.53  .          .         V          .        Q.
(PEAK DAY 1, HOUR  19.917)
116.000   1007.3808    499.44  .          .         V          .        Q.
(PEAK DAY 1, HOUR  20.000)
116.083   1010.8197    499.33  .          .         V          .        Q.
(PEAK DAY 1, HOUR  20.083)
116.167   1014.2578    499.21  .          .         V          .        Q.
(PEAK DAY 1, HOUR  20.167)
116.250   1017.6951    499.09  .          .         V          .        Q.
(PEAK DAY 1, HOUR  20.250)
116.333   1021.1315    498.96  .          .         V          .        Q.
(PEAK DAY 1, HOUR  20.333)
116.417   1024.5669    498.83  .          .         V          .        Q.
(PEAK DAY 1, HOUR  20.417)
116.500   1028.0013    498.69  .          .         V          .        Q.
(PEAK DAY 1, HOUR  20.500)
116.583   1031.4348    498.54  .          .         V          .        Q.
(PEAK DAY 1, HOUR  20.583)
116.667   1034.8673    498.39  .          .         V          .        Q.
(PEAK DAY 1, HOUR  20.667)
116.750   1038.2987    498.23  .          .         V          .        Q.
(PEAK DAY 1, HOUR  20.750)
116.833   1041.7290    498.07  .          .         V          .        Q.
(PEAK DAY 1, HOUR  20.833)
116.917   1045.1581    497.91  .          .         V          .        Q.
(PEAK DAY 1, HOUR  20.917)
117.000   1048.5861    497.73  .          .         .V         .        Q.
(PEAK DAY 1, HOUR  21.000)
117.083   1052.0128    497.56  .          .         .V         .        Q.
(PEAK DAY 1, HOUR  21.083)
117.167   1055.4384    497.38  .          .         .V         .        Q.
(PEAK DAY 1, HOUR  21.167)
117.250   1058.8625    497.20  .          .         .V         .        Q.
(PEAK DAY 1, HOUR  21.250)
117.333   1062.2855    497.01  .          .         .V         .        Q.
(PEAK DAY 1, HOUR  21.333)
117.417   1065.7072    496.82  .          .         .V         .        Q.
(PEAK DAY 1, HOUR  21.417)
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 117.500   1069.1274    496.63  .         .         .V        .         Q.
(PEAK DAY 1, HOUR  21.500)
 117.583   1072.5464    496.44  .         .         .V        .         Q.
(PEAK DAY 1, HOUR  21.583)
 117.667   1075.9640    496.24  .         .         .V        .         Q.
(PEAK DAY 1, HOUR  21.667)
 117.750   1079.3802    496.04  .         .         .V        .         Q.
(PEAK DAY 1, HOUR  21.750)
 117.833   1082.7950    495.83  .         .         .V        .         Q.
(PEAK DAY 1, HOUR  21.833)
 117.917   1086.2085    495.63  .         .         .V        .         Q.
(PEAK DAY 1, HOUR  21.917)
 118.000   1089.6205    495.42  .         .         .V        .         Q.
(PEAK DAY 1, HOUR  22.000)
 118.083   1093.0310    495.21  .         .         .V        .         Q.
(PEAK DAY 1, HOUR  22.083)
 118.167   1096.4401    494.99  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  22.167)
 118.250   1099.8477    494.78  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  22.250)
 118.333   1103.2537    494.56  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  22.333)
 118.417   1106.6582    494.34  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  22.417)
 118.500   1110.0613    494.12  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  22.500)
 118.583   1113.4628    493.89  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  22.583)
 118.667   1116.8627    493.67  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  22.667)
 118.750   1120.2610    493.44  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  22.750)
 118.833   1123.6577    493.21  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  22.833)
 118.917   1127.0529    492.98  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  22.917)
 119.000   1130.4464    492.74  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  23.000)
 119.083   1133.8384    492.51  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  23.083)
 119.167   1137.2286    492.27  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  23.167)
 119.250   1140.6173    492.03  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  23.250)
 119.333   1144.0043    491.79  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  23.333)
 119.417   1147.3896    491.55  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  23.417)
 119.500   1150.7733    491.31  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  23.500)
 119.583   1154.1553    491.06  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  23.583)
 119.667   1157.5355    490.81  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  23.667)
 119.750   1160.9141    490.57  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  23.750)
 119.833   1164.2909    490.32  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  23.833)
 119.917   1167.6660    490.07  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  23.917)
 120.000   1171.0394    489.82  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  24.000)
 120.083   1174.4110    489.56  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  24.083)
 120.167   1177.7809    489.30  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  24.167)
 120.250   1181.1489    489.03  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  24.250)
 120.333   1184.5150    488.75  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  24.333)
 120.417   1187.8790    488.46  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  24.417)
 120.500   1191.2408    488.13  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  24.500)
 120.583   1194.6002    487.77  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  24.583)
 120.667   1197.9569    487.39  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  24.667)
 120.750   1201.3109    487.00  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  24.750)
 120.833   1204.6621    486.59  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  24.833)
 120.917   1208.0105    486.18  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  24.917)
 121.000   1211.3560    485.76  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  25.000)
 121.083   1214.6986    485.34  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  25.083)
 121.167   1218.0385    484.94  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  25.167)
 121.250   1221.3755    484.54  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  25.250)
 121.333   1224.7097    484.14  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  25.333)
 121.417   1228.0413    483.73  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  25.417)
 121.500   1231.3700    483.32  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  25.500)
 121.583   1234.6958    482.91  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  25.583)
 121.667   1238.0188    482.50  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  25.667)
 121.750   1241.3390    482.09  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  25.750)
 121.833   1244.6562    481.67  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  25.833)
 121.917   1247.9707    481.26  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  25.917)
 122.000   1251.2823    480.84  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  26.000)
 122.083   1254.5911    480.43  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  26.083)
 122.167   1257.8970    480.01  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  26.167)
 122.250   1261.2000    479.60  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  26.250)
 122.333   1264.5001    479.18  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  26.333)
 122.417   1267.7974    478.77  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  26.417)
 122.500   1271.0918    478.35  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  26.500)
 122.583   1274.3834    477.94  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  26.583)
 122.667   1277.6721    477.52  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  26.667)
 122.750   1280.9580    477.11  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  26.750)
 122.833   1284.2410    476.69  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  26.833)
 122.917   1287.5211    476.28  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  26.917)
 123.000   1290.7985    475.87  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  27.000)
 123.083   1294.0729    475.45  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  27.083)
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 123.167   1297.3445    475.04  .         .         .     V   .       Q .
 (PEAK DAY 1, HOUR  27.167)
 123.250   1300.6133    474.62  .         .         .     V   .      Q  .
 (PEAK DAY 1, HOUR  27.250)
 123.333   1303.8792    474.21  .         .         .     V   .      Q  .
 (PEAK DAY 1, HOUR  27.333)
 123.417   1307.1422    473.80  .         .         .     V   .      Q  .
 (PEAK DAY 1, HOUR  27.417)
 123.500   1310.4025    473.39  .         .         .     V   .      Q  .
 (PEAK DAY 1, HOUR  27.500)
 123.583   1313.6599    472.97  .         .         .     V   .      Q  .
 (PEAK DAY 1, HOUR  27.583)
 123.667   1316.9144    472.56  .         .         .     V   .      Q  .
 (PEAK DAY 1, HOUR  27.667)
 123.750   1320.1663    472.16  .         .         .     V   .      Q  .
 (PEAK DAY 1, HOUR  27.750)
 123.833   1323.4154    471.78  .         .         .     V   .      Q  .
 (PEAK DAY 1, HOUR  27.833)
 123.917   1326.6620    471.41  .         .         .     V   .      Q  .
 (PEAK DAY 1, HOUR  27.917)
 124.000   1329.9060    471.03  .         .         .     V   .      Q  .
 (PEAK DAY 1, HOUR  28.000)
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE    780.00 TO NODE   6311.00 IS CODE = 5.2
--------------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  4741.3 Ac. ***

         THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
         TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
         INTERVALS(Reference: the National Engineering Handbook,
         Hydrology, Chapter 17, page 17-52, August,1972,
         U.S. Department of Commerce).


         ASSUMED REGULAR CHANNEL INFORMATION:
           BASEWIDTH(FT) =   20.00     CHANNEL Z =  1.00
           UPSTREAM ELEVATION(FT) =     408.00
           DOWNSTREAM ELEVATION(FT) =     382.00
           CHANNEL LENGTH(FT) =    2533.00     MANNING'S FACTOR = 0.040
           CONSTANT LOSS RATE(CFS) =    0.00


         CHANNEL ROUTING COEFFICIENT ESTIMATED:
           MAXIMUM INFLOW(CFS) =   499.80
           AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =   371.92
           CHANNEL NORMAL VELOCITY FOR Q =   371.92 CFS =   6.28 FPS
           ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.787

         MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
         UNIT INTERVALS IS CSTAR = 0.775


         CONVEX METHOD CHANNEL ROUTING RESULTS:
                                              OUTFLOW LESS
               CLOCK        INFLOW     ROUTED      LOSS
PEAK    TIME   TIME       (STREAM 1)    FLOW     (STREAM 1)
 DAY   (HRS)   (HRS)         (CFS)       (CFS)      (CFS)
  2   24.000  96.000       290.64      292.43      292.43
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1	0.083	96.083	289.33	291.10	291.10
1	0.167	96.167	288.04	289.79	289.79
1	0.250	96.250	286.79	288.49	288.49
1	0.333	96.333	285.59	287.23	287.23
1	0.417	96.417	284.47	286.02	286.02
1	0.500	96.500	283.48	284.87	284.87
1	0.583	96.583	282.64	283.83	283.83
1	0.667	96.667	281.90	282.94	282.94
1	0.750	96.750	281.23	282.17	282.17
1	0.833	96.833	280.60	281.47	281.47
1	0.917	96.917	280.02	280.83	280.83
1	1.000	97.000	279.47	280.23	280.23
1	1.083	97.083	278.96	279.67	279.67
1	1.167	97.167	278.47	279.14	279.14
1	1.250	97.250	278.01	278.64	278.64
1	1.333	97.333	277.57	278.17	278.17
1	1.417	97.417	277.15	277.72	277.72
1	1.500	97.500	276.74	277.29	277.29
1	1.583	97.583	276.26	276.88	276.88
1	1.667	97.667	275.70	276.43	276.43
1	1.750	97.750	275.15	275.89	275.89
1	1.833	97.833	274.62	275.35	275.35
1	1.917	97.917	274.11	274.81	274.81
1	2.000	98.000	273.62	274.29	274.29
1	2.083	98.083	273.14	273.79	273.79
1	2.167	98.167	272.68	273.31	273.31
1	2.250	98.250	272.22	272.84	272.84
1	2.333	98.333	271.78	272.38	272.38
1	2.417	98.417	271.35	271.94	271.94
1	2.500	98.500	270.94	271.51	271.51
1	2.583	98.583	270.53	271.08	271.08
1	2.667	98.667	270.14	270.67	270.67
1	2.750	98.750	269.76	270.28	270.28
1	2.833	98.833	269.39	269.89	269.89
1	2.917	98.917	269.03	269.52	269.52
1	3.000	99.000	268.68	269.16	269.16
1	3.083	99.083	268.35	268.81	268.81
1	3.167	99.167	268.03	268.47	268.47
1	3.250	99.250	267.72	268.14	268.14
1	3.333	99.333	267.42	267.83	267.83
1	3.417	99.417	267.13	267.52	267.52
1	3.500	99.500	266.85	267.23	267.23
1	3.583	99.583	266.59	266.95	266.95
1	3.667	99.667	266.34	266.68	266.68
1	3.750	99.750	266.10	266.43	266.43
1	3.833	99.833	265.87	266.18	266.18
1	3.917	99.917	265.65	265.95	265.95
1	4.000	100.000	265.44	265.73	265.73
1	4.083	100.083	265.25	265.52	265.52
1	4.167	100.167	265.06	265.32	265.32
1	4.250	100.250	264.88	265.13	265.13
1	4.333	100.333	264.72	264.95	264.95
1	4.417	100.417	264.56	264.78	264.78
1	4.500	100.500	264.42	264.62	264.62
1	4.583	100.583	264.28	264.47	264.47
1	4.667	100.667	264.16	264.33	264.33
1	4.750	100.750	264.05	264.20	264.20
1	4.833	100.833	263.94	264.09	264.09
1	4.917	100.917	263.85	263.98	263.98
1	5.000	101.000	263.77	263.88	263.88
1	5.083	101.083	263.70	263.80	263.80
1	5.167	101.167	263.64	263.72	263.72
1	5.250	101.250	263.59	263.66	263.66
1	5.333	101.333	263.55	263.61	263.61
1	5.417	101.417	263.52	263.56	263.56
1	5.500	101.500	263.50	263.53	263.53
1	5.583	101.583	263.49	263.51	263.51
1	5.667	101.667	263.50	263.50	263.50

1	5.750	101.750	263.51	263.50	263.50
1	5.833	101.833	263.54	263.51	263.51
1	5.917	101.917	263.57	263.53	263.53
1	6.000	102.000	263.62	263.56	263.56
1	6.083	102.083	263.68	263.61	263.61
1	6.167	102.167	263.75	263.66	263.66
1	6.250	102.250	263.83	263.72	263.72
1	6.333	102.333	263.92	263.80	263.80
1	6.417	102.417	264.02	263.89	263.89
1	6.500	102.500	264.13	263.99	263.99
1	6.583	102.583	264.26	264.10	264.10
1	6.667	102.667	264.40	264.22	264.22
1	6.750	102.750	264.54	264.35	264.35
1	6.833	102.833	264.70	264.49	264.49
1	6.917	102.917	264.87	264.65	264.65
1	7.000	103.000	265.06	264.82	264.82
1	7.083	103.083	265.25	264.99	264.99
1	7.167	103.167	265.46	265.18	265.18
1	7.250	103.250	265.68	265.39	265.39
1	7.333	103.333	265.91	265.60	265.60
1	7.417	103.417	266.15	265.83	265.83
1	7.500	103.500	266.40	266.07	266.07
1	7.583	103.583	266.67	266.32	266.32
1	7.667	103.667	266.95	266.58	266.58
1	7.750	103.750	267.24	266.85	266.85
1	7.833	103.833	267.55	267.14	267.14
1	7.917	103.917	267.86	267.44	267.44
1	8.000	104.000	268.19	267.75	267.75
1	8.083	104.083	268.54	268.08	268.08
1	8.167	104.167	268.89	268.42	268.42
1	8.250	104.250	269.27	268.77	268.77
1	8.333	104.333	269.65	269.14	269.14
1	8.417	104.417	270.05	269.52	269.52
1	8.500	104.500	270.46	269.91	269.91
1	8.583	104.583	270.88	270.32	270.32
1	8.667	104.667	271.32	270.74	270.74
1	8.750	104.750	271.78	271.17	271.17
1	8.833	104.833	272.24	271.62	271.62
1	8.917	104.917	272.73	272.08	272.08
1	9.000	105.000	273.23	272.56	272.56
1	9.083	105.083	273.74	273.05	273.05
1	9.167	105.167	274.27	273.56	273.56
1	9.250	105.250	274.81	274.08	274.08
1	9.333	105.333	275.37	274.62	274.62
1	9.417	105.417	275.95	275.18	275.18
1	9.500	105.500	276.48	275.75	275.75
1	9.583	105.583	276.92	276.29	276.29
1	9.667	105.667	277.33	276.76	276.76
1	9.750	105.750	277.75	277.18	277.18
1	9.833	105.833	278.18	277.60	277.60
1	9.917	105.917	278.62	278.03	278.03
1	10.000	106.000	279.08	278.47	278.47
1	10.083	106.083	279.55	278.92	278.92
1	10.167	106.167	280.04	279.39	279.39
1	10.250	106.250	280.53	279.87	279.87
1	10.333	106.333	281.05	280.36	280.36
1	10.417	106.417	281.57	280.87	280.87
1	10.500	106.500	282.11	281.39	281.39
1	10.583	106.583	282.67	281.93	281.93
1	10.667	106.667	283.24	282.48	282.48
1	10.750	106.750	283.83	283.04	283.04
1	10.833	106.833	284.43	283.63	283.63
1	10.917	106.917	285.05	284.22	284.22
1	11.000	107.000	285.69	284.84	284.84
1	11.083	107.083	286.34	285.47	285.47
1	11.167	107.167	287.01	286.12	286.12
1	11.250	107.250	287.70	286.78	286.78
1	11.333	107.333	288.41	287.46	287.46
1	11.417	107.417	289.13	288.16	288.16
1	11.500	107.500	289.88	288.88	288.88
1	11.583	107.583	290.64	289.62	289.62
1	11.667	107.667	291.43	290.38	290.38
1	11.750	107.750	292.23	291.16	291.16
1	11.833	107.833	293.06	291.96	291.96
1	11.917	107.917	293.91	292.78	292.78
1	12.000	108.000	294.78	293.62	293.62
1	12.083	108.083	295.69	294.48	294.48
1	12.167	108.167	296.63	295.37	295.37
1	12.250	108.250	297.63	296.30	296.30
1	12.333	108.333	298.70	297.28	297.28
1	12.417	108.417	299.86	298.33	298.33
1	12.500	108.500	301.17	299.46	299.46
1	12.583	108.583	302.66	300.73	300.73
1	12.667	108.667	304.27	302.16	302.16
1	12.750	108.750	305.96	303.72	303.72
1	12.833	108.833	307.73	305.38	305.38
1	12.917	108.917	309.43	307.12	307.12
1	13.000	109.000	311.06	308.84	308.84
1	13.083	109.083	312.73	310.49	310.49
1	13.167	109.167	314.44	312.15	312.15
1	13.250	109.250	316.21	313.85	313.85
1	13.333	109.333	318.04	315.60	315.60
1	13.417	109.417	319.92	317.41	317.41
1	13.500	109.500	321.87	319.27	319.27
1	13.583	109.583	323.91	321.20	321.20
1	13.667	109.667	326.03	323.21	323.21
1	13.750	109.750	328.25	325.30	325.30
1	13.833	109.833	330.57	327.48	327.48
1	13.917	109.917	332.99	329.77	329.77
1	14.000	110.000	335.53	332.16	332.16
1	14.083	110.083	337.90	334.66	334.66
1	14.167	110.167	339.74	337.06	337.06
1	14.250	110.250	341.35	339.05	339.05
1	14.333	110.333	343.12	340.76	340.76
1	14.417	110.417	345.11	342.51	342.51
1	14.500	110.500	347.41	344.43	344.43
1	14.583	110.583	350.08	346.64	346.64
1	14.667	110.667	353.02	349.18	349.18
1	14.750	110.750	356.16	352.02	352.02
1	14.833	110.833	359.49	355.09	355.09
1	14.917	110.917	362.99	358.35	358.35
1	15.000	111.000	366.37	361.79	361.79
1	15.083	111.083	369.51	365.18	365.18
1	15.167	111.167	372.70	368.40	368.40
1	15.250	111.250	376.03	371.59	371.59
1	15.333	111.333	379.52	374.88	374.88
1	15.417	111.417	383.15	378.32	378.32
1	15.500	111.500	386.89	381.90	381.90
1	15.583	111.583	390.67	385.60	385.60
1	15.667	111.667	394.37	389.36	389.36
1	15.750	111.750	398.00	393.07	393.07
1	15.833	111.833	401.53	396.73	396.73
1	15.917	111.917	404.95	400.29	400.29
1	16.000	112.000	408.55	403.75	403.75
1	16.083	112.083	412.80	407.31	407.31
1	16.167	112.167	417.91	411.37	411.37
1	16.250	112.250	423.97	416.21	416.21
1	16.333	112.333	431.24	421.95	421.95
1	16.417	112.417	439.97	428.82	428.82
1	16.500	112.500	450.84	437.07	437.07
1	16.583	112.583	460.43	447.25	447.25
1	16.667	112.667	465.72	457.03	457.03
1	16.750	112.750	469.03	463.53	463.53
1	16.833	112.833	471.98	467.64	467.64
1	16.917	112.917	474.84	470.87	470.87
1	17.000	113.000	477.56	473.82	473.82

1	17.083	113.083	480.08	476.60	476.60
1	17.167	113.167	482.39	479.18	479.18
1	17.250	113.250	484.52	481.57	481.57
1	17.333	113.333	486.53	483.76	483.76
1	17.417	113.417	488.42	485.81	485.81
1	17.500	113.500	490.10	487.75	487.75
1	17.583	113.583	491.53	489.50	489.50
1	17.667	113.667	492.77	491.01	491.01
1	17.750	113.750	493.86	492.32	492.32
1	17.833	113.833	494.80	493.46	493.46
1	17.917	113.917	495.62	494.45	494.45
1	18.000	114.000	496.35	495.32	495.32
1	18.083	114.083	496.96	496.08	496.08
1	18.167	114.167	497.46	496.73	496.73
1	18.250	114.250	497.89	497.27	497.27
1	18.333	114.333	498.27	497.73	497.73
1	18.417	114.417	498.60	498.13	498.13
1	18.500	114.500	498.87	498.48	498.48
1	18.583	114.583	499.10	498.77	498.77
1	18.667	114.667	499.27	499.01	499.01
1	18.750	114.750	499.42	499.21	499.21
1	18.833	114.833	499.53	499.36	499.36
1	18.917	114.917	499.62	499.49	499.49
1	19.000	115.000	499.69	499.59	499.59
1	19.083	115.083	499.74	499.67	499.67
1	19.167	115.167	499.78	499.72	499.72
1	19.250	115.250	499.80	499.76	499.76
1	19.333	115.333	499.80	499.79	499.79
1	19.417	115.417	499.80	499.80	499.80
1	19.500	115.500	499.78	499.80	499.80
1	19.583	115.583	499.75	499.79	499.79
1	19.667	115.667	499.72	499.76	499.76
1	19.750	115.750	499.67	499.73	499.73
1	19.833	115.833	499.61	499.68	499.68
1	19.917	115.917	499.53	499.63	499.63
1	20.000	116.000	499.44	499.56	499.56
1	20.083	116.083	499.33	499.47	499.47
1	20.167	116.167	499.21	499.37	499.37
1	20.250	116.250	499.09	499.25	499.25
1	20.333	116.333	498.96	499.13	499.13
1	20.417	116.417	498.83	499.01	499.01
1	20.500	116.500	498.69	498.88	498.88
1	20.583	116.583	498.54	498.74	498.74
1	20.667	116.667	498.39	498.59	498.59
1	20.750	116.750	498.23	498.44	498.44
1	20.833	116.833	498.07	498.29	498.29
1	20.917	116.917	497.91	498.13	498.13
1	21.000	117.000	497.73	497.96	497.96
1	21.083	117.083	497.56	497.79	497.79
1	21.167	117.167	497.38	497.62	497.62
1	21.250	117.250	497.20	497.44	497.44
1	21.333	117.333	497.01	497.26	497.26
1	21.417	117.417	496.82	497.08	497.08
1	21.500	117.500	496.63	496.89	496.89
1	21.583	117.583	496.44	496.70	496.70
1	21.667	117.667	496.24	496.50	496.50
1	21.750	117.750	496.04	496.31	496.31
1	21.833	117.833	495.83	496.11	496.11
1	21.917	117.917	495.63	495.91	495.91
1	22.000	118.000	495.42	495.70	495.70
1	22.083	118.083	495.21	495.49	495.49
1	22.167	118.167	494.99	495.28	495.28
1	22.250	118.250	494.78	495.07	495.07
1	22.333	118.333	494.56	494.85	494.85
1	22.417	118.417	494.34	494.64	494.64
1	22.500	118.500	494.12	494.42	494.42
1	22.583	118.583	493.89	494.20	494.20
1	22.667	118.667	493.67	493.97	493.97
1	22.750	118.750	493.44	493.75	493.75
1	22.833	118.833	493.21	493.52	493.52
1	22.917	118.917	492.98	493.29	493.29
1	23.000	119.000	492.74	493.06	493.06
1	23.083	119.083	492.51	492.82	492.82
1	23.167	119.167	492.27	492.59	492.59
1	23.250	119.250	492.03	492.35	492.35
1	23.333	119.333	491.79	492.11	492.11
1	23.417	119.417	491.55	491.88	491.88
1	23.500	119.500	491.31	491.63	491.63
1	23.583	119.583	491.06	491.39	491.39
1	23.667	119.667	490.81	491.15	491.15
1	23.750	119.750	490.57	490.90	490.90
1	23.833	119.833	490.32	490.65	490.65
1	23.917	119.917	490.07	490.40	490.40
1	24.000	120.000	489.82	490.15	490.15
1	24.083	120.083	489.56	489.90	489.90
1	24.167	120.167	489.30	489.65	489.65
1	24.250	120.250	489.03	489.39	489.39
1	24.333	120.333	488.75	489.13	489.13
1	24.417	120.417	488.46	488.85	488.85
1	24.500	120.500	488.13	488.56	488.56
1	24.583	120.583	487.77	488.24	488.24
1	24.667	120.667	487.39	487.90	487.90
1	24.750	120.750	487.00	487.52	487.52
1	24.833	120.833	486.59	487.13	487.13
1	24.917	120.917	486.18	486.73	486.73
1	25.000	121.000	485.76	486.32	486.32
1	25.083	121.083	485.34	485.90	485.90
1	25.167	121.167	484.94	485.49	485.49
1	25.250	121.250	484.54	485.08	485.08
1	25.333	121.333	484.14	484.68	484.68
1	25.417	121.417	483.73	484.28	484.28
1	25.500	121.500	483.32	483.87	483.87
1	25.583	121.583	482.91	483.47	483.47
1	25.667	121.667	482.50	483.06	483.06
1	25.750	121.750	482.09	482.65	482.65
1	25.833	121.833	481.67	482.23	482.23
1	25.917	121.917	481.26	481.82	481.82
1	26.000	122.000	480.84	481.40	481.40
1	26.083	122.083	480.43	480.99	480.99
1	26.167	122.167	480.01	480.57	480.57
1	26.250	122.250	479.60	480.16	480.16
1	26.333	122.333	479.18	479.74	479.74
1	26.417	122.417	478.77	479.33	479.33
1	26.500	122.500	478.35	478.91	478.91
1	26.583	122.583	477.94	478.50	478.50
1	26.667	122.667	477.52	478.08	478.08
1	26.750	122.750	477.11	477.67	477.67
1	26.833	122.833	476.69	477.25	477.25
1	26.917	122.917	476.28	476.84	476.84
1	27.000	123.000	475.87	476.42	476.42
1	27.083	123.083	475.45	476.01	476.01
1	27.167	123.167	475.04	475.60	475.60
1	27.250	123.250	474.62	475.18	475.18
1	27.333	123.333	474.21	474.77	474.77
1	27.417	123.417	473.80	474.36	474.36
1	27.500	123.500	473.39	473.94	473.94
1	27.583	123.583	472.97	473.53	473.53
1	27.667	123.667	472.56	473.12	473.12
1	27.750	123.750	472.16	472.70	472.70
1	27.833	123.833	471.78	472.30	472.30
1	27.917	123.917	471.41	471.92	471.92
1	28.000	124.000	471.03	471.54	471.54

Note: Computed Hydrograph continues past two days after the peak day of the design storm.

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PROCESS SUMMARY OF STORAGE:

```
    INFLOW  VOLUME =   1991.046 AF
    OUTFLOW VOLUME =   1991.045 AF
    LOSS    VOLUME =      0.000 AF
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6300.00 TO NODE   6311.00 IS CODE =   1
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        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of   299.3 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
================================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #2)

         WATERSHED AREA =     299.300 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.250 HOURS
          CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
          THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
          MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.250
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.750
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:
         +------------------+--------+--------+--------+--------+--------+
         | RAINFALL DEPTHS & |        |        |        |        |        |
         |    LOSS RATES     |  DAY 1 |  DAY 2 |  DAY 3 |  DAY 4 |  DAY 5 |
         |==================+========+========+========+========+========|
         | 5-MINUTE (INCHES) |    0.58|    0.27|    0.12|    0.06|    0.04|
         |30-MINUTE (INCHES) |    1.22|    0.56|    0.24|    0.13|    0.09|
         |   1-HOUR (INCHES) |    1.62|    0.75|    0.33|    0.17|    0.12|
         |   3-HOUR (INCHES) |    2.71|    1.25|    0.54|    0.28|    0.21|
         |   6-HOUR (INCHES) |    3.75|    1.73|    0.75|    0.39|    0.29|
         |  24-HOUR (INCHES) |    6.28|    2.89|    1.26|    0.66|    0.48|
         |==================+========+========+========+========+========|
         | LOSS RATE(IN/HR)  |   0.260|   0.260|   0.260|   0.260|   0.260|
         | LOW LOSS FRACTION |   0.500|   0.730|   0.930|   0.990|   0.990|
         +------------------+--------+--------+--------+--------+--------+
           5-MINUTE FACTOR = 0.987
          30-MINUTE FACTOR = 0.987
           1-HOUR FACTOR = 0.987
           3-HOUR FACTOR = 0.998
           6-HOUR FACTOR = 0.999
          24-HOUR FACTOR = 0.999

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  33.333


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  96.00
         MODEL TIME(HOURS) FOR END OF RESULTS = 124.00


================================================================================
                      UNIT HYDROGRAPH DETERMINATION

--------------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------------
           1                3.852               139.411
           2               18.445               528.231
           3               39.624               766.604
           4               55.845               587.160
           5               64.124               299.680
           6               70.038               214.036
           7               74.639               166.538
           8               78.230               130.017
           9               81.158               105.957
          10               83.587                87.936
          11               85.638                74.235
          12               87.267                58.971
          13               88.619                48.932
          14               89.699                39.084
          15               90.702                36.306
          16               91.629                33.565
          17               92.506                31.749
          18               93.325                29.632
          19               94.080                27.335
          20               94.768                24.914
          21               95.424                23.727
          22               95.971                19.796
          23               96.509                19.477
          24               97.020                18.507
          25               97.406                13.985
          26               97.766                13.021
          27               98.126                13.018
          28               98.458                12.019
          29               98.594                 4.931
          30               98.692                 3.557
          31               98.791                 3.557
          32               98.889                 3.550
          33               98.987                 3.557
          34               99.085                 3.551
          35               99.183                 3.557
          36               99.281                 3.550
          37               99.380                 3.550
          38               99.478                 3.550
          39               99.576                 3.550
          40               99.674                 3.550
          41               99.772                 3.550
          42               99.870                 3.550
          43               99.968                 3.550
          44              100.000                 1.157


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    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =     162.2768
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =     126.0595
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5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 175.0 350.0 525.0 700.0
96.000	32.8756	3.82	Q V . . .
(PEAK DAY 2, HOUR 24.000)			
96.083	32.9046	4.22	Q V . . .
(PEAK DAY 1, HOUR 0.083)			
96.167	32.9446	5.81	Q V . . .
(PEAK DAY 1, HOUR 0.167)			
96.250	33.0007	8.14	Q V . . .
(PEAK DAY 1, HOUR 0.250)			
96.333	33.0691	9.93	Q V . . .
(PEAK DAY 1, HOUR 0.333)			
96.417	33.1439	10.86	Q V . . .
(PEAK DAY 1, HOUR 0.417)			
96.500	33.2233	11.53	Q V . . .
(PEAK DAY 1, HOUR 0.500)			
96.583	33.3064	12.07	Q V . . .
(PEAK DAY 1, HOUR 0.583)			
96.667	33.3925	12.50	Q V . . .
(PEAK DAY 1, HOUR 0.667)			
96.750	33.4810	12.85	Q V . . .
(PEAK DAY 1, HOUR 0.750)			
96.833	33.5716	13.16	Q V . . .
(PEAK DAY 1, HOUR 0.833)			
96.917	33.6640	13.42	Q V . . .
(PEAK DAY 1, HOUR 0.917)			
97.000	33.7579	13.64	Q V . . .
(PEAK DAY 1, HOUR 1.000)			
97.083	33.8532	13.83	Q V . . .
(PEAK DAY 1, HOUR 1.083)			
97.167	33.9496	13.99	Q V . . .
(PEAK DAY 1, HOUR 1.167)			
97.250	34.0470	14.15	Q V . . .
(PEAK DAY 1, HOUR 1.250)			
97.333	34.1455	14.30	Q V . . .
(PEAK DAY 1, HOUR 1.333)			
97.417	34.2449	14.44	Q V . . .
(PEAK DAY 1, HOUR 1.417)			
97.500	34.3453	14.58	Q V . . .
(PEAK DAY 1, HOUR 1.500)			
97.583	34.4466	14.71	Q V . . .
(PEAK DAY 1, HOUR 1.583)			
97.667	34.5487	14.83	Q V . . .
(PEAK DAY 1, HOUR 1.667)			
97.750	34.6517	14.96	Q V . . .
(PEAK DAY 1, HOUR 1.750)			
97.833	34.7555	15.07	Q .V . . .
(PEAK DAY 1, HOUR 1.833)			
97.917	34.8601	15.18	Q .V . . .
(PEAK DAY 1, HOUR 1.917)			
98.000	34.9654	15.29	Q .V . . .
(PEAK DAY 1, HOUR 2.000)			
98.083	35.0714	15.39	Q .V . . .
(PEAK DAY 1, HOUR 2.083)			
98.167	35.1780	15.48	Q .V . . .
(PEAK DAY 1, HOUR 2.167)			
98.250	35.2853	15.58	Q .V . . .
(PEAK DAY 1, HOUR 2.250)			
98.333	35.3933	15.67	Q .V . . .
(PEAK DAY 1, HOUR 2.333)			
98.417	35.5017	15.75	Q .V . . .
(PEAK DAY 1, HOUR 2.417)			
98.500	35.6106	15.81	Q .V . . .
(PEAK DAY 1, HOUR 2.500)			
98.583	35.7200	15.88	Q .V . . .
(PEAK DAY 1, HOUR 2.583)			
98.667	35.8299	15.95	Q .V . . .
(PEAK DAY 1, HOUR 2.667)			
98.750	35.9403	16.03	Q .V . . .
(PEAK DAY 1, HOUR 2.750)			
98.833	36.0511	16.10	Q .V . . .
(PEAK DAY 1, HOUR 2.833)			
98.917	36.1625	16.17	Q .V . . .
(PEAK DAY 1, HOUR 2.917)			
99.000	36.2744	16.24	Q .V . . .
(PEAK DAY 1, HOUR 3.000)			
99.083	36.3867	16.32	Q .V . . .
(PEAK DAY 1, HOUR 3.083)			
99.167	36.4996	16.39	Q .V . . .
(PEAK DAY 1, HOUR 3.167)			
99.250	36.6130	16.47	Q .V . . .
(PEAK DAY 1, HOUR 3.250)			
99.333	36.7270	16.54	Q .V . . .
(PEAK DAY 1, HOUR 3.333)			
99.417	36.8414	16.62	Q .V . . .
(PEAK DAY 1, HOUR 3.417)			
99.500	36.9564	16.70	Q .V . . .
(PEAK DAY 1, HOUR 3.500)			
99.583	37.0720	16.78	Q .V . . .
(PEAK DAY 1, HOUR 3.583)			
99.667	37.1880	16.85	Q .V . . .
(PEAK DAY 1, HOUR 3.667)			
99.750	37.3045	16.92	Q .V . . .
(PEAK DAY 1, HOUR 3.750)			
99.833	37.4215	16.99	Q .V . . .
(PEAK DAY 1, HOUR 3.833)			
99.917	37.5390	17.06	Q .V . . .
(PEAK DAY 1, HOUR 3.917)			
100.000	37.6569	17.13	Q .V . . .
(PEAK DAY 1, HOUR 4.000)			
100.083	37.7754	17.20	Q .V . . .
(PEAK DAY 1, HOUR 4.083)			
100.167	37.8943	17.27	Q . V . . .
(PEAK DAY 1, HOUR 4.167)			
100.250	38.0138	17.35	Q . V . . .
(PEAK DAY 1, HOUR 4.250)			
100.333	38.1338	17.42	Q . V . . .
(PEAK DAY 1, HOUR 4.333)			
100.417	38.2543	17.50	Q . V . . .
(PEAK DAY 1, HOUR 4.417)			
100.500	38.3753	17.57	.Q . V . . .
(PEAK DAY 1, HOUR 4.500)			
100.583	38.4969	17.65	.Q . V . . .
(PEAK DAY 1, HOUR 4.583)			
100.667	38.6190	17.73	.Q . V . . .
(PEAK DAY 1, HOUR 4.667)			
100.750	38.7416	17.81	.Q . V . . .
(PEAK DAY 1, HOUR 4.750)			
100.833	38.8648	17.89	.Q . V . . .
(PEAK DAY 1, HOUR 4.833)			
100.917	38.9885	17.97	.Q . V . . .
(PEAK DAY 1, HOUR 4.917)			
101.000	39.1128	18.05	.Q . V . . .
(PEAK DAY 1, HOUR 5.000)			
101.083	39.2377	18.13	.Q . V . . .
(PEAK DAY 1, HOUR 5.083)			

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101.167     39.3632     18.22  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.167)
101.250     39.4892     18.30  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.250)
101.333     39.6158     18.39  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.333)
101.417     39.7430     18.47  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.417)
101.500     39.8709     18.56  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.500)
101.583     39.9993     18.65  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.583)
101.667     40.1283     18.74  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.667)
101.750     40.2580     18.83  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.750)
101.833     40.3883     18.92  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.833)
101.917     40.5193     19.02  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.917)
102.000     40.6509     19.11  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   6.000)
102.083     40.7832     19.21  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   6.083)
102.167     40.9161     19.30  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   6.167)
102.250     41.0497     19.40  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.250)
102.333     41.1841     19.50  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.333)
102.417     41.3191     19.60  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.417)
102.500     41.4548     19.71  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.500)
102.583     41.5912     19.81  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.583)
102.667     41.7283     19.91  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.667)
102.750     41.8662     20.02  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.750)
102.833     42.0048     20.13  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.833)
102.917     42.1442     20.24  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.917)
103.000     42.2844     20.35  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.000)
103.083     42.4253     20.46  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.083)
103.167     42.5670     20.58  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.167)
103.250     42.7096     20.69  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.250)
103.333     42.8529     20.81  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.333)
103.417     42.9970     20.93  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.417)
103.500     43.1420     21.05  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.500)
103.583     43.2879     21.18  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.583)
103.667     43.4346     21.30  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.667)
103.750     43.5822     21.43  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.750)
103.833     43.7307     21.56  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.833)
103.917     43.8801     21.69  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.917)
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104.000     44.0304     21.82  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   8.000)
104.083     44.1816     21.96  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.083)
104.167     44.3338     22.10  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.167)
104.250     44.4869     22.24  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.250)
104.333     44.6411     22.38  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.333)
104.417     44.7962     22.52  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.417)
104.500     44.9523     22.67  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.500)
104.583     45.1095     22.82  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.583)
104.667     45.2677     22.97  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.667)
104.750     45.4270     23.13  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.750)
104.833     45.5874     23.29  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.833)
104.917     45.7489     23.45  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.917)
105.000     45.9115     23.61  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.000)
105.083     46.0752     23.78  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.083)
105.167     46.2402     23.95  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.167)
105.250     46.4063     24.12  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.250)
105.333     46.5736     24.30  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.333)
105.417     46.7422     24.48  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.417)
105.500     46.9120     24.66  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.500)
105.583     47.0831     24.85  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.583)
105.667     47.2556     25.04  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.667)
105.750     47.4293     25.23  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.750)
105.833     47.6045     25.43  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.833)
105.917     47.7810     25.63  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.917)
106.000     47.9590     25.84  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.000)
106.083     48.1383     26.05  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.083)
106.167     48.3192     26.26  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.167)
106.250     48.5016     26.48  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.250)
106.333     48.6856     26.71  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.333)
106.417     48.8711     26.94  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.417)
106.500     49.0583     27.18  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.500)
106.583     49.2471     27.42  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.583)
106.667     49.4376     27.66  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.667)
106.750     49.6299     27.91  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.750)
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106.833     49.8239     28.17  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.833)
106.917     50.0198     28.44  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.917)
107.000     50.2175     28.71  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  11.000)
107.083     50.4171     28.99  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  11.083)
107.167     50.6187     29.27  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.167)
107.250     50.8223     29.57  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.250)
107.333     51.0280     29.87  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.333)
107.417     51.2359     30.17  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.417)
107.500     51.4459     30.49  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.500)
107.583     51.6581     30.82  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.583)
107.667     51.8727     31.15  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.667)
107.750     52.0896     31.50  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.750)
107.833     52.3090     31.85  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.833)
107.917     52.5309     32.22  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.917)
108.000     52.7554     32.60  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  12.000)
108.083     52.9850     33.34  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  12.083)
108.167     53.2266     35.09  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.167)
108.250     53.4846     37.46  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.250)
108.333     53.7559     39.39  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.333)
108.417     54.0356     40.62  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.417)
108.500     54.3224     41.64  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.500)
108.583     54.6155     42.56  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.583)
108.667     54.9144     43.40  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.667)
108.750     55.2188     44.20  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.750)
108.833     55.5286     44.98  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.833)
108.917     55.8436     45.74  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.917)
109.000     56.1638     46.49  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  13.000)
109.083     56.4890     47.23  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  13.083)
109.167     56.8194     47.97  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  13.167)
109.250     57.1551     48.73  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  13.250)
109.333     57.4961     49.52  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  13.333)
109.417     57.8427     50.33  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  13.417)
109.500     58.1951     51.16  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  13.500)
109.583     58.5534     52.03  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  13.583)
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109.667     58.9178     52.92  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  13.667)
109.750     59.2887     53.85  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  13.750)
109.833     59.6663     54.82  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  13.833)
109.917     60.0508     55.83  . Q       .        V.         .         .
(PEAK DAY 1, HOUR  13.917)
110.000     60.4427     56.90  . Q       .        V.         .         .
(PEAK DAY 1, HOUR  14.000)
110.083     60.8424     58.05  . Q       .        V.         .         .
(PEAK DAY 1, HOUR  14.083)
110.167     61.2514     59.39  . Q       .        V.         .         .
(PEAK DAY 1, HOUR  14.167)
110.250     61.6706     60.87  . Q       .        V.         .         .
(PEAK DAY 1, HOUR  14.250)
110.333     62.1002     62.37  . Q       .        V.         .         .
(PEAK DAY 1, HOUR  14.333)
110.417     62.5398     63.84  . Q       .        V.         .         .
(PEAK DAY 1, HOUR  14.417)
110.500     62.9900     65.37  . Q       .        V.         .         .
(PEAK DAY 1, HOUR  14.500)
110.583     63.4513     66.98  . Q       .         V         .         .
(PEAK DAY 1, HOUR  14.583)
110.667     63.9245     68.71  . Q       .         V         .         .
(PEAK DAY 1, HOUR  14.667)
110.750     64.4112     70.66  .  Q       .         V         .         .
(PEAK DAY 1, HOUR  14.750)
110.833     64.9150     73.15  .  Q       .         V         .         .
(PEAK DAY 1, HOUR  14.833)
110.917     65.4407     76.34  .  Q       .         V         .         .
(PEAK DAY 1, HOUR  14.917)
111.000     65.9935     80.25  .  Q       .         V         .         .
(PEAK DAY 1, HOUR  15.000)
111.083     66.5774     84.78  .  Q       .         .V        .         .
(PEAK DAY 1, HOUR  15.083)
111.167     67.1973     90.01  .   Q       .         .V        .         .
(PEAK DAY 1, HOUR  15.167)
111.250     67.8580     95.94  .   Q       .         .V        .         .
(PEAK DAY 1, HOUR  15.250)
111.333     68.5659    102.79  .   Q       .         .V        .         .
(PEAK DAY 1, HOUR  15.333)
111.417     69.3190    109.35  .    Q       .         .V        .         .
(PEAK DAY 1, HOUR  15.417)
111.500     70.1017    113.65  .    Q       .         . V       .         .
(PEAK DAY 1, HOUR  15.500)
111.583     70.9099    117.35  .    Q       .         . V       .         .
(PEAK DAY 1, HOUR  15.583)
111.667     71.7709    125.02  .     Q       .         . V       .         .
(PEAK DAY 1, HOUR  15.667)
111.750     72.7266    138.77  .     Q       .         .  V      .         .
(PEAK DAY 1, HOUR  15.750)
111.833     73.8217    159.00  .       Q.        .         .  V      .         .
(PEAK DAY 1, HOUR  15.833)
111.917     75.1262    189.42  .        Q        .         .  V      .         .
(PEAK DAY 1, HOUR  15.917)
112.000     76.7812    240.31  .         .  Q      .         .   V     .         .
(PEAK DAY 1, HOUR  16.000)
112.083     79.3056    366.54  .         .        Q    V    .         .
(PEAK DAY 1, HOUR  16.083)
112.167     83.2784    576.85  .         .         .     V   . Q       .
(PEAK DAY 1, HOUR  16.167)
112.250     87.9056    671.87  .         .         .      V  .       Q .
(PEAK DAY 1, HOUR  16.250)
112.333     91.7172    553.44  .         .         .        V.Q       .
(PEAK DAY 1, HOUR  16.333)
112.417     94.3714    385.40  .         .         . Q      V.        .
(PEAK DAY 1, HOUR  16.417)
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 112.500     96.5294    313.35  .          .      Q  .         V         .
(PEAK DAY 1, HOUR  16.500)
 112.583     98.3808    268.82  .          .    Q    .         .V        .
(PEAK DAY 1, HOUR  16.583)
 112.667     99.9869    233.20  .          .  Q      .         .V        .
(PEAK DAY 1, HOUR  16.667)
 112.750    101.3946    204.39  .          .Q        .         . V       .
(PEAK DAY 1, HOUR  16.750)
 112.833    102.6383    180.59  .          Q         .         . V       .
(PEAK DAY 1, HOUR  16.833)
 112.917    103.7472    161.01  .        Q.          .         . V       .
(PEAK DAY 1, HOUR  16.917)
 113.000    104.7342    143.32  .       Q .          .         .  V      .
(PEAK DAY 1, HOUR  17.000)
 113.083    105.6298    130.03  .      Q  .          .         .  V      .
(PEAK DAY 1, HOUR  17.083)
 113.167    106.4471    118.67  .     Q   .          .         .  V      .
(PEAK DAY 1, HOUR  17.167)
 113.250    107.2151    111.51  .     Q   .          .         .   V     .
(PEAK DAY 1, HOUR  17.250)
 113.333    107.9404    105.32  .     Q   .          .         .   V     .
(PEAK DAY 1, HOUR  17.333)
 113.417    108.6304    100.18  .    Q    .          .         .   V     .
(PEAK DAY 1, HOUR  17.417)
 113.500    109.2865     95.26  .    Q    .          .         .   V     .
(PEAK DAY 1, HOUR  17.500)
 113.583    109.9104     90.59  .    Q    .          .         .   V     .
(PEAK DAY 1, HOUR  17.583)
 113.667    110.5035     86.13  .   Q     .          .         .    V    .
(PEAK DAY 1, HOUR  17.667)
 113.750    111.0709     82.38  .   Q     .          .         .    V    .
(PEAK DAY 1, HOUR  17.750)
 113.833    111.6069     77.82  .   Q     .          .         .    V    .
(PEAK DAY 1, HOUR  17.833)
 113.917    112.1224     74.86  .   Q     .          .         .    V    .
(PEAK DAY 1, HOUR  17.917)
 114.000    112.6157     71.63  .   Q     .          .         .    V    .
(PEAK DAY 1, HOUR  18.000)
 114.083    113.0756     66.78  .  Q      .          .         .    V    .
(PEAK DAY 1, HOUR  18.083)
 114.167    113.5071     62.65  .  Q      .          .         .     V   .
(PEAK DAY 1, HOUR  18.167)
 114.250    113.9085     58.29  .  Q      .          .         .     V   .
(PEAK DAY 1, HOUR  18.250)
 114.333    114.2791     53.80  .  Q      .          .         .     V   .
(PEAK DAY 1, HOUR  18.333)
 114.417    114.6084     47.83  . Q       .          .         .     V   .
(PEAK DAY 1, HOUR  18.417)
 114.500    114.9178     44.92  . Q       .          .         .     V   .
(PEAK DAY 1, HOUR  18.500)
 114.583    115.2148     43.12  . Q       .          .         .     V   .
(PEAK DAY 1, HOUR  18.583)
 114.667    115.5015     41.63  . Q       .          .         .     V   .
(PEAK DAY 1, HOUR  18.667)
 114.750    115.7791     40.30  . Q       .          .         .     V   .
(PEAK DAY 1, HOUR  18.750)
 114.833    116.0483     39.09  . Q       .          .         .     V   .
(PEAK DAY 1, HOUR  18.833)
 114.917    116.3100     38.00  . Q       .          .         .     V   .
(PEAK DAY 1, HOUR  18.917)
 115.000    116.5650     37.02  . Q       .          .         .     V   .
(PEAK DAY 1, HOUR  19.000)
 115.083    116.8138     36.13  . Q       .          .         .      V  .
(PEAK DAY 1, HOUR  19.083)
 115.167    117.0569     35.29  . Q       .          .         .      V  .
(PEAK DAY 1, HOUR  19.167)
 115.250    117.2943     34.47  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  19.250)
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 115.333    117.5261     33.65  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  19.333)
 115.417    117.7521     32.82  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  19.417)
 115.500    117.9719     31.91  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  19.500)
 115.583    118.1844     30.86  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  19.583)
 115.667    118.3832     28.87  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  19.667)
 115.750    118.5730     27.55  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  19.750)
 115.833    118.7582     26.88  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  19.833)
 115.917    118.9394     26.31  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  19.917)
 116.000    119.1169     25.78  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  20.000)
 116.083    119.2911     25.29  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  20.083)
 116.167    119.4621     24.83  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  20.167)
 116.250    119.6301     24.40  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  20.250)
 116.333    119.7954     24.00  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  20.333)
 116.417    119.9582     23.64  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  20.417)
 116.500    120.1186     23.29  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  20.500)
 116.583    120.2767     22.96  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  20.583)
 116.667    120.4326     22.64  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  20.667)
 116.750    120.5864     22.33  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  20.750)
 116.833    120.7382     22.03  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  20.833)
 116.917    120.8879     21.75  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  20.917)
 117.000    121.0358     21.47  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.000)
 117.083    121.1818     21.20  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.083)
 117.167    121.3261     20.94  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.167)
 117.250    121.4686     20.69  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.250)
 117.333    121.6094     20.45  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.333)
 117.417    121.7486     20.21  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.417)
 117.500    121.8862     19.98  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.500)
 117.583    122.0223     19.76  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.583)
 117.667    122.1569     19.55  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.667)
 117.750    122.2902     19.34  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.750)
 117.833    122.4220     19.15  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.833)
 117.917    122.5526     18.96  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.917)
 118.000    122.6818     18.77  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  22.000)
 118.083    122.8099     18.59  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  22.083)
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 118.167    122.9367     18.41  .Q         .         .         .         V.
 (PEAK DAY 1, HOUR  22.167)
 118.250    123.0623     18.24  .Q         .         .         .         V.
 (PEAK DAY 1, HOUR  22.250)
 118.333    123.1867     18.07  .Q         .         .         .         V.
 (PEAK DAY 1, HOUR  22.333)
 118.417    123.3100     17.90  .Q         .         .         .         V.
 (PEAK DAY 1, HOUR  22.417)
 118.500    123.4322     17.74  .Q         .         .         .         V.
 (PEAK DAY 1, HOUR  22.500)
 118.583    123.5533     17.59  .Q         .         .         .         V.
 (PEAK DAY 1, HOUR  22.583)
 118.667    123.6734     17.43  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  22.667)
 118.750    123.7924     17.28  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  22.750)
 118.833    123.9104     17.14  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  22.833)
 118.917    124.0275     16.99  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  22.917)
 119.000    124.1436     16.85  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  23.000)
 119.083    124.2587     16.72  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  23.083)
 119.167    124.3729     16.58  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  23.167)
 119.250    124.4862     16.45  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  23.250)
 119.333    124.5986     16.32  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  23.333)
 119.417    124.7101     16.20  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  23.417)
 119.500    124.8208     16.07  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  23.500)
 119.583    124.9307     15.95  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  23.583)
 119.667    125.0397     15.83  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  23.667)
 119.750    125.1480     15.72  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  23.750)
 119.833    125.2554     15.60  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  23.833)
 119.917    125.3621     15.49  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  23.917)
 120.000    125.4680     15.38  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  24.000)
 120.083    125.5693     14.71  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  24.083)
 120.167    125.6552     12.46  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  24.167)
 120.250    125.7190      9.27  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  24.250)
 120.333    125.7661      6.83  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  24.333)
 120.417    125.8044      5.57  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  24.417)
 120.500    125.8365      4.66  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  24.500)
 120.583    125.8637      3.95  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  24.583)
 120.667    125.8871      3.40  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  24.667)
 120.750    125.9073      2.94  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  24.750)
 120.833    125.9250      2.56  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  24.833)
 120.917    125.9405      2.25  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  24.917)
 121.000    125.9542      1.99  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  25.000)
 121.083    125.9664      1.78  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  25.083)
 121.167    125.9775      1.61  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  25.167)
 121.250    125.9874      1.45  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  25.250)
 121.333    125.9964      1.30  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  25.333)
 121.417    126.0044      1.16  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  25.417)
 121.500    126.0116      1.04  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  25.500)
 121.583    126.0179      0.92  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  25.583)
 121.667    126.0234      0.81  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  25.667)
 121.750    126.0283      0.71  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  25.750)
 121.833    126.0326      0.62  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  25.833)
 121.917    126.0363      0.54  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  25.917)
 122.000    126.0395      0.46  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  26.000)
 122.083    126.0423      0.40  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  26.083)
 122.167    126.0446      0.35  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  26.167)
 122.250    126.0466      0.29  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  26.250)
 122.333    126.0483      0.24  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  26.333)
 122.417    126.0498      0.22  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  26.417)
 122.500    126.0512      0.20  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  26.500)
 122.583    126.0524      0.19  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  26.583)
 122.667    126.0536      0.17  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  26.667)
 122.750    126.0547      0.15  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  26.750)
 122.833    126.0556      0.14  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  26.833)
 122.917    126.0565      0.12  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  26.917)
 123.000    126.0572      0.11  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  27.000)
 123.083    126.0579      0.09  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  27.083)
 123.167    126.0584      0.08  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  27.167)
 123.250    126.0588      0.06  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  27.250)
 123.333    126.0592      0.05  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  27.333)
 123.417    126.0594      0.03  Q          .         .         .         V.
 (PEAK DAY 1, HOUR  27.417)
 123.500    126.0595      0.02  Q          .         .         .          V
 (PEAK DAY 1, HOUR  27.500)
 123.583    126.0596      0.00  Q          .         .         .          V
 (PEAK DAY 1, HOUR  27.583)
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  FLOW PROCESS FROM NODE   6311.00 TO NODE   6311.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  5040.6 Ac. ***
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE   6311.00 TO NODE   6311.00 IS CODE =  11
----------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
============================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  5040.6 Ac. ***

            STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
          (Note: Time indicated is at END of Each Unit Intervals)
----------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      275.0     550.0     825.0    1100.0
----------------------------------------------------------------------------
  96.000    493.7987    296.25  .        VQ         .         .         .
 (PEAK DAY 2, HOUR  24.000)
  96.083    495.8326    295.32  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   0.083)
  96.167    497.8684    295.60  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   0.167)
  96.250    499.9113    296.63  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   0.250)
  96.333    501.9579    297.16  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   0.333)
  96.417    504.0024    296.88  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   0.417)
  96.500    506.0438    296.40  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   0.500)
  96.583    508.0817    295.90  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   0.583)
  96.667    510.1164    295.44  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   0.667)
  96.750    512.1482    295.02  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   0.750)
  96.833    514.1773    294.62  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   0.833)
  96.917    516.2038    294.25  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   0.917)
  97.000    518.2277    293.87  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   1.000)
  97.083    520.2490    293.50  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   1.083)
  97.167    522.2679    293.13  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   1.167)
  97.250    524.2844    292.79  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   1.250)
  97.333    526.2986    292.47  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   1.333)
  97.417    528.3107    292.16  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   1.417)
  97.500    530.3209    291.87  .         Q         .         .         .
 (PEAK DAY 1, HOUR   1.500)
  97.583    532.3291    291.59  .         Q         .         .         .
 (PEAK DAY 1, HOUR   1.583)
  97.667    534.3350    291.26  .         Q         .         .         .
 (PEAK DAY 1, HOUR   1.667)
  97.750    536.3381    290.85  .         Q         .         .         .
 (PEAK DAY 1, HOUR   1.750)
  97.833    538.3383    290.41  .         Q         .         .         .
 (PEAK DAY 1, HOUR   1.833)
  97.917    540.3354    289.99  .         Q         .         .         .
 (PEAK DAY 1, HOUR   1.917)
  98.000    542.3298    289.58  .         Q         .         .         .
 (PEAK DAY 1, HOUR   2.000)
  98.083    544.3215    289.18  .         Q         .         .         .
 (PEAK DAY 1, HOUR   2.083)
  98.167    546.3104    288.79  .         Q         .         .         .
 (PEAK DAY 1, HOUR   2.167)
  98.250    548.2968    288.42  .         Q         .         .         .
 (PEAK DAY 1, HOUR   2.250)
  98.333    550.2807    288.06  .         Q         .         .         .
 (PEAK DAY 1, HOUR   2.333)
  98.417    552.2620    287.68  .         Q         .         .         .
 (PEAK DAY 1, HOUR   2.417)
  98.500    554.2408    287.32  .         Q         .         .         .
 (PEAK DAY 1, HOUR   2.500)
  98.583    556.2172    286.97  .         Q         .         .         .
 (PEAK DAY 1, HOUR   2.583)
  98.667    558.1912    286.63  .         Q         .         .         .
 (PEAK DAY 1, HOUR   2.667)
  98.750    560.1630    286.30  .         Q         .         .         .
 (PEAK DAY 1, HOUR   2.750)
  98.833    562.1326    285.99  .         Q         .         .         .
 (PEAK DAY 1, HOUR   2.833)
  98.917    564.1002    285.69  .         Q         .         .         .
 (PEAK DAY 1, HOUR   2.917)
  99.000    566.0657    285.40  .         Q         .         .         .
 (PEAK DAY 1, HOUR   3.000)
  99.083    568.0294    285.12  .         Q         .         .         .
 (PEAK DAY 1, HOUR   3.083)
  99.167    569.9913    284.86  .         Q         .         .         .
 (PEAK DAY 1, HOUR   3.167)
  99.250    571.9514    284.61  .         Q         .         .         .
 (PEAK DAY 1, HOUR   3.250)
  99.333    573.9099    284.37  .         Q         .         .         .
 (PEAK DAY 1, HOUR   3.333)
  99.417    575.8668    284.14  .         Q         .         .         .
 (PEAK DAY 1, HOUR   3.417)
  99.500    577.8222    283.93  .         Q         .         .         .
 (PEAK DAY 1, HOUR   3.500)
  99.583    579.7762    283.73  .         Q         .         .         .
 (PEAK DAY 1, HOUR   3.583)
  99.667    581.7289    283.53  .         Q         .         .         .
 (PEAK DAY 1, HOUR   3.667)
  99.750    583.6804    283.34  .         QV        .         .         .
 (PEAK DAY 1, HOUR   3.750)
  99.833    585.6306    283.17  .         QV        .         .         .
 (PEAK DAY 1, HOUR   3.833)
  99.917    587.5797    283.01  .         QV        .         .         .
 (PEAK DAY 1, HOUR   3.917)
 100.000    589.5277    282.86  .         QV        .         .         .
 (PEAK DAY 1, HOUR   4.000)
 100.083    591.4748    282.72  .         QV        .         .         .
 (PEAK DAY 1, HOUR   4.083)
 100.167    593.4210    282.59  .         QV        .         .         .
 (PEAK DAY 1, HOUR   4.167)
 100.250    595.3664    282.47  .         QV        .         .         .
 (PEAK DAY 1, HOUR   4.250)
 100.333    597.3111    282.37  .         QV        .         .         .
 (PEAK DAY 1, HOUR   4.333)
 100.417    599.2551    282.27  .         QV        .         .         .
 (PEAK DAY 1, HOUR   4.417)
 100.500    601.1986    282.19  .         QV        .         .         .
 (PEAK DAY 1, HOUR   4.500)
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100.583    603.1416    282.12  .         QV        .         .         .
(PEAK DAY 1, HOUR   4.583)
100.667    605.0842    282.06  .         QV        .         .         .
(PEAK DAY 1, HOUR   4.667)
100.750    607.0264    282.01  .         QV        .         .         .
(PEAK DAY 1, HOUR   4.750)
100.833    608.9683    281.97  .         QV        .         .         .
(PEAK DAY 1, HOUR   4.833)
100.917    610.9101    281.95  .         QV        .         .         .
(PEAK DAY 1, HOUR   4.917)
101.000    612.8518    281.93  .         QV        .         .         .
(PEAK DAY 1, HOUR   5.000)
101.083    614.7935    281.93  .         QV        .         .         .
(PEAK DAY 1, HOUR   5.083)
101.167    616.7352    281.94  .         QV        .         .         .
(PEAK DAY 1, HOUR   5.167)
101.250    618.6771    281.96  .         QV        .         .         .
(PEAK DAY 1, HOUR   5.250)
101.333    620.6191    281.99  .         QV        .         .         .
(PEAK DAY 1, HOUR   5.333)
101.417    622.5615    282.04  .         QV        .         .         .
(PEAK DAY 1, HOUR   5.417)
101.500    624.5043    282.09  .         QV        .         .         .
(PEAK DAY 1, HOUR   5.500)
101.583    626.4475    282.16  .         QV        .         .         .
(PEAK DAY 1, HOUR   5.583)
101.667    628.3913    282.24  .         QV        .         .         .
(PEAK DAY 1, HOUR   5.667)
101.750    630.3357    282.33  .         QV        .         .         .
(PEAK DAY 1, HOUR   5.750)
101.833    632.2808    282.43  .         QV        .         .         .
(PEAK DAY 1, HOUR   5.833)
101.917    634.2267    282.55  .         QV        .         .         .
(PEAK DAY 1, HOUR   5.917)
102.000    636.1735    282.67  .         Q V       .         .         .
(PEAK DAY 1, HOUR   6.000)
102.083    638.1213    282.81  .         Q V       .         .         .
(PEAK DAY 1, HOUR   6.083)
102.167    640.0701    282.96  .         Q V       .         .         .
(PEAK DAY 1, HOUR   6.167)
102.250    642.0200    283.13  .         Q V       .         .         .
(PEAK DAY 1, HOUR   6.250)
102.333    643.9711    283.30  .         Q V       .         .         .
(PEAK DAY 1, HOUR   6.333)
102.417    645.9235    283.49  .         Q V       .         .         .
(PEAK DAY 1, HOUR   6.417)
102.500    647.8773    283.69  .         Q V       .         .         .
(PEAK DAY 1, HOUR   6.500)
102.583    649.8325    283.90  .         Q V       .         .         .
(PEAK DAY 1, HOUR   6.583)
102.667    651.7894    284.13  .         Q V       .         .         .
(PEAK DAY 1, HOUR   6.667)
102.750    653.7479    284.37  .         Q V       .         .         .
(PEAK DAY 1, HOUR   6.750)
102.833    655.7081    284.62  .         Q V       .         .         .
(PEAK DAY 1, HOUR   6.833)
102.917    657.6701    284.89  .         Q V       .         .         .
(PEAK DAY 1, HOUR   6.917)
103.000    659.6340    285.17  .         Q V       .         .         .
(PEAK DAY 1, HOUR   7.000)
103.083    661.6000    285.46  .         Q V       .         .         .
(PEAK DAY 1, HOUR   7.083)
103.167    663.5681    285.76  .         Q V       .         .         .
(PEAK DAY 1, HOUR   7.167)
103.250    665.5383    286.08  .         Q V       .         .         .
(PEAK DAY 1, HOUR   7.250)
103.333    667.5109    286.41  .         Q V       .         .         .
(PEAK DAY 1, HOUR   7.333)
103.417    669.4858    286.76  .         Q V       .         .         .
(PEAK DAY 1, HOUR   7.417)
103.500    671.4632    287.12  .         Q V       .         .         .
(PEAK DAY 1, HOUR   7.500)
103.583    673.4432    287.49  .         Q V       .         .         .
(PEAK DAY 1, HOUR   7.583)
103.667    675.4258    287.88  .         Q V       .         .         .
(PEAK DAY 1, HOUR   7.667)
103.750    677.4113    288.28  .         Q V       .         .         .
(PEAK DAY 1, HOUR   7.750)
103.833    679.3995    288.70  .         Q V       .         .         .
(PEAK DAY 1, HOUR   7.833)
103.917    681.3908    289.13  .         Q V       .         .         .
(PEAK DAY 1, HOUR   7.917)
104.000    683.3851    289.58  .         Q V       .         .         .
(PEAK DAY 1, HOUR   8.000)
104.083    685.3826    290.04  .         Q V       .         .         .
(PEAK DAY 1, HOUR   8.083)
104.167    687.3834    290.52  .         Q V       .         .         .
(PEAK DAY 1, HOUR   8.167)
104.250    689.3876    291.01  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   8.250)
104.333    691.3953    291.52  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   8.333)
104.417    693.4066    292.04  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   8.417)
104.500    695.4216    292.58  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   8.500)
104.583    697.4405    293.14  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   8.583)
104.667    699.4633    293.71  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   8.667)
104.750    701.4902    294.30  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   8.750)
104.833    703.5212    294.91  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   8.833)
104.917    705.5565    295.53  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   8.917)
105.000    707.5963    296.17  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   9.000)
105.083    709.6406    296.83  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   9.083)
105.167    711.6895    297.51  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   9.167)
105.250    713.7433    298.20  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   9.250)
105.333    715.8019    298.92  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   9.333)
105.417    717.8657    299.65  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   9.417)
105.500    719.9346    300.41  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   9.500)
105.583    722.0085    301.14  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   9.583)
105.667    724.0870    301.80  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   9.667)
105.750    726.1697    302.41  .         Q  V      .         .         .
(PEAK DAY 1, HOUR   9.750)
105.833    728.2567    303.03  .         .Q V      .         .         .
(PEAK DAY 1, HOUR   9.833)
105.917    730.3480    303.66  .         .Q V      .         .         .
(PEAK DAY 1, HOUR   9.917)
106.000    732.4437    304.31  .         .Q V      .         .         .
(PEAK DAY 1, HOUR  10.000)
106.083    734.5441    304.97  .         .Q V      .         .         .
(PEAK DAY 1, HOUR  10.083)
106.167    736.6491    305.65  .         .Q V      .         .         .
(PEAK DAY 1, HOUR  10.167)
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106.250    738.7590    306.35  .         .Q V      .         .         .
(PEAK DAY 1, HOUR  10.250)
106.333    740.8738    307.07  .         .Q V      .         .         .
(PEAK DAY 1, HOUR  10.333)
106.417    742.9937    307.81  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  10.417)
106.500    745.1188    308.57  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  10.500)
106.583    747.2493    309.34  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  10.583)
106.667    749.3853    310.14  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  10.667)
106.750    751.5269    310.96  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  10.750)
106.833    753.6743    311.80  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  10.833)
106.917    755.8276    312.66  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  10.917)
107.000    757.9870    313.55  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  11.000)
107.083    760.1526    314.46  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  11.083)
107.167    762.3248    315.39  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  11.167)
107.250    764.5035    316.35  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  11.250)
107.333    766.6890    317.33  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  11.333)
107.417    768.8813    318.34  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  11.417)
107.500    771.0809    319.37  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  11.500)
107.583    773.2877    320.44  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  11.583)
107.667    775.5021    321.53  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  11.667)
107.750    777.7243    322.65  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  11.750)
107.833    779.9544    323.81  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  11.833)
107.917    782.1927    324.99  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  11.917)
108.000    784.4393    326.21  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  12.000)
108.083    786.6971    327.82  .         .Q  V     .         .         .
(PEAK DAY 1, HOUR  12.083)
108.167    788.9730    330.46  .         . Q V     .         .         .
(PEAK DAY 1, HOUR  12.167)
108.250    791.2717    333.76  .         . Q V     .         .         .
(PEAK DAY 1, HOUR  12.250)
108.333    793.5904    336.68  .         . Q V     .         .         .
(PEAK DAY 1, HOUR  12.333)
108.417    795.9247    338.95  .         . Q  V    .         .         .
(PEAK DAY 1, HOUR  12.417)
108.500    798.2739    341.10  .         . Q  V    .         .         .
(PEAK DAY 1, HOUR  12.500)
108.583    800.6381    343.29  .         . Q  V    .         .         .
(PEAK DAY 1, HOUR  12.583)
108.667    803.0180    345.56  .         . Q  V    .         .         .
(PEAK DAY 1, HOUR  12.667)
108.750    805.4142    347.92  .         . Q  V    .         .         .
(PEAK DAY 1, HOUR  12.750)
108.833    807.8271    350.36  .         . Q  V    .         .         .
(PEAK DAY 1, HOUR  12.833)
108.917    810.2573    352.86  .         . Q  V    .         .         .
(PEAK DAY 1, HOUR  12.917)
109.000    812.7045    355.32  .         . Q  V    .         .         .
(PEAK DAY 1, HOUR  13.000)
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109.083    815.1681    357.72  .         .  Q V    .         .         .
(PEAK DAY 1, HOUR  13.083)
109.167    817.6483    360.12  .         .  Q V    .         .         .
(PEAK DAY 1, HOUR  13.167)
109.250    820.1454    362.58  .         .  Q V    .         .         .
(PEAK DAY 1, HOUR  13.250)
109.333    822.6600    365.12  .         .  Q V    .         .         .
(PEAK DAY 1, HOUR  13.333)
109.417    825.1926    367.73  .         .  Q V    .         .         .
(PEAK DAY 1, HOUR  13.417)
109.500    827.7438    370.43  .         .  Q V    .         .         .
(PEAK DAY 1, HOUR  13.500)
109.583    830.3142    373.22  .         .  Q V    .         .         .
(PEAK DAY 1, HOUR  13.583)
109.667    832.9046    376.13  .         .  Q V    .         .         .
(PEAK DAY 1, HOUR  13.667)
109.750    835.5158    379.15  .         .  Q V    .         .         .
(PEAK DAY 1, HOUR  13.750)
109.833    838.1487    382.31  .         .  Q V    .         .         .
(PEAK DAY 1, HOUR  13.833)
109.917    840.8044    385.60  .         .   QV    .         .         .
(PEAK DAY 1, HOUR  13.917)
110.000    843.4838    389.05  .         .   QV    .         .         .
(PEAK DAY 1, HOUR  14.000)
110.083    846.1884    392.71  .         .   QV    .         .         .
(PEAK DAY 1, HOUR  14.083)
110.167    848.9188    396.45  .         .   Q V   .         .         .
(PEAK DAY 1, HOUR  14.167)
110.250    851.6731    399.92  .         .   Q V   .         .         .
(PEAK DAY 1, HOUR  14.250)
110.333    854.4495    403.13  .         .   Q V   .         .         .
(PEAK DAY 1, HOUR  14.333)
110.417    857.2480    406.35  .         .   Q V   .         .         .
(PEAK DAY 1, HOUR  14.417)
110.500    860.0703    409.80  .         .   Q V   .         .         .
(PEAK DAY 1, HOUR  14.500)
110.583    862.9189    413.62  .         .    QV   .         .         .
(PEAK DAY 1, HOUR  14.583)
110.667    865.7970    417.89  .         .    QV   .         .         .
(PEAK DAY 1, HOUR  14.667)
110.750    868.7081    422.69  .         .    QV   .         .         .
(PEAK DAY 1, HOUR  14.750)
110.833    871.6573    428.24  .         .    QV   .         .         .
(PEAK DAY 1, HOUR  14.833)
110.917    874.6511    434.69  .         .    QV   .         .         .
(PEAK DAY 1, HOUR  14.917)
111.000    877.6954    442.04  .         .     Q   .         .         .
(PEAK DAY 1, HOUR  15.000)
111.083    880.7944    449.97  .         .     Q   .         .         .
(PEAK DAY 1, HOUR  15.083)
111.167    883.9514    458.40  .         .     Q   .         .         .
(PEAK DAY 1, HOUR  15.167)
111.250    887.1713    467.53  .         .     VQ  .         .         .
(PEAK DAY 1, HOUR  15.250)
111.333    890.4611    477.67  .         .     VQ  .         .         .
(PEAK DAY 1, HOUR  15.333)
111.417    893.8196    487.67  .         .     VQ  .         .         .
(PEAK DAY 1, HOUR  15.417)
111.500    897.2325    495.54  .         .     V Q .         .         .
(PEAK DAY 1, HOUR  15.500)
111.583    900.6964    502.95  .         .      VQ .         .         .
(PEAK DAY 1, HOUR  15.583)
111.667    904.2389    514.38  .         .      VQ .         .         .
(PEAK DAY 1, HOUR  15.667)
111.750    907.9017    531.84  .         .      V Q.         .         .
(PEAK DAY 1, HOUR  15.750)
111.833    911.7291    555.73  .         .      V  Q         .         .
(PEAK DAY 1, HOUR  15.833)
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111.917    915.7904    589.71  .          .      V  .Q        .          .
(PEAK DAY 1, HOUR  15.917)
112.000    920.2261    644.06  .          .      V  .  Q      .          .
(PEAK DAY 1, HOUR  16.000)
112.083    925.5556    773.84  .          .      V  .       Q .          .
(PEAK DAY 1, HOUR  16.083)
112.167    932.3615    988.22  .          .      V  .         .    Q     .
(PEAK DAY 1, HOUR  16.167)
112.250    939.8552   1088.08  .          .      V  .         .        Q.
(PEAK DAY 1, HOUR  16.250)
112.333    946.5728    975.39  .          .      V  .         .    Q     .
(PEAK DAY 1, HOUR  16.333)
112.417    952.1804    814.22  .          .      V  .        Q.          .
(PEAK DAY 1, HOUR  16.417)
112.500    957.3485    750.42  .          .       V .      Q  .          .
(PEAK DAY 1, HOUR  16.500)
112.583    962.2802    716.08  .          .       V .     Q   .          .
(PEAK DAY 1, HOUR  16.583)
112.667    967.0338    690.24  .          .       V .    Q    .          .
(PEAK DAY 1, HOUR  16.667)
112.750    971.6339    667.92  .          .       V .   Q     .          .
(PEAK DAY 1, HOUR  16.750)
112.833    976.0982    648.23  .          .       V .  Q      .          .
(PEAK DAY 1, HOUR  16.833)
112.917    980.4500    631.88  .          .       V . Q       .          .
(PEAK DAY 1, HOUR  16.917)
113.000    984.7002    617.14  .          .       V . Q       .          .
(PEAK DAY 1, HOUR  17.000)
113.083    988.8781    606.63  .          .       V . Q       .          .
(PEAK DAY 1, HOUR  17.083)
113.167    992.9955    597.85  .          .       V .Q        .          .
(PEAK DAY 1, HOUR  17.167)
113.250    997.0801    593.08  .          .       V .Q        .          .
(PEAK DAY 1, HOUR  17.250)
113.333   1001.1371    589.08  .          .       V .Q        .          .
(PEAK DAY 1, HOUR  17.333)
113.417   1005.1729    585.99  .          .       V .Q        .          .
(PEAK DAY 1, HOUR  17.417)
113.500   1009.1882    583.01  .          .        V.Q        .          .
(PEAK DAY 1, HOUR  17.500)
113.583   1013.1833    580.09  .          .        V.Q        .          .
(PEAK DAY 1, HOUR  17.583)
113.667   1017.1581    577.14  .          .        VQ         .          .
(PEAK DAY 1, HOUR  17.667)
113.750   1021.1161    574.70  .          .        VQ         .          .
(PEAK DAY 1, HOUR  17.750)
113.833   1025.0505    571.29  .          .        VQ         .          .
(PEAK DAY 1, HOUR  17.833)
113.917   1028.9714    569.31  .          .        VQ         .          .
(PEAK DAY 1, HOUR  17.917)
114.000   1032.8760    566.95  .          .        VQ         .          .
(PEAK DAY 1, HOUR  18.000)
114.083   1036.7524    562.86  .          .        VQ         .          .
(PEAK DAY 1, HOUR  18.083)
114.167   1040.6050    559.38  .          .        VQ         .          .
(PEAK DAY 1, HOUR  18.167)
114.250   1044.4312    555.56  .          .        VQ         .          .
(PEAK DAY 1, HOUR  18.250)
114.333   1048.2295    551.53  .          .        VQ         .          .
(PEAK DAY 1, HOUR  18.333)
114.417   1051.9895    545.95  .          .        Q.         .          .
(PEAK DAY 1, HOUR  18.417)
114.500   1055.7319    543.40  .          .        Q.         .          .
(PEAK DAY 1, HOUR  18.500)
114.583   1059.4640    541.89  .          .        QV         .          .
(PEAK DAY 1, HOUR  18.583)
114.667   1063.1875    540.65  .          .        QV         .          .
(PEAK DAY 1, HOUR  18.667)
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114.750   1066.9031    539.50  .          .        QV         .          .
(PEAK DAY 1, HOUR  18.750)
114.833   1070.6115    538.45  .          .        QV         .          .
(PEAK DAY 1, HOUR  18.833)
114.917   1074.3131    537.49  .          .        QV         .          .
(PEAK DAY 1, HOUR  18.917)
115.000   1078.0088    536.61  .          .        QV         .          .
(PEAK DAY 1, HOUR  19.000)
115.083   1081.6989    535.80  .          .        QV         .          .
(PEAK DAY 1, HOUR  19.083)
115.167   1085.3835    535.02  .          .        QV         .          .
(PEAK DAY 1, HOUR  19.167)
115.250   1089.0629    534.24  .          .        QV         .          .
(PEAK DAY 1, HOUR  19.250)
115.333   1092.7367    533.44  .          .        QV         .          .
(PEAK DAY 1, HOUR  19.333)
115.417   1096.4049    532.62  .          .        QV         .          .
(PEAK DAY 1, HOUR  19.417)
115.500   1100.0668    531.71  .          .        QV         .          .
(PEAK DAY 1, HOUR  19.500)
115.583   1103.7213    530.65  .          .        QV         .          .
(PEAK DAY 1, HOUR  19.583)
115.667   1107.3621    528.63  .          .        QV         .          .
(PEAK DAY 1, HOUR  19.667)
115.750   1110.9935    527.28  .          .        QV         .          .
(PEAK DAY 1, HOUR  19.750)
115.833   1114.6200    526.57  .          .        Q.V        .          .
(PEAK DAY 1, HOUR  19.833)
115.917   1118.2422    525.94  .          .        Q.V        .          .
(PEAK DAY 1, HOUR  19.917)
116.000   1121.8602    525.34  .          .        Q.V        .          .
(PEAK DAY 1, HOUR  20.000)
116.083   1125.4742    524.75  .          .        Q.V        .          .
(PEAK DAY 1, HOUR  20.083)
116.167   1129.0844    524.20  .          .        Q.V        .          .
(PEAK DAY 1, HOUR  20.167)
116.250   1132.6908    523.66  .          .        Q.V        .          .
(PEAK DAY 1, HOUR  20.250)
116.333   1136.2937    523.13  .          .        Q.V        .          .
(PEAK DAY 1, HOUR  20.333)
116.417   1139.8932    522.64  .          .        Q.V        .          .
(PEAK DAY 1, HOUR  20.417)
116.500   1143.4894    522.17  .          .       Q .V        .          .
(PEAK DAY 1, HOUR  20.500)
116.583   1147.0823    521.69  .          .       Q .V        .          .
(PEAK DAY 1, HOUR  20.583)
116.667   1150.6720    521.23  .          .       Q .V        .          .
(PEAK DAY 1, HOUR  20.667)
116.750   1154.2585    520.77  .          .       Q .V        .          .
(PEAK DAY 1, HOUR  20.750)
116.833   1157.8420    520.32  .          .       Q .V        .          .
(PEAK DAY 1, HOUR  20.833)
116.917   1161.4225    519.88  .          .       Q .V        .          .
(PEAK DAY 1, HOUR  20.917)
117.000   1164.9999    519.43  .          .       Q . V       .          .
(PEAK DAY 1, HOUR  21.000)
117.083   1168.5742    519.00  .          .       Q . V       .          .
(PEAK DAY 1, HOUR  21.083)
117.167   1172.1456    518.56  .          .       Q . V       .          .
(PEAK DAY 1, HOUR  21.167)
117.250   1175.7141    518.14  .          .       Q . V       .          .
(PEAK DAY 1, HOUR  21.250)
117.333   1179.2797    517.71  .          .       Q . V       .          .
(PEAK DAY 1, HOUR  21.333)
117.417   1182.8423    517.29  .          .       Q . V       .          .
(PEAK DAY 1, HOUR  21.417)
117.500   1186.4020    516.87  .          .       Q . V       .          .
(PEAK DAY 1, HOUR  21.500)
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117.583	1189.9589	516.46	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 21.583)										
117.667	1193.5129	516.05	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 21.667)										
117.750	1197.0642	515.65	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 21.750)										
117.833	1200.6128	515.26	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 21.833)										
117.917	1204.1587	514.86	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 21.917)										
118.000	1207.7019	514.47	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 22.000)										
118.083	1211.2424	514.08	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 22.083)										
118.167	1214.7803	513.69	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 22.167)										
118.250	1218.3154	513.31	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 22.250)										
118.333	1221.8479	512.92	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 22.333)										
118.417	1225.3778	512.54	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 22.417)										
118.500	1228.9050	512.16	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 22.500)										
118.583	1232.4297	511.78	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 22.583)										
118.667	1235.9518	511.40	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 22.667)										
118.750	1239.4713	511.03	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 22.750)										
118.833	1242.9883	510.66	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 22.833)										
118.917	1246.5027	510.28	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 22.917)										
119.000	1250.0145	509.91	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 23.000)										
119.083	1253.5238	509.54	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 23.083)										
119.167	1257.0305	509.17	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 23.167)										
119.250	1260.5347	508.80	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 23.250)										
119.333	1264.0363	508.44	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 23.333)										
119.417	1267.5354	508.07	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 23.417)										
119.500	1271.0320	507.71	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 23.500)										
119.583	1274.5261	507.34	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 23.583)										
119.667	1278.0177	506.98	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 23.667)										
119.750	1281.5068	506.62	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 23.750)										
119.833	1284.9934	506.26	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 23.833)										
119.917	1288.4775	505.89	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 23.917)										
120.000	1291.9592	505.53	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 24.000)										
120.083	1295.4344	504.61	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 24.083)										
120.167	1298.8926	502.11	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 24.167)										
120.250	1302.3269	498.66	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 24.250)										
120.333	1305.7426	495.95	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 24.333)										
120.417	1309.1476	494.42	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 24.417)										
120.500	1312.5444	493.22	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 24.500)										
120.583	1315.9342	492.19	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 24.583)										
120.667	1319.3177	491.29	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 24.667)										
120.750	1322.6956	490.46	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 24.750)										
120.833	1326.0681	489.70	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 24.833)										
120.917	1329.4357	488.98	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 24.917)										
121.000	1332.7987	488.31	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 25.000)										
121.083	1336.1573	487.68	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 25.083)										
121.167	1339.5120	487.10	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 25.167)										
121.250	1342.8627	486.53	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 25.250)										
121.333	1346.2097	485.98	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 25.333)										
121.417	1349.5530	485.44	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 25.417)										
121.500	1352.8926	484.91	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 25.500)										
121.583	1356.2285	484.38	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 25.583)										
121.667	1359.5609	483.87	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 25.667)										
121.750	1362.8898	483.35	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 25.750)										
121.833	1366.2152	482.86	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 25.833)										
121.917	1369.5372	482.36	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 25.917)										
122.000	1372.8558	481.86	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 26.000)										
122.083	1376.1711	481.39	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 26.083)										
122.167	1379.4833	480.92	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 26.167)										
122.250	1382.7921	480.45	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 26.250)										
122.333	1386.0978	479.98	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 26.333)										
122.417	1389.4004	479.54	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 26.417)										
122.500	1392.7001	479.11	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 26.500)										
122.583	1395.9968	478.68	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 26.583)										
122.667	1399.2905	478.25	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 26.667)										
122.750	1402.5813	477.82	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 26.750)										
122.833	1405.8691	477.39	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 26.833)										
122.917	1409.1541	476.96	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 26.917)										
123.000	1412.4359	476.53	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 27.000)										
123.083	1415.7148	476.10	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 27.083)										
123.167	1418.9908	475.67	.	.	Q	.	V	.	.	
(PEAK DAY 1, HOUR 27.167)										

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 123.250   1422.2639    475.25  .         .      Q  .     V   .         .
 (PEAK DAY 1, HOUR  27.250)
 123.333   1425.5341    474.82  .         .      Q  .     V   .         .
 (PEAK DAY 1, HOUR  27.333)
 123.417   1428.8011    474.39  .         .      Q  .     V   .         .
 (PEAK DAY 1, HOUR  27.417)
 123.500   1432.0653    473.96  .         .      Q  .      V  .         .
 (PEAK DAY 1, HOUR  27.500)
 123.583   1435.3265    473.53  .         .      Q  .      V  .         .
 (PEAK DAY 1, HOUR  27.583)
 123.667   1438.5850    473.12  .         .      Q  .      V  .         .
 (PEAK DAY 1, HOUR  27.667)
 123.750   1441.8405    472.70  .         .      Q  .      V  .         .
 (PEAK DAY 1, HOUR  27.750)
 123.833   1445.0933    472.30  .         .      Q  .      V  .         .
 (PEAK DAY 1, HOUR  27.833)
 123.917   1448.3434    471.92  .         .      Q  .      V  .         .
 (PEAK DAY 1, HOUR  27.917)
 124.000   1451.5909    471.54  .         .      Q  .      V  .         .
 (PEAK DAY 1, HOUR  28.000)
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
===============================================================================


*******************************************************************************
  FLOW PROCESS FROM NODE   6311.00 TO NODE   6330.00 IS CODE = 5.2
-------------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
===============================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  5040.6 Ac. ***

         THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
         TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
         INTERVALS(Reference: the National Engineering Handbook,
         Hydrology, Chapter 17, page 17-52, August,1972,
         U.S. Department of Commerce).


         ASSUMED REGULAR CHANNEL INFORMATION:
           BASEWIDTH(FT) =   20.00     CHANNEL Z =  1.00
           UPSTREAM ELEVATION(FT) =     382.00
           DOWNSTREAM ELEVATION(FT) =     375.00
           CHANNEL LENGTH(FT) =    1141.00     MANNING'S FACTOR = 0.040
           CONSTANT LOSS RATE(CFS) =    0.00


         CHANNEL ROUTING COEFFICIENT ESTIMATED:
           MAXIMUM INFLOW(CFS) =  1088.08
           AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =   653.80
           CHANNEL NORMAL VELOCITY FOR Q =   653.80 CFS =   6.34 FPS
           ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.789

         MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
         UNIT INTERVALS IS CSTAR = 0.933


         CONVEX METHOD CHANNEL ROUTING RESULTS:
                                                 OUTFLOW LESS
                CLOCK        INFLOW     ROUTED      LOSS
PEAK    TIME    TIME       (STREAM 1)    FLOW     (STREAM 1)
 DAY   (HRS)   (HRS)         (CFS)       (CFS)      (CFS)
  2   24.000  96.000       296.25      296.99      296.99
  1    0.083  96.083       295.32      295.84      295.84
  1    0.167  96.167       295.60      295.49      295.49
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1	0.250	96.250	296.63	296.10	296.10
1	0.333	96.333	297.16	296.86	296.86
1	0.417	96.417	296.88	297.00	297.00
1	0.500	96.500	296.40	296.65	296.65
1	0.583	96.583	295.90	296.17	296.17
1	0.667	96.667	295.44	295.69	295.69
1	0.750	96.750	295.02	295.25	295.25
1	0.833	96.833	294.62	294.84	294.84
1	0.917	96.917	294.25	294.45	294.45
1	1.000	97.000	293.87	294.07	294.07
1	1.083	97.083	293.50	293.70	293.70
1	1.167	97.167	293.13	293.33	293.33
1	1.250	97.250	292.79	292.98	292.98
1	1.333	97.333	292.47	292.64	292.64
1	1.417	97.417	292.16	292.33	292.33
1	1.500	97.500	291.87	292.03	292.03
1	1.583	97.583	291.59	291.74	291.74
1	1.667	97.667	291.26	291.44	291.44
1	1.750	97.750	290.85	291.07	291.07
1	1.833	97.833	290.41	290.65	290.65
1	1.917	97.917	289.99	290.22	290.22
1	2.000	98.000	289.58	289.81	289.81
1	2.083	98.083	289.18	289.40	289.40
1	2.167	98.167	288.79	289.01	289.01
1	2.250	98.250	288.42	288.62	288.62
1	2.333	98.333	288.06	288.25	288.25
1	2.417	98.417	287.68	287.89	287.89
1	2.500	98.500	287.32	287.52	287.52
1	2.583	98.583	286.97	287.16	287.16
1	2.667	98.667	286.63	286.81	286.81
1	2.750	98.750	286.30	286.48	286.48
1	2.833	98.833	285.99	286.16	286.16
1	2.917	98.917	285.69	285.85	285.85
1	3.000	99.000	285.40	285.56	285.56
1	3.083	99.083	285.12	285.27	285.27
1	3.167	99.167	284.86	285.00	285.00
1	3.250	99.250	284.61	284.75	284.75
1	3.333	99.333	284.37	284.50	284.50
1	3.417	99.417	284.14	284.27	284.27
1	3.500	99.500	283.93	284.05	284.05
1	3.583	99.583	283.73	283.84	283.84
1	3.667	99.667	283.53	283.64	283.64
1	3.750	99.750	283.34	283.45	283.45
1	3.833	99.833	283.17	283.26	283.26
1	3.917	99.917	283.01	283.09	283.09
1	4.000	100.000	282.86	282.94	282.94
1	4.083	100.083	282.72	282.79	282.79
1	4.167	100.167	282.59	282.66	282.66
1	4.250	100.250	282.47	282.54	282.54
1	4.333	100.333	282.37	282.42	282.42
1	4.417	100.417	282.27	282.32	282.32
1	4.500	100.500	282.19	282.24	282.24
1	4.583	100.583	282.12	282.16	282.16
1	4.667	100.667	282.06	282.09	282.09
1	4.750	100.750	282.01	282.04	282.04
1	4.833	100.833	281.97	281.99	281.99
1	4.917	100.917	281.95	281.96	281.96
1	5.000	101.000	281.93	281.94	281.94
1	5.083	101.083	281.93	281.93	281.93
1	5.167	101.167	281.94	281.94	281.94
1	5.250	101.250	281.96	281.95	281.95
1	5.333	101.333	281.99	281.98	281.98
1	5.417	101.417	282.04	282.01	282.01
1	5.500	101.500	282.09	282.06	282.06
1	5.583	101.583	282.16	282.12	282.12
1	5.667	101.667	282.24	282.19	282.19
1	5.750	101.750	282.33	282.28	282.28
1	5.833	101.833	282.43	282.38	282.38

1	5.917	101.917	282.55	282.48	282.48
1	6.000	102.000	282.67	282.60	282.60
1	6.083	102.083	282.81	282.74	282.74
1	6.167	102.167	282.96	282.88	282.88
1	6.250	102.250	283.13	283.04	283.04
1	6.333	102.333	283.30	283.21	283.21
1	6.417	102.417	283.49	283.39	283.39
1	6.500	102.500	283.69	283.58	283.58
1	6.583	102.583	283.90	283.79	283.79
1	6.667	102.667	284.13	284.01	284.01
1	6.750	102.750	284.37	284.24	284.24
1	6.833	102.833	284.62	284.49	284.49
1	6.917	102.917	284.89	284.74	284.74
1	7.000	103.000	285.17	285.02	285.02
1	7.083	103.083	285.46	285.30	285.30
1	7.167	103.167	285.76	285.60	285.60
1	7.250	103.250	286.08	285.91	285.91
1	7.333	103.333	286.41	286.23	286.23
1	7.417	103.417	286.76	286.57	286.57
1	7.500	103.500	287.12	286.92	286.92
1	7.583	103.583	287.49	287.29	287.29
1	7.667	103.667	287.88	287.67	287.67
1	7.750	103.750	288.28	288.06	288.06
1	7.833	103.833	288.70	288.47	288.47
1	7.917	103.917	289.13	288.90	288.90
1	8.000	104.000	289.58	289.34	289.34
1	8.083	104.083	290.04	289.79	289.79
1	8.167	104.167	290.52	290.26	290.26
1	8.250	104.250	291.01	290.74	290.74
1	8.333	104.333	291.52	291.24	291.24
1	8.417	104.417	292.04	291.76	291.76
1	8.500	104.500	292.58	292.29	292.29
1	8.583	104.583	293.14	292.84	292.84
1	8.667	104.667	293.71	293.40	293.40
1	8.750	104.750	294.30	293.98	293.98
1	8.833	104.833	294.91	294.58	294.58
1	8.917	104.917	295.53	295.19	295.19
1	9.000	105.000	296.17	295.82	295.82
1	9.083	105.083	296.83	296.47	296.47
1	9.167	105.167	297.51	297.14	297.14
1	9.250	105.250	298.20	297.83	297.83
1	9.333	105.333	298.92	298.53	298.53
1	9.417	105.417	299.65	299.26	299.26
1	9.500	105.500	300.41	300.00	300.00
1	9.583	105.583	301.14	300.74	300.74
1	9.667	105.667	301.80	301.43	301.43
1	9.750	105.750	302.41	302.07	302.07
1	9.833	105.833	303.03	302.69	302.69
1	9.917	105.917	303.66	303.32	303.32
1	10.000	106.000	304.31	303.96	303.96
1	10.083	106.083	304.97	304.61	304.61
1	10.167	106.167	305.65	305.28	305.28
1	10.250	106.250	306.35	305.97	305.97
1	10.333	106.333	307.07	306.68	306.68
1	10.417	106.417	307.81	307.41	307.41
1	10.500	106.500	308.57	308.16	308.16
1	10.583	106.583	309.34	308.92	308.92
1	10.667	106.667	310.14	309.71	309.71
1	10.750	106.750	310.96	310.52	310.52
1	10.833	106.833	311.80	311.34	311.34
1	10.917	106.917	312.66	312.19	312.19
1	11.000	107.000	313.55	313.07	313.07
1	11.083	107.083	314.46	313.96	313.96
1	11.167	107.167	315.39	314.88	314.88
1	11.250	107.250	316.35	315.83	315.83
1	11.333	107.333	317.33	316.79	316.79
1	11.417	107.417	318.34	317.79	317.79
1	11.500	107.500	319.37	318.81	318.81
1	11.583	107.583	320.44	319.86	319.86
1	11.667	107.667	321.53	320.94	320.94
1	11.750	107.750	322.65	322.05	322.05
1	11.833	107.833	323.81	323.18	323.18
1	11.917	107.917	324.99	324.35	324.35
1	12.000	108.000	326.21	325.55	325.55
1	12.083	108.083	327.82	326.96	326.96
1	12.167	108.167	330.46	329.06	329.06
1	12.250	108.250	333.76	331.99	331.99
1	12.333	108.333	336.68	335.08	335.08
1	12.417	108.417	338.95	337.69	337.69
1	12.500	108.500	341.10	339.92	339.92
1	12.583	108.583	343.29	342.10	342.10
1	12.667	108.667	345.56	344.33	344.33
1	12.750	108.750	347.92	346.64	346.64
1	12.833	108.833	350.36	349.04	349.04
1	12.917	108.917	352.86	351.50	351.50
1	13.000	109.000	355.32	353.98	353.98
1	13.083	109.083	357.72	356.41	356.41
1	13.167	109.167	360.12	358.81	358.81
1	13.250	109.250	362.58	361.25	361.25
1	13.333	109.333	365.12	363.74	363.74
1	13.417	109.417	367.73	366.31	366.31
1	13.500	109.500	370.43	368.97	368.97
1	13.583	109.583	373.22	371.71	371.71
1	13.667	109.667	376.13	374.55	374.55
1	13.750	109.750	379.15	377.51	377.51
1	13.833	109.833	382.31	380.59	380.59
1	13.917	109.917	385.60	383.81	383.81
1	14.000	110.000	389.05	387.18	387.18
1	14.083	110.083	392.71	390.73	390.73
1	14.167	110.167	396.45	394.42	394.42
1	14.250	110.250	399.92	398.02	398.02
1	14.333	110.333	403.13	401.37	401.37
1	14.417	110.417	406.35	404.60	404.60
1	14.500	110.500	409.80	407.93	407.93
1	14.583	110.583	413.62	411.56	411.56
1	14.667	110.667	417.89	415.59	415.59
1	14.750	110.750	422.69	420.10	420.10
1	14.833	110.833	428.24	425.25	425.25
1	14.917	110.917	434.69	431.21	431.21
1	15.000	111.000	442.04	438.08	438.08
1	15.083	111.083	449.97	445.68	445.68
1	15.167	111.167	458.40	453.83	453.83
1	15.250	111.250	467.53	462.59	462.59
1	15.333	111.333	477.67	472.19	472.19
1	15.417	111.417	487.67	482.23	482.23
1	15.500	111.500	495.54	491.18	491.18
1	15.583	111.583	502.95	498.90	498.90
1	15.667	111.667	514.38	508.30	508.30
1	15.750	111.750	531.84	522.57	522.57
1	15.833	111.833	555.73	542.98	542.98
1	15.917	111.917	589.71	571.61	571.61
1	16.000	112.000	644.06	615.25	615.25
1	16.083	112.083	773.84	706.01	706.01
1	16.167	112.167	988.22	874.83	874.83
1	16.250	112.250	1088.08	1029.82	1029.82
1	16.333	112.333	975.39	1028.75	1028.75
1	16.417	112.417	814.22	899.63	899.63
1	16.500	112.500	750.42	788.51	788.51
1	16.583	112.583	716.08	736.05	736.05
1	16.667	112.667	690.24	704.69	704.69
1	16.750	112.750	667.92	680.22	680.22
1	16.833	112.833	648.23	659.05	659.05
1	16.917	112.917	631.88	640.90	640.90
1	17.000	113.000	617.14	625.22	625.22
1	17.083	113.083	606.63	612.50	612.50
1	17.167	113.167	597.85	602.70	602.70

1	17.250	113.250	593.08	595.83	595.83
1	17.333	113.333	589.08	591.30	591.30
1	17.417	113.417	585.99	587.71	587.71
1	17.500	113.500	583.01	584.64	584.64
1	17.583	113.583	580.09	581.68	581.68
1	17.667	113.667	577.14	578.74	578.74
1	17.750	113.750	574.70	576.05	576.05
1	17.833	113.833	571.29	573.11	573.11
1	17.917	113.917	569.31	570.44	570.44
1	18.000	114.000	566.95	568.22	568.22
1	18.083	114.083	562.86	565.02	565.02
1	18.167	114.167	559.38	561.29	561.29
1	18.250	114.250	555.56	557.63	557.63
1	18.333	114.333	551.53	553.71	553.71
1	18.417	114.417	545.95	548.93	548.93
1	18.500	114.500	543.40	544.90	544.90
1	18.583	114.583	541.89	542.76	542.76
1	18.667	114.667	540.65	541.34	541.34
1	18.750	114.750	539.50	540.13	540.13
1	18.833	114.833	538.45	539.03	539.03
1	18.917	114.917	537.49	538.02	538.02
1	19.000	115.000	536.61	537.09	537.09
1	19.083	115.083	535.80	536.25	536.25
1	19.167	115.167	535.02	535.44	535.44
1	19.250	115.250	534.24	534.66	534.66
1	19.333	115.333	533.44	533.87	533.87
1	19.417	115.417	532.62	533.06	533.06
1	19.500	115.500	531.71	532.20	532.20
1	19.583	115.583	530.65	531.22	531.22
1	19.667	115.667	528.63	529.69	529.69
1	19.750	115.750	527.28	528.04	528.04
1	19.833	115.833	526.57	526.98	526.98
1	19.917	115.917	525.94	526.29	526.29
1	20.000	116.000	525.34	525.67	525.67
1	20.083	116.083	524.75	525.07	525.07
1	20.167	116.167	524.20	524.50	524.50
1	20.250	116.250	523.66	523.95	523.95
1	20.333	116.333	523.13	523.42	523.42
1	20.417	116.417	522.64	522.91	522.91
1	20.500	116.500	522.17	522.43	522.43
1	20.583	116.583	521.69	521.95	521.95
1	20.667	116.667	521.23	521.48	521.48
1	20.750	116.750	520.77	521.02	521.02
1	20.833	116.833	520.32	520.57	520.57
1	20.917	116.917	519.88	520.12	520.12
1	21.000	117.000	519.43	519.67	519.67
1	21.083	117.083	519.00	519.23	519.23
1	21.167	117.167	518.56	518.80	518.80
1	21.250	117.250	518.14	518.37	518.37
1	21.333	117.333	517.71	517.94	517.94
1	21.417	117.417	517.29	517.52	517.52
1	21.500	117.500	516.87	517.10	517.10
1	21.583	117.583	516.46	516.68	516.68
1	21.667	117.667	516.05	516.27	516.27
1	21.750	117.750	515.65	515.87	515.87
1	21.833	117.833	515.26	515.47	515.47
1	21.917	117.917	514.86	515.08	515.08
1	22.000	118.000	514.47	514.68	514.68
1	22.083	118.083	514.08	514.29	514.29
1	22.167	118.167	513.69	513.90	513.90
1	22.250	118.250	513.31	513.52	513.52
1	22.333	118.333	512.92	513.13	513.13
1	22.417	118.417	512.54	512.75	512.75
1	22.500	118.500	512.16	512.37	512.37
1	22.583	118.583	511.78	511.99	511.99
1	22.667	118.667	511.40	511.61	511.61
1	22.750	118.750	511.03	511.23	511.23
1	22.833	118.833	510.66	510.86	510.86
1	22.917	118.917	510.28	510.49	510.49
1	23.000	119.000	509.91	510.11	510.11
1	23.083	119.083	509.54	509.74	509.74
1	23.167	119.167	509.17	509.37	509.37
1	23.250	119.250	508.80	509.00	509.00
1	23.333	119.333	508.44	508.64	508.64
1	23.417	119.417	508.07	508.27	508.27
1	23.500	119.500	507.71	507.91	507.91
1	23.583	119.583	507.34	507.54	507.54
1	23.667	119.667	506.98	507.18	507.18
1	23.750	119.750	506.62	506.81	506.81
1	23.833	119.833	506.26	506.45	506.45
1	23.917	119.917	505.89	506.09	506.09
1	24.000	120.000	505.53	505.73	505.73
1	24.083	120.083	504.61	505.09	505.09
1	24.167	120.167	502.11	503.41	503.41
1	24.250	120.250	498.66	500.50	500.50
1	24.333	120.333	495.95	497.45	497.45
1	24.417	120.417	494.42	495.30	495.30
1	24.500	120.500	493.22	493.89	493.89
1	24.583	120.583	492.19	492.76	492.76
1	24.667	120.667	491.29	491.79	491.79
1	24.750	120.750	490.46	490.92	490.92
1	24.833	120.833	489.70	490.12	490.12
1	24.917	120.917	488.98	489.37	489.37
1	25.000	121.000	488.31	488.68	488.68
1	25.083	121.083	487.68	488.03	488.03
1	25.167	121.167	487.10	487.42	487.42
1	25.250	121.250	486.53	486.84	486.84
1	25.333	121.333	485.98	486.28	486.28
1	25.417	121.417	485.44	485.74	485.74
1	25.500	121.500	484.91	485.20	485.20
1	25.583	121.583	484.38	484.67	484.67
1	25.667	121.667	483.87	484.15	484.15
1	25.750	121.750	483.35	483.63	483.63
1	25.833	121.833	482.86	483.13	483.13
1	25.917	121.917	482.36	482.63	482.63
1	26.000	122.000	481.86	482.13	482.13
1	26.083	122.083	481.39	481.65	481.65
1	26.167	122.167	480.92	481.17	481.17
1	26.250	122.250	480.45	480.70	480.70
1	26.333	122.333	479.98	480.24	480.24
1	26.417	122.417	479.54	479.78	479.78
1	26.500	122.500	479.11	479.35	479.35
1	26.583	122.583	478.68	478.92	478.92
1	26.667	122.667	478.25	478.49	478.49
1	26.750	122.750	477.82	478.06	478.06
1	26.833	122.833	477.39	477.63	477.63
1	26.917	122.917	476.96	477.20	477.20
1	27.000	123.000	476.53	476.77	476.77
1	27.083	123.083	476.10	476.34	476.34
1	27.167	123.167	475.67	475.91	475.91
1	27.250	123.250	475.25	475.48	475.48
1	27.333	123.333	474.82	475.05	475.05
1	27.417	123.417	474.39	474.62	474.62
1	27.500	123.500	473.96	474.19	474.19
1	27.583	123.583	473.53	473.77	473.77
1	27.667	123.667	473.12	473.34	473.34
1	27.750	123.750	472.70	472.93	472.93
1	27.833	123.833	472.30	472.52	472.52
1	27.917	123.917	471.92	472.13	472.13
1	28.000	124.000	471.54	471.75	471.75

Note: Computed Hydrograph continues past two days after the peak day of the design storm.

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PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 2117.105 AF

OUTFLOW VOLUME = 2117.103 AF

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    LOSS    VOLUME =      0.000 AF
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6320.00 TO NODE   6330.00 IS CODE =   1
--------------------------------------------------------------------------------

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of   300.7 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
================================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #2)

        WATERSHED AREA =     300.700 ACRES
        BASEFLOW =   0.000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    0.290 HOURS
         CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
         THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
         MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
        VALLEY(DEVELOPED):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.250
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.750
        VALLEY(UNDEVELOPED)/DESERT:
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:
        +------------------+--------+--------+--------+--------+--------+
        | RAINFALL DEPTHS & |        |        |        |        |        |
        |    LOSS RATES     |  DAY 1 |  DAY 2 |  DAY 3 |  DAY 4 |  DAY 5 |
        |==================+========+========+========+========+========|
        | 5-MINUTE (INCHES) |    0.58|    0.27|    0.12|    0.06|    0.04|
        |30-MINUTE (INCHES) |    1.22|    0.56|    0.24|    0.13|    0.09|
        |   1-HOUR (INCHES) |    1.62|    0.75|    0.33|    0.17|    0.12|
        |   3-HOUR (INCHES) |    2.71|    1.25|    0.54|    0.28|    0.21|
        |   6-HOUR (INCHES) |    3.75|    1.73|    0.75|    0.39|    0.29|
        |  24-HOUR (INCHES) |    6.28|    2.89|    1.26|    0.66|    0.48|
        |==================+========+========+========+========+========|
        | LOSS RATE(IN/HR)  |   0.240|   0.240|   0.240|   0.240|   0.240|
        | LOW LOSS FRACTION |   0.430|   0.670|   0.900|   0.990|   0.990|
        +------------------+--------+--------+--------+--------+--------+
          5-MINUTE FACTOR = 0.987
         30-MINUTE FACTOR = 0.987
          1-HOUR FACTOR = 0.987
          3-HOUR FACTOR = 0.998
          6-HOUR FACTOR = 0.999
         24-HOUR FACTOR = 0.999

        UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
        UNIT INTERVAL PERCENTAGE OF LAG-TIME =  28.736


        RUNOFF HYDROGRAPH LISTING LIMITS:
        MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  96.00
        MODEL TIME(HOURS) FOR END OF RESULTS = 124.00


================================================================================
                     UNIT HYDROGRAPH DETERMINATION

--------------------------------------------------------------------------------
    INTERVAL          "S" GRAPH         UNIT HYDROGRAPH
     NUMBER          MEAN VALUES         ORDINATES(CFS)
--------------------------------------------------------------------------------
       1               3.181               115.682
       2              14.148               398.807
       3              32.649               672.813
       4              49.391               608.859
       5              59.445               365.623
       6              65.754               229.414
       7              70.572               175.227
       8              74.508               143.109
       9              77.679               115.331
      10              80.307                95.584
      11              82.561                81.961
      12              84.486                69.998
      13              86.124                59.571
      14              87.475                49.137
      15              88.623                41.748
      16              89.558                33.981
      17              90.435                31.907
      18              91.248                29.581
      19              92.036                28.658
      20              92.761                26.336
      21              93.465                25.630
      22              94.104                23.223
      23              94.697                21.573
      24              95.280                21.195
      25              95.767                17.699
      26              96.231                16.876
      27              96.695                16.868
      28              97.112                15.192
      29              97.431                11.595
      30              97.741                11.275
      31              98.051                11.279
      32              98.361                11.271
      33              98.547                 6.740
      34              98.632                 3.085
      35              98.716                 3.070
      36              98.801                 3.077
      37              98.885                 3.077
      38              98.970                 3.077
      39              99.054                 3.077
      40              99.139                 3.077
      41              99.224                 3.085
      42              99.308                 3.070
      43              99.393                 3.070
      44              99.477                 3.070
      45              99.562                 3.070
      46              99.646                 3.070
      47              99.730                 3.070
      48              99.815                 3.070
      49              99.899                 3.070
      50              99.984                 3.070
      51             100.000                 0.594


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    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =     150.1466
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =     139.5311
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5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	175.0	350.0	525.0	700.0
96.000	37.7332	4.73	Q	V	.	.	.
(PEAK DAY 2, HOUR 24.000)							
96.083	37.7682	5.09	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.083)							
96.167	37.8124	6.41	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.167)							
96.250	37.8721	8.68	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.250)							
96.333	37.9461	10.74	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.333)							
96.417	38.0287	11.99	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.417)							
96.500	38.1168	12.79	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.500)							
96.583	38.2091	13.41	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.583)							
96.667	38.3050	13.93	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.667)							
96.750	38.4039	14.35	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.750)							
96.833	38.5052	14.71	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.833)							
96.917	38.6087	15.03	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.917)							
97.000	38.7141	15.31	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.000)							
97.083	38.8213	15.56	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.083)							
97.167	38.9299	15.77	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.167)							
97.250	39.0398	15.96	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.250)							
97.333	39.1508	16.12	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.333)							
97.417	39.2630	16.28	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.417)							
97.500	39.3762	16.44	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.500)							
97.583	39.4904	16.59	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.583)							
97.667	39.6056	16.73	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.667)							
97.750	39.7218	16.87	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.750)							
97.833	39.8390	17.01	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.833)							
97.917	39.9570	17.14	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.917)							
98.000	40.0760	17.27	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.000)							
98.083	40.1957	17.39	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.083)							
98.167	40.3163	17.51	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.167)							
98.250	40.4377	17.63	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.250)							
98.333	40.5599	17.74	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.333)							
98.417	40.6829	17.85	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.417)							
98.500	40.8065	17.95	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.500)							
98.583	40.9308	18.06	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.583)							
98.667	41.0559	18.16	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.667)							
98.750	41.1816	18.25	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.750)							
98.833	41.3079	18.33	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.833)							
98.917	41.4347	18.41	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.917)							
99.000	41.5620	18.49	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.000)							
99.083	41.6899	18.57	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.083)							
99.167	41.8184	18.66	.Q	.V	.	.	.
(PEAK DAY 1, HOUR 3.167)							
99.250	41.9475	18.74	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.250)							
99.333	42.0771	18.82	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.333)							
99.417	42.2074	18.91	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.417)							
99.500	42.3382	18.99	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.500)							
99.583	42.4696	19.08	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.583)							
99.667	42.6016	19.17	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.667)							
99.750	42.7342	19.26	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.750)							
99.833	42.8675	19.35	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.833)							
99.917	43.0013	19.44	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.917)							
100.000	43.1358	19.53	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.000)							
100.083	43.2709	19.62	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.083)							
100.167	43.4067	19.71	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.167)							
100.250	43.5431	19.80	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.250)							
100.333	43.6800	19.88	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.333)							
100.417	43.8175	19.97	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.417)							
100.500	43.9556	20.06	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.500)							
100.583	44.0944	20.14	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.583)							
100.667	44.2337	20.23	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.667)							
100.750	44.3737	20.32	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.750)							
100.833	44.5142	20.41	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.833)							
100.917	44.6554	20.50	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.917)							
101.000	44.7973	20.60	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 5.000)							
101.083	44.9398	20.69	.Q	. V	.	.	.
(PEAK DAY 1, HOUR 5.083)							

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101.167     45.0829     20.78  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.167)
101.250     45.2267     20.88  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.250)
101.333     45.3712     20.98  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.333)
101.417     45.5163     21.08  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.417)
101.500     45.6622     21.18  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.500)
101.583     45.8087     21.28  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.583)
101.667     45.9559     21.38  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.667)
101.750     46.1039     21.48  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.750)
101.833     46.2525     21.59  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.833)
101.917     46.4019     21.69  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.917)
102.000     46.5520     21.80  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.000)
102.083     46.7029     21.91  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.083)
102.167     46.8546     22.02  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.167)
102.250     47.0070     22.13  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.250)
102.333     47.1602     22.24  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.333)
102.417     47.3141     22.36  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.417)
102.500     47.4689     22.47  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.500)
102.583     47.6245     22.59  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.583)
102.667     47.7809     22.71  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.667)
102.750     47.9381     22.83  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.750)
102.833     48.0962     22.95  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.833)
102.917     48.2552     23.08  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.917)
103.000     48.4150     23.20  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.000)
103.083     48.5757     23.33  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.083)
103.167     48.7373     23.46  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.167)
103.250     48.8998     23.59  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.250)
103.333     49.0632     23.73  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.333)
103.417     49.2275     23.86  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.417)
103.500     49.3928     24.00  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.500)
103.583     49.5591     24.14  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.583)
103.667     49.7263     24.28  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.667)
103.750     49.8946     24.43  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.750)
103.833     50.0638     24.57  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.833)
103.917     50.2341     24.72  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.917)
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104.000     50.4054     24.87  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.000)
104.083     50.5777     25.03  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.083)
104.167     50.7512     25.18  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.167)
104.250     50.9257     25.34  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.250)
104.333     51.1013     25.50  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.333)
104.417     51.2781     25.67  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.417)
104.500     51.4560     25.83  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.500)
104.583     51.6351     26.00  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.583)
104.667     51.8154     26.17  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.667)
104.750     51.9968     26.35  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.750)
104.833     52.1795     26.53  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.833)
104.917     52.3635     26.71  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   8.917)
105.000     52.5487     26.90  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.000)
105.083     52.7353     27.08  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.083)
105.167     52.9231     27.28  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.167)
105.250     53.1123     27.47  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.250)
105.333     53.3029     27.67  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.333)
105.417     53.4948     27.87  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.417)
105.500     53.6882     28.08  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.500)
105.583     53.8830     28.29  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.583)
105.667     54.0794     28.51  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.667)
105.750     54.2772     28.72  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.750)
105.833     54.4766     28.95  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.833)
105.917     54.6775     29.18  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.917)
106.000     54.8800     29.41  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.000)
106.083     55.0842     29.65  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.083)
106.167     55.2901     29.89  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.167)
106.250     55.4977     30.14  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.250)
106.333     55.7070     30.39  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.333)
106.417     55.9181     30.65  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.417)
106.500     56.1310     30.92  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.500)
106.583     56.3458     31.19  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.583)
106.667     56.5625     31.47  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.667)
106.750     56.7812     31.75  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.750)
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106.833     57.0019     32.04  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.833)
106.917     57.2246     32.34  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.917)
107.000     57.4494     32.65  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.000)
107.083     57.6764     32.96  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.083)
107.167     57.9056     33.28  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.167)
107.250     58.1371     33.61  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.250)
107.333     58.3709     33.95  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.333)
107.417     58.6071     34.29  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.417)
107.500     58.8457     34.65  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.500)
107.583     59.0869     35.02  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  11.583)
107.667     59.3307     35.39  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.667)
107.750     59.5771     35.78  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.750)
107.833     59.8263     36.18  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.833)
107.917     60.0783     36.59  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.917)
108.000     60.3332     37.01  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.000)
108.083     60.5935     37.79  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.083)
108.167     60.8648     39.40  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.167)
108.250     61.1528     41.82  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.250)
108.333     61.4563     44.08  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.333)
108.417     61.7707     45.65  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.417)
108.500     62.0934     46.85  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.500)
108.583     62.4233     47.91  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.583)
108.667     62.7601     48.90  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.667)
108.750     63.1033     49.83  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  12.750)
108.833     63.4526     50.72  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  12.833)
108.917     63.8080     51.60  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  12.917)
109.000     64.1694     52.47  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  13.000)
109.083     64.5367     53.33  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.083)
109.167     64.9099     54.19  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.167)
109.250     65.2892     55.06  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.250)
109.333     65.6744     55.94  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.333)
109.417     66.0659     56.85  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.417)
109.500     66.4638     57.78  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  13.500)
109.583     66.8684     58.75  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  13.583)
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109.667     67.2799     59.75  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  13.667)
109.750     67.6986     60.80  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  13.750)
109.833     68.1248     61.88  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  13.833)
109.917     68.5588     63.01  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  13.917)
110.000     69.0009     64.20  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  14.000)
110.083     69.4519     65.49  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  14.083)
110.167     69.9129     66.94  .  Q      .         V         .         .
(PEAK DAY 1, HOUR  14.167)
110.250     70.3852     68.57  .  Q      .         V         .         .
(PEAK DAY 1, HOUR  14.250)
110.333     70.8690     70.25  .   Q     .         V         .         .
(PEAK DAY 1, HOUR  14.333)
110.417     71.3644     71.93  .   Q     .         V         .         .
(PEAK DAY 1, HOUR  14.417)
110.500     71.8716     73.65  .   Q     .         V         .         .
(PEAK DAY 1, HOUR  14.500)
110.583     72.3913     75.46  .   Q     .         V         .         .
(PEAK DAY 1, HOUR  14.583)
110.667     72.9242     77.39  .   Q     .         V         .         .
(PEAK DAY 1, HOUR  14.667)
110.750     73.4713     79.44  .   Q     .         .V        .         .
(PEAK DAY 1, HOUR  14.750)
110.833     74.0334     81.62  .   Q     .         .V        .         .
(PEAK DAY 1, HOUR  14.833)
110.917     74.6125     84.08  .   Q     .         .V        .         .
(PEAK DAY 1, HOUR  14.917)
111.000     75.2118     87.01  .   Q     .         .V        .         .
(PEAK DAY 1, HOUR  15.000)
111.083     75.8365     90.71  .    Q    .         .V        .         .
(PEAK DAY 1, HOUR  15.083)
111.167     76.4923     95.22  .    Q    .         .V        .         .
(PEAK DAY 1, HOUR  15.167)
111.250     77.1851    100.60  .    Q    .         . V       .         .
(PEAK DAY 1, HOUR  15.250)
111.333     77.9209    106.84  .     Q   .         . V       .         .
(PEAK DAY 1, HOUR  15.333)
111.417     78.6996    113.06  .     Q   .         . V       .         .
(PEAK DAY 1, HOUR  15.417)
111.500     79.5111    117.83  .     Q   .         . V       .         .
(PEAK DAY 1, HOUR  15.500)
111.583     80.3491    121.68  .     Q   .         .  V      .         .
(PEAK DAY 1, HOUR  15.583)
111.667     81.2314    128.10  .      Q  .         .  V      .         .
(PEAK DAY 1, HOUR  15.667)
111.750     82.1957    140.01  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  15.750)
111.833     83.2834    157.93  .        Q.         .  V      .         .
(PEAK DAY 1, HOUR  15.833)
111.917     84.5593    185.26  .         Q         .   V     .         .
(PEAK DAY 1, HOUR  15.917)
112.000     86.1399    229.51  .         . Q       .   V     .         .
(PEAK DAY 1, HOUR  16.000)
112.083     88.4661    337.76  .         .        Q.    V    .         .
(PEAK DAY 1, HOUR  16.083)
112.167     91.9571    506.90  .         .         .     V Q .         .
(PEAK DAY 1, HOUR  16.167)
112.250     96.3002    630.61  .         .         .      V  .     Q   .
(PEAK DAY 1, HOUR  16.250)
112.333    100.2459    572.92  .         .         .       V . Q       .
(PEAK DAY 1, HOUR  16.333)
112.417    103.1874    427.11  .         .         .   Q    V.         .
(PEAK DAY 1, HOUR  16.417)
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 112.500    105.4805    332.96  .          .         Q.         V         .
(PEAK DAY 1, HOUR  16.500)
 112.583    107.4393    284.42  .          .     Q   .         V         .
(PEAK DAY 1, HOUR  16.583)
 112.667    109.1666    250.80  .          .   Q     .         .V        .
(PEAK DAY 1, HOUR  16.667)
 112.750    110.6897    221.16  .          . Q       .         .V        .
(PEAK DAY 1, HOUR  16.750)
 112.833    112.0484    197.28  .          .Q        .         . V       .
(PEAK DAY 1, HOUR  16.833)
 112.917    113.2786    178.63  .          Q         .         . V       .
(PEAK DAY 1, HOUR  16.917)
 113.000    114.3999    162.81  .        Q.          .         . V       .
(PEAK DAY 1, HOUR  17.000)
 113.083    115.4265    149.07  .       Q .          .         .  V      .
(PEAK DAY 1, HOUR  17.083)
 113.167    116.3665    136.48  .      Q  .          .         .  V      .
(PEAK DAY 1, HOUR  17.167)
 113.250    117.2360    126.24  .      Q  .          .         .  V      .
(PEAK DAY 1, HOUR  17.250)
 113.333    118.0425    117.11  .     Q   .          .         .  V      .
(PEAK DAY 1, HOUR  17.333)
 113.417    118.8097    111.40  .     Q   .          .         .   V     .
(PEAK DAY 1, HOUR  17.417)
 113.500    119.5417    106.29  .     Q   .          .         .   V     .
(PEAK DAY 1, HOUR  17.500)
 113.583    120.2453    102.15  .    Q    .          .         .   V     .
(PEAK DAY 1, HOUR  17.583)
 113.667    120.9185     97.75  .    Q    .          .         .   V     .
(PEAK DAY 1, HOUR  17.667)
 113.750    121.5674     94.22  .    Q    .          .         .   V     .
(PEAK DAY 1, HOUR  17.750)
 113.833    122.1886     90.20  .    Q    .          .         .    V    .
(PEAK DAY 1, HOUR  17.833)
 113.917    122.7854     86.66  .   Q     .          .         .    V    .
(PEAK DAY 1, HOUR  17.917)
 114.000    123.3617     83.68  .   Q     .          .         .    V    .
(PEAK DAY 1, HOUR  18.000)
 114.083    123.9081     79.33  .   Q     .          .         .    V    .
(PEAK DAY 1, HOUR  18.083)
 114.167    124.4278     75.48  .   Q     .          .         .    V    .
(PEAK DAY 1, HOUR  18.167)
 114.250    124.9180     71.17  .   Q     .          .         .    V    .
(PEAK DAY 1, HOUR  18.250)
 114.333    125.3749     66.35  .  Q      .          .         .    V    .
(PEAK DAY 1, HOUR  18.333)
 114.417    125.7995     61.64  .  Q      .          .         .     V   .
(PEAK DAY 1, HOUR  18.417)
 114.500    126.2051     58.90  .  Q      .          .         .     V   .
(PEAK DAY 1, HOUR  18.500)
 114.583    126.5940     56.47  .  Q      .          .         .     V   .
(PEAK DAY 1, HOUR  18.583)
 114.667    126.9651     53.89  .  Q      .          .         .     V   .
(PEAK DAY 1, HOUR  18.667)
 114.750    127.3064     49.55  . Q       .          .         .     V   .
(PEAK DAY 1, HOUR  18.750)
 114.833    127.6234     46.02  . Q       .          .         .     V   .
(PEAK DAY 1, HOUR  18.833)
 114.917    127.9294     44.44  . Q       .          .         .     V   .
(PEAK DAY 1, HOUR  18.917)
 115.000    128.2266     43.15  . Q       .          .         .     V   .
(PEAK DAY 1, HOUR  19.000)
 115.083    128.5158     41.99  . Q       .          .         .     V   .
(PEAK DAY 1, HOUR  19.083)
 115.167    128.7977     40.93  . Q       .          .         .     V   .
(PEAK DAY 1, HOUR  19.167)
 115.250    129.0729     39.96  . Q       .          .         .      V  .
(PEAK DAY 1, HOUR  19.250)
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 115.333    129.3420     39.07  . Q       .          .         .      V  .
(PEAK DAY 1, HOUR  19.333)
 115.417    129.6053     38.24  . Q       .          .         .      V  .
(PEAK DAY 1, HOUR  19.417)
 115.500    129.8631     37.43  . Q       .          .         .      V  .
(PEAK DAY 1, HOUR  19.500)
 115.583    130.1157     36.68  . Q       .          .         .      V  .
(PEAK DAY 1, HOUR  19.583)
 115.667    130.3634     35.96  . Q       .          .         .      V  .
(PEAK DAY 1, HOUR  19.667)
 115.750    130.6062     35.25  . Q       .          .         .      V  .
(PEAK DAY 1, HOUR  19.750)
 115.833    130.8441     34.56  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  19.833)
 115.917    131.0773     33.85  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  19.917)
 116.000    131.3054     33.13  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  20.000)
 116.083    131.5281     32.33  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  20.083)
 116.167    131.7443     31.40  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  20.167)
 116.250    131.9476     29.51  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  20.250)
 116.333    132.1442     28.55  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  20.333)
 116.417    132.3369     27.98  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  20.417)
 116.500    132.5261     27.48  .Q        .          .         .      V  .
(PEAK DAY 1, HOUR  20.500)
 116.583    132.7121     27.00  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  20.583)
 116.667    132.8950     26.56  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  20.667)
 116.750    133.0751     26.15  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  20.750)
 116.833    133.2526     25.78  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  20.833)
 116.917    133.4277     25.42  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  20.917)
 117.000    133.6004     25.08  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.000)
 117.083    133.7708     24.75  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.083)
 117.167    133.9391     24.43  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.167)
 117.250    134.1053     24.13  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.250)
 117.333    134.2694     23.83  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.333)
 117.417    134.4316     23.55  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.417)
 117.500    134.5918     23.27  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.500)
 117.583    134.7503     23.00  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.583)
 117.667    134.9069     22.74  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.667)
 117.750    135.0618     22.49  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.750)
 117.833    135.2150     22.25  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.833)
 117.917    135.3666     22.01  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  21.917)
 118.000    135.5165     21.77  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  22.000)
 118.083    135.6649     21.55  .Q        .          .         .       V .
(PEAK DAY 1, HOUR  22.083)
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118.167	135.8118	21.33	.Q	.	.	.	V	.	
(PEAK DAY 1, HOUR 22.167)									
118.250	135.9573	21.12	.Q	.	.	.	V	.	
(PEAK DAY 1, HOUR 22.250)									
118.333	136.1014	20.92	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 22.333)									
118.417	136.2441	20.73	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 22.417)									
118.500	136.3856	20.54	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 22.500)									
118.583	136.5257	20.35	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 22.583)									
118.667	136.6646	20.17	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 22.667)									
118.750	136.8023	19.99	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 22.750)									
118.833	136.9388	19.82	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 22.833)									
118.917	137.0741	19.65	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 22.917)									
119.000	137.2083	19.48	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 23.000)									
119.083	137.3414	19.32	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 23.083)									
119.167	137.4734	19.16	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 23.167)									
119.250	137.6043	19.01	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 23.250)									
119.333	137.7341	18.86	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 23.333)									
119.417	137.8630	18.71	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 23.417)									
119.500	137.9908	18.56	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 23.500)									
119.583	138.1177	18.42	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 23.583)									
119.667	138.2436	18.28	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 23.667)									
119.750	138.3686	18.15	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 23.750)									
119.833	138.4927	18.01	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 23.833)									
119.917	138.6158	17.88	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 23.917)									
120.000	138.7381	17.75	.Q	.	.	.		V.	
(PEAK DAY 1, HOUR 24.000)									
120.083	138.8558	17.09	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 24.083)									
120.167	138.9599	15.13	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 24.167)									
120.250	139.0420	11.91	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 24.250)									
120.333	139.1041	9.02	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 24.333)									
120.417	139.1541	7.26	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 24.417)									
120.500	139.1965	6.15	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 24.500)									
120.583	139.2330	5.30	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 24.583)									
120.667	139.2646	4.60	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 24.667)									
120.750	139.2924	4.03	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 24.750)									
120.833	139.3169	3.56	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 24.833)									
120.917	139.3386	3.15	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 24.917)									
121.000	139.3580	2.81	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 25.000)									
121.083	139.3753	2.51	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 25.083)									
121.167	139.3909	2.27	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 25.167)									
121.250	139.4051	2.06	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 25.250)									
121.333	139.4180	1.89	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 25.333)									
121.417	139.4299	1.72	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 25.417)									
121.500	139.4408	1.58	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 25.500)									
121.583	139.4506	1.43	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 25.583)									
121.667	139.4596	1.30	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 25.667)									
121.750	139.4676	1.17	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 25.750)									
121.833	139.4749	1.06	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 25.833)									
121.917	139.4814	0.95	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 25.917)									
122.000	139.4873	0.84	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 26.000)									
122.083	139.4925	0.76	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 26.083)									
122.167	139.4971	0.67	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 26.167)									
122.250	139.5012	0.59	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 26.250)									
122.333	139.5047	0.52	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 26.333)									
122.417	139.5079	0.46	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 26.417)									
122.500	139.5107	0.40	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 26.500)									
122.583	139.5130	0.35	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 26.583)									
122.667	139.5151	0.29	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 26.667)									
122.750	139.5168	0.26	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 26.750)									
122.833	139.5185	0.24	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 26.833)									
122.917	139.5201	0.23	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 26.917)									
123.000	139.5216	0.21	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 27.000)									
123.083	139.5229	0.20	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 27.083)									
123.167	139.5242	0.18	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 27.167)									
123.250	139.5253	0.17	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 27.250)									
123.333	139.5264	0.15	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 27.333)									
123.417	139.5273	0.13	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 27.417)									
123.500	139.5281	0.12	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 27.500)									
123.583	139.5288	0.10	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 27.583)									
123.667	139.5294	0.09	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 27.667)									
123.750	139.5300	0.08	Q	.	.	.		V.	
(PEAK DAY 1, HOUR 27.750)									

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 123.833    139.5304      0.06  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  27.833)
 123.917    139.5307      0.05  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  27.917)
 124.000    139.5309      0.03  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  28.000)
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6330.00 TO NODE   6330.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  5341.3 Ac. ***
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6330.00 TO NODE   6330.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  5341.3 Ac. ***

            STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
        (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      425.0     850.0    1275.0    1700.0
--------------------------------------------------------------------------------
  96.000    530.4213    301.71  .      Q V.          .          .          .
 (PEAK DAY 2, HOUR  24.000)
  96.083    532.4938    300.93  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   0.083)
  96.167    534.5730    301.91  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   0.167)
  96.250    536.6720    304.78  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   0.250)
  96.333    538.7904    307.60  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   0.333)
  96.417    540.9185    308.99  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   0.417)
  96.500    543.0496    309.44  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   0.500)
  96.583    545.1816    309.58  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   0.583)
  96.667    547.3140    309.62  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   0.667)
  96.750    549.4462    309.60  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   0.750)
  96.833    551.5781    309.55  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   0.833)
  96.917    553.7095    309.48  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   0.917)
  97.000    555.8402    309.38  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   1.000)
  97.083    557.9701    309.26  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   1.083)
  97.167    560.0989    309.10  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   1.167)
  97.250    562.2266    308.94  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   1.250)
  97.333    564.3531    308.77  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   1.333)
  97.417    566.4785    308.61  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   1.417)
  97.500    568.6029    308.46  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   1.500)
  97.583    570.7264    308.33  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   1.583)
  97.667    572.8488    308.17  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   1.667)
  97.750    574.9695    307.94  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   1.750)
  97.833    577.0884    307.66  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   1.833)
  97.917    579.2052    307.36  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   1.917)
  98.000    581.3201    307.08  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   2.000)
  98.083    583.4330    306.79  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   2.083)
  98.167    585.5439    306.52  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   2.167)
  98.250    587.6531    306.25  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   2.250)
  98.333    589.7606    306.00  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   2.333)
  98.417    591.8661    305.73  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   2.417)
  98.500    593.9699    305.47  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   2.500)
  98.583    596.0720    305.22  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   2.583)
  98.667    598.1724    304.98  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   2.667)
  98.750    600.2711    304.73  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   2.750)
  98.833    602.3681    304.49  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   2.833)
  98.917    604.4636    304.26  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   2.917)
  99.000    606.5576    304.05  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   3.000)
  99.083    608.6501    303.85  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   3.083)
  99.167    610.7415    303.66  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   3.167)
  99.250    612.8315    303.49  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   3.250)
  99.333    614.9205    303.32  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   3.333)
  99.417    617.0085    303.18  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   3.417)
  99.500    619.0956    303.04  .      Q V.          .          .          .
 (PEAK DAY 1, HOUR   3.500)
  99.583    621.1818    302.92  .      Q .V          .          .          .
 (PEAK DAY 1, HOUR   3.583)
  99.667    623.2673    302.81  .      Q .V          .          .          .
 (PEAK DAY 1, HOUR   3.667)
  99.750    625.3520    302.70  .      Q .V          .          .          .
 (PEAK DAY 1, HOUR   3.750)
  99.833    627.4361    302.61  .      Q .V          .          .          .
 (PEAK DAY 1, HOUR   3.833)
  99.917    629.5197    302.53  .      Q .V          .          .          .
 (PEAK DAY 1, HOUR   3.917)
 100.000    631.6027    302.47  .      Q .V          .          .          .
 (PEAK DAY 1, HOUR   4.000)
 100.083    633.6854    302.41  .      Q .V          .          .          .
 (PEAK DAY 1, HOUR   4.083)
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100.167    635.7679    302.37  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   4.167)
100.250    637.8501    302.33  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   4.250)
100.333    639.9321    302.31  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   4.333)
100.417    642.0140    302.29  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   4.417)
100.500    644.0959    302.29  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   4.500)
100.583    646.1779    302.30  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   4.583)
100.667    648.2600    302.32  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   4.667)
100.750    650.3423    302.36  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   4.750)
100.833    652.4250    302.41  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   4.833)
100.917    654.5081    302.47  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   4.917)
101.000    656.5917    302.54  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   5.000)
101.083    658.6759    302.62  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   5.083)
101.167    660.7607    302.72  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   5.167)
101.250    662.8464    302.83  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   5.250)
101.333    664.9328    302.95  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   5.333)
101.417    667.0202    303.09  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   5.417)
101.500    669.1086    303.24  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   5.500)
101.583    671.1981    303.40  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   5.583)
101.667    673.2888    303.57  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   5.667)
101.750    675.3809    303.76  .      Q  .V       .         .         .
(PEAK DAY 1, HOUR   5.750)
101.833    677.4742    303.96  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   5.833)
101.917    679.5691    304.18  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   5.917)
102.000    681.6655    304.40  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   6.000)
102.083    683.7636    304.64  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   6.083)
102.167    685.8635    304.90  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   6.167)
102.250    687.9651    305.17  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   6.250)
102.333    690.0688    305.45  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   6.333)
102.417    692.1745    305.75  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   6.417)
102.500    694.2823    306.06  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   6.500)
102.583    696.3924    306.38  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   6.583)
102.667    698.5048    306.72  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   6.667)
102.750    700.6196    307.07  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   6.750)
102.833    702.7369    307.44  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   6.833)
102.917    704.8569    307.82  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   6.917)
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103.000    706.9797    308.22  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   7.000)
103.083    709.1052    308.63  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   7.083)
103.167    711.2338    309.06  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   7.167)
103.250    713.3653    309.50  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   7.250)
103.333    715.5000    309.96  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   7.333)
103.417    717.6380    310.44  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   7.417)
103.500    719.7794    310.92  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   7.500)
103.583    721.9242    311.43  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   7.583)
103.667    724.0726    311.95  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   7.667)
103.750    726.2248    312.49  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   7.750)
103.833    728.3807    313.05  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   7.833)
103.917    730.5406    313.62  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   7.917)
104.000    732.7047    314.21  .      Q  . V      .         .         .
(PEAK DAY 1, HOUR   8.000)
104.083    734.8728    314.82  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   8.083)
104.167    737.0453    315.44  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   8.167)
104.250    739.2222    316.08  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   8.250)
104.333    741.4036    316.74  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   8.333)
104.417    743.5897    317.42  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   8.417)
104.500    745.7806    318.12  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   8.500)
104.583    747.9765    318.84  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   8.583)
104.667    750.1774    319.57  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   8.667)
104.750    752.3835    320.33  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   8.750)
104.833    754.5950    321.11  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   8.833)
104.917    756.8120    321.90  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   8.917)
105.000    759.0346    322.72  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   9.000)
105.083    761.2629    323.56  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   9.083)
105.167    763.4972    324.42  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   9.167)
105.250    765.7375    325.30  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   9.250)
105.333    767.9841    326.20  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   9.333)
105.417    770.2371    327.13  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   9.417)
105.500    772.4965    328.08  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   9.500)
105.583    774.7626    329.03  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   9.583)
105.667    777.0349    329.94  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   9.667)
105.750    779.3132    330.80  .      Q  .  V     .         .         .
(PEAK DAY 1, HOUR   9.750)
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105.833    781.5972    331.64  .      Q  .  V      .         .         .
(PEAK DAY 1, HOUR   9.833)
105.917    783.8871    332.49  .      Q  .  V      .         .         .
(PEAK DAY 1, HOUR   9.917)
106.000    786.1830    333.37  .      Q  .  V      .         .         .
(PEAK DAY 1, HOUR  10.000)
106.083    788.4851    334.26  .      Q  .  V      .         .         .
(PEAK DAY 1, HOUR  10.083)
106.167    790.7935    335.17  .      Q  .   V     .         .         .
(PEAK DAY 1, HOUR  10.167)
106.250    793.1083    336.11  .      Q  .   V     .         .         .
(PEAK DAY 1, HOUR  10.250)
106.333    795.4297    337.07  .      Q  .   V     .         .         .
(PEAK DAY 1, HOUR  10.333)
106.417    797.7580    338.06  .      Q  .   V     .         .         .
(PEAK DAY 1, HOUR  10.417)
106.500    800.0932    339.07  .      Q  .   V     .         .         .
(PEAK DAY 1, HOUR  10.500)
106.583    802.4355    340.11  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  10.583)
106.667    804.7852    341.17  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  10.667)
106.750    807.1424    342.27  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  10.750)
106.833    809.5073    343.39  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  10.833)
106.917    811.8801    344.53  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  10.917)
107.000    814.2610    345.71  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  11.000)
107.083    816.6503    346.92  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  11.083)
107.167    819.0482    348.16  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  11.167)
107.250    821.4547    349.44  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  11.250)
107.333    823.8703    350.74  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  11.333)
107.417    826.2951    352.08  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  11.417)
107.500    828.7294    353.46  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  11.500)
107.583    831.1735    354.88  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  11.583)
107.667    833.6276    356.33  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  11.667)
107.750    836.0920    357.83  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  11.750)
107.833    838.5670    359.36  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  11.833)
107.917    841.0528    360.94  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  11.917)
108.000    843.5498    362.57  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  12.000)
108.083    846.0618    364.75  .       Q .   V     .         .         .
(PEAK DAY 1, HOUR  12.083)
108.167    848.5994    368.46  .       Q .    V    .         .         .
(PEAK DAY 1, HOUR  12.167)
108.250    851.1739    373.81  .       Q .    V    .         .         .
(PEAK DAY 1, HOUR  12.250)
108.333    853.7852    379.16  .       Q .    V    .         .         .
(PEAK DAY 1, HOUR  12.333)
108.417    856.4252    383.34  .        Q.    V    .         .         .
(PEAK DAY 1, HOUR  12.417)
108.500    859.0889    386.77  .        Q.    V    .         .         .
(PEAK DAY 1, HOUR  12.500)
108.583    861.7750    390.01  .        Q.    V    .         .         .
(PEAK DAY 1, HOUR  12.583)
108.667    864.4831    393.22  .        Q.    V    .         .         .
(PEAK DAY 1, HOUR  12.667)
108.750    867.2136    396.47  .        Q.    V    .         .         .
(PEAK DAY 1, HOUR  12.750)
108.833    869.9668    399.76  .        Q.    V    .         .         .
(PEAK DAY 1, HOUR  12.833)
108.917    872.7430    403.10  .        Q.    V    .         .         .
(PEAK DAY 1, HOUR  12.917)
109.000    875.5422    406.45  .        Q.    V    .         .         .
(PEAK DAY 1, HOUR  13.000)
109.083    878.3642    409.75  .        Q.    V    .         .         .
(PEAK DAY 1, HOUR  13.083)
109.167    881.2086    413.01  .        Q.    V    .         .         .
(PEAK DAY 1, HOUR  13.167)
109.250    884.0757    416.31  .        Q.    V    .         .         .
(PEAK DAY 1, HOUR  13.250)
109.333    886.9661    419.68  .        Q.    V    .         .         .
(PEAK DAY 1, HOUR  13.333)
109.417    889.8804    423.16  .        Q.    V    .         .         .
(PEAK DAY 1, HOUR  13.417)
109.500    892.8195    426.74  .         Q    V    .         .         .
(PEAK DAY 1, HOUR  13.500)
109.583    895.7841    430.46  .         Q    V    .         .         .
(PEAK DAY 1, HOUR  13.583)
109.667    898.7751    434.30  .         Q    V    .         .         .
(PEAK DAY 1, HOUR  13.667)
109.750    901.7937    438.31  .         Q    V    .         .         .
(PEAK DAY 1, HOUR  13.750)
109.833    904.8411    442.47  .         Q     V   .         .         .
(PEAK DAY 1, HOUR  13.833)
109.917    907.9184    446.83  .         Q     V   .         .         .
(PEAK DAY 1, HOUR  13.917)
110.000    911.0271    451.38  .         Q     V   .         .         .
(PEAK DAY 1, HOUR  14.000)
110.083    914.1691    456.21  .         Q     V   .         .         .
(PEAK DAY 1, HOUR  14.083)
110.167    917.3464    461.35  .         Q     V   .         .         .
(PEAK DAY 1, HOUR  14.167)
110.250    920.5599    466.59  .         Q     V   .         .         .
(PEAK DAY 1, HOUR  14.250)
110.333    923.8080    471.63  .         .Q    V   .         .         .
(PEAK DAY 1, HOUR  14.333)
110.417    927.0898    476.52  .         .Q    V   .         .         .
(PEAK DAY 1, HOUR  14.417)
110.500    930.4065    481.58  .         .Q    V   .         .         .
(PEAK DAY 1, HOUR  14.500)
110.583    933.7606    487.02  .         .Q    V   .         .         .
(PEAK DAY 1, HOUR  14.583)
110.667    937.1558    492.97  .         .Q    V   .         .         .
(PEAK DAY 1, HOUR  14.667)
110.750    940.5961    499.53  .         .Q    V   .         .         .
(PEAK DAY 1, HOUR  14.750)
110.833    944.0869    506.87  .         .Q    V   .         .         .
(PEAK DAY 1, HOUR  14.833)
110.917    947.6357    515.29  .         . Q   V   .         .         .
(PEAK DAY 1, HOUR  14.917)
111.000    951.2521    525.09  .         . Q   V   .         .         .
(PEAK DAY 1, HOUR  15.000)
111.083    954.9462    536.39  .         . Q   V   .         .         .
(PEAK DAY 1, HOUR  15.083)
111.167    958.7275    549.05  .         . Q   V   .         .         .
(PEAK DAY 1, HOUR  15.167)
111.250    962.6063    563.19  .         .  Q   V  .         .         .
(PEAK DAY 1, HOUR  15.250)
111.333    966.5941    579.03  .         .  Q   V  .         .         .
(PEAK DAY 1, HOUR  15.333)
111.417    970.6938    595.29  .         .   Q  V  .         .         .
(PEAK DAY 1, HOUR  15.417)
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 111.500    974.8882    609.02  .         .   Q  V  .         .         .
(PEAK DAY 1, HOUR  15.500)
 111.583    979.1621    620.58  .         .   Q  V  .         .         .
(PEAK DAY 1, HOUR  15.583)
 111.667    983.5450    636.41  .         .   Q  V  .         .         .
(PEAK DAY 1, HOUR  15.667)
 111.750    988.1083    662.58  .         .    Q V  .         .         .
(PEAK DAY 1, HOUR  15.750)
 111.833    992.9355    700.92  .         .     QV  .         .         .
(PEAK DAY 1, HOUR  15.833)
 111.917    998.1481    756.87  .         .      Q  .         .         .
(PEAK DAY 1, HOUR  15.917)
 112.000   1003.9661    844.76  .         .      V Q.         .         .
(PEAK DAY 1, HOUR  16.000)
 112.083   1011.1546   1043.78  .         .      V  .   Q     .         .
(PEAK DAY 1, HOUR  16.083)
 112.167   1020.6707   1381.73  .         .       V .         . Q       .
(PEAK DAY 1, HOUR  16.167)
 112.250   1032.1061   1660.43  .         .       V .         .        Q.
(PEAK DAY 1, HOUR  16.250)
 112.333   1043.1368   1601.66  .         .       V .         .      Q  .
(PEAK DAY 1, HOUR  16.333)
 112.417   1052.2742   1326.73  .         .       V .         .Q        .
(PEAK DAY 1, HOUR  16.417)
 112.500   1059.9978   1121.47  .         .       V .      Q  .         .
(PEAK DAY 1, HOUR  16.500)
 112.583   1067.0259   1020.47  .         .       V .   Q     .         .
(PEAK DAY 1, HOUR  16.583)
 112.667   1073.6063    955.49  .         .        V. Q       .         .
(PEAK DAY 1, HOUR  16.667)
 112.750   1079.8141    901.38  .         .        V.Q        .         .
(PEAK DAY 1, HOUR  16.750)
 112.833   1085.7117    856.32  .         .        VQ         .         .
(PEAK DAY 1, HOUR  16.833)
 112.917   1091.3558    819.53  .         .        Q.         .         .
(PEAK DAY 1, HOUR  16.917)
 113.000   1096.7831    788.03  .         .       QV.         .         .
(PEAK DAY 1, HOUR  17.000)
 113.083   1102.0281    761.58  .         .      Q V.         .         .
(PEAK DAY 1, HOUR  17.083)
 113.167   1107.1189    739.18  .         .      Q V.         .         .
(PEAK DAY 1, HOUR  17.167)
 113.250   1112.0918    722.07  .         .     Q  V.         .         .
(PEAK DAY 1, HOUR  17.250)
 113.333   1116.9706    708.41  .         .     Q  V.         .         .
(PEAK DAY 1, HOUR  17.333)
 113.417   1121.7854    699.11  .         .     Q  V.         .         .
(PEAK DAY 1, HOUR  17.417)
 113.500   1126.5439    690.93  .         .     Q  V.         .         .
(PEAK DAY 1, HOUR  17.500)
 113.583   1131.2535    683.84  .         .     Q   V         .         .
(PEAK DAY 1, HOUR  17.583)
 113.667   1135.9126    676.50  .         .    Q    V         .         .
(PEAK DAY 1, HOUR  17.667)
 113.750   1140.5288    670.27  .         .    Q    V         .         .
(PEAK DAY 1, HOUR  17.750)
 113.833   1145.0970    663.31  .         .    Q    V         .         .
(PEAK DAY 1, HOUR  17.833)
 113.917   1149.6224    657.09  .         .    Q    V         .         .
(PEAK DAY 1, HOUR  17.917)
 114.000   1154.1122    651.91  .         .    Q    V         .         .
(PEAK DAY 1, HOUR  18.000)
 114.083   1158.5498    644.35  .         .    Q    V         .         .
(PEAK DAY 1, HOUR  18.083)
 114.167   1162.9353    636.77  .         .   Q     V         .         .
(PEAK DAY 1, HOUR  18.167)
 114.250   1167.2659    628.79  .         .   Q     V         .         .
(PEAK DAY 1, HOUR  18.250)
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 114.333   1171.5363    620.07  .         .   Q     V         .         .
(PEAK DAY 1, HOUR  18.333)
 114.417   1175.7413    610.57  .         .   Q     V         .         .
(PEAK DAY 1, HOUR  18.417)
 114.500   1179.8997    603.79  .         .   Q     V         .         .
(PEAK DAY 1, HOUR  18.500)
 114.583   1184.0266    599.23  .         .   Q     V         .         .
(PEAK DAY 1, HOUR  18.583)
 114.667   1188.1260    595.23  .         .   Q     .V        .         .
(PEAK DAY 1, HOUR  18.667)
 114.750   1192.1871    589.68  .         .  Q      .V        .         .
(PEAK DAY 1, HOUR  18.750)
 114.833   1196.2164    585.05  .         .  Q      .V        .         .
(PEAK DAY 1, HOUR  18.833)
 114.917   1200.2278    582.45  .         .  Q      .V        .         .
(PEAK DAY 1, HOUR  18.917)
 115.000   1204.2240    580.24  .         .  Q      .V        .         .
(PEAK DAY 1, HOUR  19.000)
 115.083   1208.2063    578.24  .         .  Q      .V        .         .
(PEAK DAY 1, HOUR  19.083)
 115.167   1212.1758    576.37  .         .  Q      .V        .         .
(PEAK DAY 1, HOUR  19.167)
 115.250   1216.1332    574.62  .         .  Q      .V        .         .
(PEAK DAY 1, HOUR  19.250)
 115.333   1220.0791    572.95  .         .  Q      .V        .         .
(PEAK DAY 1, HOUR  19.333)
 115.417   1224.0137    571.30  .         .  Q      .V        .         .
(PEAK DAY 1, HOUR  19.417)
 115.500   1227.9368    569.63  .         .  Q      .V        .         .
(PEAK DAY 1, HOUR  19.500)
 115.583   1231.8479    567.90  .         .  Q      .V        .         .
(PEAK DAY 1, HOUR  19.583)
 115.667   1235.7435    565.65  .         .  Q      .V        .         .
(PEAK DAY 1, HOUR  19.667)
 115.750   1239.6229    563.29  .         .  Q      .V        .         .
(PEAK DAY 1, HOUR  19.750)
 115.833   1243.4902    561.54  .         .  Q      . V       .         .
(PEAK DAY 1, HOUR  19.833)
 115.917   1247.3479    560.14  .         .  Q      . V       .         .
(PEAK DAY 1, HOUR  19.917)
 116.000   1251.1963    558.79  .         .  Q      . V       .         .
(PEAK DAY 1, HOUR  20.000)
 116.083   1255.0352    557.40  .         .  Q      . V       .         .
(PEAK DAY 1, HOUR  20.083)
 116.167   1258.8636    555.90  .         .  Q      . V       .         .
(PEAK DAY 1, HOUR  20.167)
 116.250   1262.6754    553.46  .         .  Q      . V       .         .
(PEAK DAY 1, HOUR  20.250)
 116.333   1266.4768    551.97  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  20.333)
 116.417   1270.2708    550.89  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  20.417)
 116.500   1274.0580    549.91  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  20.500)
 116.583   1277.8386    548.95  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  20.583)
 116.667   1281.6130    548.04  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  20.667)
 116.750   1285.3815    547.17  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  20.750)
 116.833   1289.1442    546.34  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  20.833)
 116.917   1292.9014    545.54  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  20.917)
 117.000   1296.6531    544.75  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  21.000)
 117.083   1300.3995    543.98  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  21.083)
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 117.167   1304.1407    543.23  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  21.167)
 117.250   1307.8770    542.50  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  21.250)
 117.333   1311.6082    541.77  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  21.333)
 117.417   1315.3345    541.07  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  21.417)
 117.500   1319.0560    540.37  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  21.500)
 117.583   1322.7728    539.69  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  21.583)
 117.667   1326.4851    539.02  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  21.667)
 117.750   1330.1929    538.36  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  21.750)
 117.833   1333.8961    537.72  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  21.833)
 117.917   1337.5951    537.08  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  21.917)
 118.000   1341.2897    536.46  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  22.000)
 118.083   1344.9800    535.84  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  22.083)
 118.167   1348.6661    535.23  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  22.167)
 118.250   1352.3483    534.64  .         . Q       . V       .         .
(PEAK DAY 1, HOUR  22.250)
 118.333   1356.0264    534.05  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  22.333)
 118.417   1359.7004    533.47  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  22.417)
 118.500   1363.3706    532.90  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  22.500)
 118.583   1367.0369    532.34  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  22.583)
 118.667   1370.6992    531.78  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  22.667)
 118.750   1374.3578    531.22  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  22.750)
 118.833   1378.0126    530.68  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  22.833)
 118.917   1381.6637    530.13  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  22.917)
 119.000   1385.3110    529.60  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  23.000)
 119.083   1388.9547    529.06  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  23.083)
 119.167   1392.5947    528.54  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  23.167)
 119.250   1396.2312    528.01  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  23.250)
 119.333   1399.8641    527.49  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  23.333)
 119.417   1403.4935    526.98  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  23.417)
 119.500   1407.1194    526.47  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  23.500)
 119.583   1410.7417    525.96  .         . Q       .   V     .         .
(PEAK DAY 1, HOUR  23.583)
 119.667   1414.3606    525.46  .         . Q       .   V     .         .
(PEAK DAY 1, HOUR  23.667)
 119.750   1417.9761    524.96  .         . Q       .   V     .         .
(PEAK DAY 1, HOUR  23.750)
 119.833   1421.5881    524.46  .         . Q       .   V     .         .
(PEAK DAY 1, HOUR  23.833)
 119.917   1425.1968    523.97  .         . Q       .   V     .         .
(PEAK DAY 1, HOUR  23.917)
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 120.000   1428.8020    523.48  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  24.000)
 120.083   1432.3983    522.18  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  24.083)
 120.167   1435.9695    518.54  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  24.167)
 120.250   1439.4985    512.42  .         . Q       .  V      .         .
(PEAK DAY 1, HOUR  24.250)
 120.333   1442.9866    506.47  .         .Q        .  V      .         .
(PEAK DAY 1, HOUR  24.333)
 120.417   1446.4478    502.56  .         .Q        .  V      .         .
(PEAK DAY 1, HOUR  24.417)
 120.500   1449.8915    500.04  .         .Q        .  V      .         .
(PEAK DAY 1, HOUR  24.500)
 120.583   1453.3217    498.06  .         .Q        .  V      .         .
(PEAK DAY 1, HOUR  24.583)
 120.667   1456.7402    496.38  .         .Q        .  V      .         .
(PEAK DAY 1, HOUR  24.667)
 120.750   1460.1489    494.95  .         .Q        .  V      .         .
(PEAK DAY 1, HOUR  24.750)
 120.833   1463.5490    493.68  .         .Q        .  V      .         .
(PEAK DAY 1, HOUR  24.833)
 120.917   1466.9410    492.53  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  24.917)
 121.000   1470.3259    491.48  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  25.000)
 121.083   1473.7043    490.54  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  25.083)
 121.167   1477.0768    489.68  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  25.167)
 121.250   1480.4438    488.90  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  25.250)
 121.333   1483.8059    488.17  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  25.333)
 121.417   1487.1631    487.46  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  25.417)
 121.500   1490.5155    486.77  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  25.500)
 121.583   1493.8633    486.10  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  25.583)
 121.667   1497.2065    485.45  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  25.667)
 121.750   1500.5454    484.80  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  25.750)
 121.833   1503.8800    484.18  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  25.833)
 121.917   1507.2104    483.58  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  25.917)
 122.000   1510.5367    482.98  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  26.000)
 122.083   1513.8591    482.40  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  26.083)
 122.167   1517.1776    481.85  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  26.167)
 122.250   1520.4923    481.29  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  26.250)
 122.333   1523.8032    480.75  .         .Q        .    V    .         .
(PEAK DAY 1, HOUR  26.333)
 122.417   1527.1107    480.24  .         .Q        .    V    .         .
(PEAK DAY 1, HOUR  26.417)
 122.500   1530.4148    479.75  .         .Q        .    V    .         .
(PEAK DAY 1, HOUR  26.500)
 122.583   1533.7155    479.26  .         .Q        .    V    .         .
(PEAK DAY 1, HOUR  26.583)
 122.667   1537.0128    478.78  .         .Q        .    V    .         .
(PEAK DAY 1, HOUR  26.667)
 122.750   1540.3070    478.32  .         .Q        .    V    .         .
(PEAK DAY 1, HOUR  26.750)
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 122.833   1543.5981    477.87  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  26.833)
 122.917   1546.8862    477.42  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  26.917)
 123.000   1550.1711    476.98  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  27.000)
 123.083   1553.4530    476.53  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  27.083)
 123.167   1556.7318    476.09  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  27.167)
 123.250   1560.0076    475.64  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  27.250)
 123.333   1563.2803    475.20  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  27.333)
 123.417   1566.5499    474.76  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  27.417)
 123.500   1569.8165    474.31  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  27.500)
 123.583   1573.0801    473.87  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  27.583)
 123.667   1576.3407    473.43  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  27.667)
 123.750   1579.5983    473.00  .         .Q        .      V  .         .
 (PEAK DAY 1, HOUR  27.750)
 123.833   1582.8529    472.58  .         .Q        .       V .         .
 (PEAK DAY 1, HOUR  27.833)
 123.917   1586.1047    472.17  .         .Q        .       V .         .
 (PEAK DAY 1, HOUR  27.917)
 124.000   1589.3539    471.78  .         .Q        .       V .         .
 (PEAK DAY 1, HOUR  28.000)
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6330.00 TO NODE   6355.00 IS CODE = 5.2
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  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  5341.3 Ac. ***

         THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
         TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
         INTERVALS(Reference: the National Engineering Handbook,
         Hydrology, Chapter 17, page 17-52, August,1972,
         U.S. Department of Commerce).


         ASSUMED REGULAR CHANNEL INFORMATION:
           BASEWIDTH(FT) =   30.00     CHANNEL Z =  1.00
           UPSTREAM ELEVATION(FT) =     375.00
           DOWNSTREAM ELEVATION(FT) =     314.00
           CHANNEL LENGTH(FT) =    6086.00     MANNING'S FACTOR = 0.040
           CONSTANT LOSS RATE(CFS) =    0.00


         CHANNEL ROUTING COEFFICIENT ESTIMATED:
           MAXIMUM INFLOW(CFS) =  1660.43
           AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  1155.84
           CHANNEL NORMAL VELOCITY FOR Q =  1155.84 CFS =   8.31 FPS
           ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.830

         MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
         UNIT INTERVALS IS CSTAR = 0.691
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CONVEX METHOD CHANNEL ROUTING RESULTS:

PEAK DAY	TIME (HRS)	CLOCK TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
2	24.000	96.000	301.71	305.18	305.18
1	0.083	96.083	300.93	303.77	303.77
1	0.167	96.167	301.91	302.38	302.38
1	0.250	96.250	304.78	301.39	301.39
1	0.333	96.333	307.60	301.73	301.73
1	0.417	96.417	308.99	303.78	303.78
1	0.500	96.500	309.44	306.36	306.36
1	0.583	96.583	309.58	308.15	308.15
1	0.667	96.667	309.62	309.03	309.03
1	0.750	96.750	309.60	309.41	309.41
1	0.833	96.833	309.55	309.55	309.55
1	0.917	96.917	309.48	309.59	309.59
1	1.000	97.000	309.38	309.56	309.56
1	1.083	97.083	309.26	309.51	309.51
1	1.167	97.167	309.10	309.42	309.42
1	1.250	97.250	308.94	309.31	309.31
1	1.333	97.333	308.77	309.17	309.17
1	1.417	97.417	308.61	309.01	309.01
1	1.500	97.500	308.46	308.85	308.85
1	1.583	97.583	308.33	308.69	308.69
1	1.667	97.667	308.17	308.54	308.54
1	1.750	97.750	307.94	308.40	308.40
1	1.833	97.833	307.66	308.24	308.24
1	1.917	97.917	307.36	308.04	308.04
1	2.000	98.000	307.08	307.78	307.78
1	2.083	98.083	306.79	307.50	307.50
1	2.167	98.167	306.52	307.21	307.21
1	2.250	98.250	306.25	306.93	306.93
1	2.333	98.333	306.00	306.65	306.65
1	2.417	98.417	305.73	306.38	306.38
1	2.500	98.500	305.47	306.12	306.12
1	2.583	98.583	305.22	305.86	305.86
1	2.667	98.667	304.98	305.59	305.59
1	2.750	98.750	304.73	305.34	305.34
1	2.833	98.833	304.49	305.09	305.09
1	2.917	98.917	304.26	304.85	304.85
1	3.000	99.000	304.05	304.61	304.61
1	3.083	99.083	303.85	304.37	304.37
1	3.167	99.167	303.66	304.15	304.15
1	3.250	99.250	303.49	303.95	303.95
1	3.333	99.333	303.32	303.75	303.75
1	3.417	99.417	303.18	303.57	303.57
1	3.500	99.500	303.04	303.40	303.40
1	3.583	99.583	302.92	303.25	303.25
1	3.667	99.667	302.81	303.11	303.11
1	3.750	99.750	302.70	302.98	302.98
1	3.833	99.833	302.61	302.86	302.86
1	3.917	99.917	302.53	302.75	302.75
1	4.000	100.000	302.47	302.66	302.66
1	4.083	100.083	302.41	302.57	302.57
1	4.167	100.167	302.37	302.50	302.50
1	4.250	100.250	302.33	302.44	302.44
1	4.333	100.333	302.31	302.39	302.39
1	4.417	100.417	302.29	302.35	302.35
1	4.500	100.500	302.29	302.32	302.32
1	4.583	100.583	302.30	302.30	302.30
1	4.667	100.667	302.32	302.29	302.29
1	4.750	100.750	302.36	302.30	302.30
1	4.833	100.833	302.41	302.32	302.32
1	4.917	100.917	302.47	302.34	302.34
1	5.000	101.000	302.54	302.39	302.39

1	5.083	101.083	302.62	302.44	302.44
1	5.167	101.167	302.72	302.51	302.51
1	5.250	101.250	302.83	302.58	302.58
1	5.333	101.333	302.95	302.68	302.68
1	5.417	101.417	303.09	302.78	302.78
1	5.500	101.500	303.24	302.90	302.90
1	5.583	101.583	303.40	303.03	303.03
1	5.667	101.667	303.57	303.17	303.17
1	5.750	101.750	303.76	303.32	303.32
1	5.833	101.833	303.96	303.49	303.49
1	5.917	101.917	304.18	303.67	303.67
1	6.000	102.000	304.40	303.87	303.87
1	6.083	102.083	304.64	304.08	304.08
1	6.167	102.167	304.90	304.30	304.30
1	6.250	102.250	305.17	304.53	304.53
1	6.333	102.333	305.45	304.78	304.78
1	6.417	102.417	305.75	305.04	305.04
1	6.500	102.500	306.06	305.32	305.32
1	6.583	102.583	306.38	305.61	305.61
1	6.667	102.667	306.72	305.91	305.91
1	6.750	102.750	307.07	306.23	306.23
1	6.833	102.833	307.44	306.56	306.56
1	6.917	102.917	307.82	306.91	306.91
1	7.000	103.000	308.22	307.27	307.27
1	7.083	103.083	308.63	307.64	307.64
1	7.167	103.167	309.06	308.03	308.03
1	7.250	103.250	309.50	308.44	308.44
1	7.333	103.333	309.96	308.86	308.86
1	7.417	103.417	310.44	309.30	309.30
1	7.500	103.500	310.92	309.75	309.75
1	7.583	103.583	311.43	310.21	310.21
1	7.667	103.667	311.95	310.70	310.70
1	7.750	103.750	312.49	311.19	311.19
1	7.833	103.833	313.05	311.71	311.71
1	7.917	103.917	313.62	312.24	312.24
1	8.000	104.000	314.21	312.79	312.79
1	8.083	104.083	314.82	313.35	313.35
1	8.167	104.167	315.44	313.93	313.93
1	8.250	104.250	316.08	314.53	314.53
1	8.333	104.333	316.74	315.15	315.15
1	8.417	104.417	317.42	315.78	315.78
1	8.500	104.500	318.12	316.43	316.43
1	8.583	104.583	318.84	317.10	317.10
1	8.667	104.667	319.57	317.79	317.79
1	8.750	104.750	320.33	318.50	318.50
1	8.833	104.833	321.11	319.23	319.23
1	8.917	104.917	321.90	319.98	319.98
1	9.000	105.000	322.72	320.74	320.74
1	9.083	105.083	323.56	321.53	321.53
1	9.167	105.167	324.42	322.34	322.34
1	9.250	105.250	325.30	323.16	323.16
1	9.333	105.333	326.20	324.01	324.01
1	9.417	105.417	327.13	324.88	324.88
1	9.500	105.500	328.08	325.78	325.78
1	9.583	105.583	329.03	326.69	326.69
1	9.667	105.667	329.94	327.63	327.63
1	9.750	105.750	330.80	328.58	328.58
1	9.833	105.833	331.64	329.50	329.50
1	9.917	105.917	332.49	330.38	330.38
1	10.000	106.000	333.37	331.24	331.24
1	10.083	106.083	334.26	332.09	332.09
1	10.167	106.167	335.17	332.95	332.95
1	10.250	106.250	336.11	333.84	333.84
1	10.333	106.333	337.07	334.74	334.74
1	10.417	106.417	338.06	335.67	335.67
1	10.500	106.500	339.07	336.62	336.62
1	10.583	106.583	340.11	337.60	337.60
1	10.667	106.667	341.17	338.60	338.60
1	10.750	106.750	342.27	339.62	339.62
1	10.833	106.833	343.39	340.68	340.68
1	10.917	106.917	344.53	341.75	341.75
1	11.000	107.000	345.71	342.86	342.86
1	11.083	107.083	346.92	344.00	344.00
1	11.167	107.167	348.16	345.16	345.16
1	11.250	107.250	349.44	346.35	346.35
1	11.333	107.333	350.74	347.58	347.58
1	11.417	107.417	352.08	348.84	348.84
1	11.500	107.500	353.46	350.13	350.13
1	11.583	107.583	354.88	351.46	351.46
1	11.667	107.667	356.33	352.82	352.82
1	11.750	107.750	357.83	354.21	354.21
1	11.833	107.833	359.36	355.65	355.65
1	11.917	107.917	360.94	357.13	357.13
1	12.000	108.000	362.57	358.64	358.64
1	12.083	108.083	364.75	360.20	360.20
1	12.167	108.167	368.46	361.81	361.81
1	12.250	108.250	373.81	363.80	363.80
1	12.333	108.333	379.16	366.95	366.95
1	12.417	108.417	383.34	371.59	371.59
1	12.500	108.500	386.77	376.72	376.72
1	12.583	108.583	390.01	381.21	381.21
1	12.667	108.667	393.22	384.99	384.99
1	12.750	108.750	396.47	388.40	388.40
1	12.833	108.833	399.76	391.67	391.67
1	12.917	108.917	403.10	394.93	394.93
1	13.000	109.000	406.45	398.20	398.20
1	13.083	109.083	409.75	401.53	401.53
1	13.167	109.167	413.01	404.87	404.87
1	13.250	109.250	416.31	408.18	408.18
1	13.333	109.333	419.68	411.45	411.45
1	13.417	109.417	423.16	414.75	414.75
1	13.500	109.500	426.74	418.10	418.10
1	13.583	109.583	430.46	421.53	421.53
1	13.667	109.667	434.30	425.07	425.07
1	13.750	109.750	438.31	428.72	428.72
1	13.833	109.833	442.47	432.50	432.50
1	13.917	109.917	446.83	436.44	436.44
1	14.000	110.000	451.38	440.53	440.53
1	14.083	110.083	456.21	444.80	444.80
1	14.167	110.167	461.35	449.26	449.26
1	14.250	110.250	466.59	453.97	453.97
1	14.333	110.333	471.63	458.98	458.98
1	14.417	110.417	476.52	464.14	464.14
1	14.500	110.500	481.58	469.22	469.22
1	14.583	110.583	487.02	474.18	474.18
1	14.667	110.667	492.97	479.20	479.20
1	14.750	110.750	499.53	484.50	484.50
1	14.833	110.833	506.87	490.24	490.24
1	14.917	110.917	515.29	496.54	496.54
1	15.000	111.000	525.09	503.54	503.54
1	15.083	111.083	536.39	511.50	511.50
1	15.167	111.167	549.05	520.71	520.71
1	15.250	111.250	563.19	531.33	531.33
1	15.333	111.333	579.03	543.34	543.34
1	15.417	111.417	595.29	556.79	556.79
1	15.500	111.500	609.02	571.86	571.86
1	15.583	111.583	620.58	587.74	587.74
1	15.667	111.667	636.41	602.19	602.19
1	15.750	111.750	662.58	614.68	614.68
1	15.833	111.833	700.92	629.39	629.39
1	15.917	111.917	756.87	651.84	651.84
1	16.000	112.000	844.76	685.03	685.03
1	16.083	112.083	1043.78	733.62	733.62
1	16.167	112.167	1381.73	808.77	808.77
1	16.250	112.250	1660.43	967.43	967.43
1	16.333	112.333	1601.66	1247.38	1247.38

1	16.417	112.417	1326.73	1527.57	1527.57
1	16.500	112.500	1121.47	1579.85	1579.85
1	16.583	112.583	1020.47	1410.09	1410.09
1	16.667	112.667	955.49	1214.50	1214.50
1	16.750	112.750	901.38	1082.33	1082.33
1	16.833	112.833	856.32	995.90	995.90
1	16.917	112.917	819.53	931.60	931.60
1	17.000	113.000	788.03	880.43	880.43
1	17.083	113.083	761.58	839.04	839.04
1	17.167	113.167	739.18	804.38	804.38
1	17.250	113.250	722.07	775.30	775.30
1	17.333	113.333	708.41	750.76	750.76
1	17.417	113.417	699.11	731.26	731.26
1	17.500	113.500	690.93	715.72	715.72
1	17.583	113.583	683.84	704.42	704.42
1	17.667	113.667	676.50	695.25	695.25
1	17.750	113.750	670.27	687.50	687.50
1	17.833	113.833	663.31	680.04	680.04
1	17.917	113.917	657.09	673.40	673.40
1	18.000	114.000	651.91	666.56	666.56
1	18.083	114.083	644.35	660.14	660.14
1	18.167	114.167	636.77	654.55	654.55
1	18.250	114.250	628.79	647.64	647.64
1	18.333	114.333	620.07	640.27	640.27
1	18.417	114.417	610.57	632.49	632.49
1	18.500	114.500	603.79	624.07	624.07
1	18.583	114.583	599.23	614.92	614.92
1	18.667	114.667	595.23	607.36	607.36
1	18.750	114.750	589.68	601.83	601.83
1	18.833	114.833	585.05	597.34	597.34
1	18.917	114.917	582.45	592.15	592.15
1	19.000	115.000	580.24	587.33	587.33
1	19.083	115.083	578.24	584.01	584.01
1	19.167	115.167	576.37	581.45	581.45
1	19.250	115.250	574.62	579.27	579.27
1	19.333	115.333	572.95	577.30	577.30
1	19.417	115.417	571.30	575.48	575.48
1	19.500	115.500	569.63	573.76	573.76
1	19.583	115.583	567.90	572.09	572.09
1	19.667	115.667	565.65	570.43	570.43
1	19.750	115.750	563.29	568.71	568.71
1	19.833	115.833	561.54	566.64	566.64
1	19.917	115.917	560.14	564.37	564.37
1	20.000	116.000	558.79	562.45	562.45
1	20.083	116.083	557.40	560.88	560.88
1	20.167	116.167	555.90	559.46	559.46
1	20.250	116.250	553.46	558.06	558.06
1	20.333	116.333	551.97	556.60	556.60
1	20.417	116.417	550.89	554.48	554.48
1	20.500	116.500	549.91	552.77	552.77
1	20.583	116.583	548.95	551.49	551.49
1	20.667	116.667	548.04	550.41	550.41
1	20.750	116.750	547.17	549.42	549.42
1	20.833	116.833	546.34	548.48	548.48
1	20.917	116.917	545.54	547.59	547.59
1	21.000	117.000	544.75	546.75	546.75
1	21.083	117.083	543.98	545.93	545.93
1	21.167	117.167	543.23	545.13	545.13
1	21.250	117.250	542.50	544.35	544.35
1	21.333	117.333	541.77	543.59	543.59
1	21.417	117.417	541.07	542.85	542.85
1	21.500	117.500	540.37	542.12	542.12
1	21.583	117.583	539.69	541.40	541.40
1	21.667	117.667	539.02	540.70	540.70
1	21.750	117.750	538.36	540.01	540.01
1	21.833	117.833	537.72	539.34	539.34
1	21.917	117.917	537.08	538.67	538.67
1	22.000	118.000	536.46	538.03	538.03
1	22.083	118.083	535.84	537.39	537.39
1	22.167	118.167	535.23	536.76	536.76
1	22.250	118.250	534.64	536.14	536.14
1	22.333	118.333	534.05	535.52	535.52
1	22.417	118.417	533.47	534.92	534.92
1	22.500	118.500	532.90	534.33	534.33
1	22.583	118.583	532.34	533.75	533.75
1	22.667	118.667	531.78	533.17	533.17
1	22.750	118.750	531.22	532.61	532.61
1	22.833	118.833	530.68	532.04	532.04
1	22.917	118.917	530.13	531.49	531.49
1	23.000	119.000	529.60	530.94	530.94
1	23.083	119.083	529.06	530.39	530.39
1	23.167	119.167	528.54	529.85	529.85
1	23.250	119.250	528.01	529.32	529.32
1	23.333	119.333	527.49	528.79	528.79
1	23.417	119.417	526.98	528.26	528.26
1	23.500	119.500	526.47	527.74	527.74
1	23.583	119.583	525.96	527.22	527.22
1	23.667	119.667	525.46	526.71	526.71
1	23.750	119.750	524.96	526.20	526.20
1	23.833	119.833	524.46	525.70	525.70
1	23.917	119.917	523.97	525.20	525.20
1	24.000	120.000	523.48	524.70	524.70
1	24.083	120.083	522.18	524.21	524.21
1	24.167	120.167	518.54	523.71	523.71
1	24.250	120.250	512.42	522.68	522.68
1	24.333	120.333	506.47	519.89	519.89
1	24.417	120.417	502.56	514.84	514.84
1	24.500	120.500	500.04	509.17	509.17
1	24.583	120.583	498.06	504.68	504.68
1	24.667	120.667	496.38	501.52	501.52
1	24.750	120.750	494.95	499.16	499.16
1	24.833	120.833	493.68	497.27	497.27
1	24.917	120.917	492.53	495.69	495.69
1	25.000	121.000	491.48	494.32	494.32
1	25.083	121.083	490.54	493.10	493.10
1	25.167	121.167	489.68	492.00	492.00
1	25.250	121.250	488.90	491.01	491.01
1	25.333	121.333	488.17	490.11	490.11
1	25.417	121.417	487.46	489.29	489.29
1	25.500	121.500	486.77	488.53	488.53
1	25.583	121.583	486.10	487.80	487.80
1	25.667	121.667	485.45	487.11	487.11
1	25.750	121.750	484.80	486.42	486.42
1	25.833	121.833	484.18	485.76	485.76
1	25.917	121.917	483.58	485.11	485.11
1	26.000	122.000	482.98	484.48	484.48
1	26.083	122.083	482.40	483.87	483.87
1	26.167	122.167	481.85	483.26	483.26
1	26.250	122.250	481.29	482.68	482.68
1	26.333	122.333	480.75	482.12	482.12
1	26.417	122.417	480.24	481.56	481.56
1	26.500	122.500	479.75	481.01	481.01
1	26.583	122.583	479.26	480.49	480.49
1	26.667	122.667	478.78	479.99	479.99
1	26.750	122.750	478.32	479.50	479.50
1	26.833	122.833	477.87	479.01	479.01
1	26.917	122.917	477.42	478.54	478.54
1	27.000	123.000	476.98	478.08	478.08
1	27.083	123.083	476.53	477.64	477.64
1	27.167	123.167	476.09	477.19	477.19
1	27.250	123.250	475.64	476.74	476.74
1	27.333	123.333	475.20	476.30	476.30
1	27.417	123.417	474.76	475.86	475.86
1	27.500	123.500	474.31	475.41	475.41
1	27.583	123.583	473.87	474.97	474.97
1	27.667	123.667	473.43	474.52	474.52

```
  1   27.750 123.750       473.00      474.08      474.08
  1   27.833 123.833       472.58      473.64      473.64
  1   27.917 123.917       472.17      473.21      473.21
  1   28.000 124.000       471.78      472.78      472.78
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
================================================================================
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   2256.634 AF
    OUTFLOW VOLUME =   2256.636 AF
    LOSS    VOLUME =      0.000 AF
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6340.00 TO NODE   6355.00 IS CODE =   1
--------------------------------------------------------------------------------

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of   697.9 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
================================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #2)

        WATERSHED AREA =     697.900 ACRES
        BASEFLOW =   0.000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    0.340 HOURS
         CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
         THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
         MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
        VALLEY(DEVELOPED):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.900
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
        VALLEY(UNDEVELOPED)/DESERT:
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:
        +------------------+--------+--------+--------+--------+--------+
        | RAINFALL DEPTHS & |        |        |        |        |        |
        |    LOSS RATES     |  DAY 1 |  DAY 2 |  DAY 3 |  DAY 4 |  DAY 5 |
        |==================+========+========+========+========+========|
        | 5-MINUTE (INCHES) |    0.58|    0.27|    0.12|    0.06|    0.04|
        |30-MINUTE (INCHES) |    1.22|    0.56|    0.24|    0.13|    0.09|
        |   1-HOUR (INCHES) |    1.62|    0.75|    0.33|    0.17|    0.12|
        |   3-HOUR (INCHES) |    2.71|    1.25|    0.54|    0.28|    0.21|
        |   6-HOUR (INCHES) |    3.75|    1.73|    0.75|    0.39|    0.29|
        |  24-HOUR (INCHES) |    6.28|    2.89|    1.26|    0.66|    0.48|
        |==================+========+========+========+========+========|
        | LOSS RATE(IN/HR)  |   0.210|   0.210|   0.210|   0.210|   0.210|
        | LOW LOSS FRACTION |   0.450|   0.690|   0.900|   0.980|   0.990|
        +------------------+--------+--------+--------+--------+--------+
          5-MINUTE FACTOR = 0.969
         30-MINUTE FACTOR = 0.969
          1-HOUR FACTOR = 0.969
          3-HOUR FACTOR = 0.995
          6-HOUR FACTOR = 0.998
         24-HOUR FACTOR = 0.999

        UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
        UNIT INTERVAL PERCENTAGE OF LAG-TIME =  24.510


        RUNOFF HYDROGRAPH LISTING LIMITS:
        MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  96.00
        MODEL TIME(HOURS) FOR END OF RESULTS = 124.00
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================================================================================
                    UNIT HYDROGRAPH DETERMINATION

--------------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------------
       1                1.545               130.419
       2                7.337               488.804
       3               20.261              1090.852
       4               37.173              1427.448
       5               57.561              1720.753
       6               73.834              1373.504
       7               84.155               871.070
       8               90.157               506.624
       9               93.846               311.340
      10               95.934               176.209
      11               96.823                75.053
      12               97.453                53.201
      13               98.047                50.140
      14               98.563                43.554
      15               98.877                26.445
      16               99.042                13.975
      17               99.137                 8.025
      18               99.206                 5.797
      19               99.261                 4.649
      20               99.315                 4.546
      21               99.365                 4.228
      22               99.414                 4.161
      23               99.461                 3.902
      24               99.505                 3.743
      25               99.548                 3.674
      26               99.587                 3.272
      27               99.625                 3.204
      28               99.663                 3.169
      29               99.695                 2.719
      30               99.726                 2.582
      31               99.756                 2.583
      32               99.787                 2.570
      33               99.813                 2.195
      34               99.830                 1.492
      35               99.848                 1.489
      36               99.866                 1.488
      37               99.883                 1.487
      38               99.899                 1.328
      39               99.905                 0.518
      40               99.910                 0.406
      41               99.915                 0.406
      42               99.919                 0.404
      43               99.924                 0.406
      44               99.929                 0.406
      45               99.934                 0.405
      46               99.939                 0.408
      47               99.944                 0.405
      48               99.948                 0.408
      49               99.953                 0.404
      50               99.958                 0.405
      51               99.963                 0.405
      52               99.968                 0.405
      53               99.972                 0.405
      54               99.977                 0.404
      55               99.982                 0.405
      56               99.987                 0.405
      57               99.992                 0.405
      58               99.996                 0.405
      59              100.000                 0.311
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    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =     349.4661
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =     322.3159
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5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 400.0 800.0 1200.0 1600.0
96.000	87.4798	10.14	Q V . . .
(PEAK DAY 2, HOUR 24.000)			
96.083	87.5521	10.50	Q V . . .
(PEAK DAY 1, HOUR 0.083)			
96.167	87.6352	12.06	Q V . . .
(PEAK DAY 1, HOUR 0.167)			
96.250	87.7427	15.61	Q V . . .
(PEAK DAY 1, HOUR 0.250)			
96.333	87.8825	20.31	Q V . . .
(PEAK DAY 1, HOUR 0.333)			
96.417	88.0616	26.00	Q V . . .
(PEAK DAY 1, HOUR 0.417)			
96.500	88.2723	30.59	Q V . . .
(PEAK DAY 1, HOUR 0.500)			
96.583	88.5034	33.55	Q V . . .
(PEAK DAY 1, HOUR 0.583)			
96.667	88.7466	35.32	Q .V . . .
(PEAK DAY 1, HOUR 0.667)			
96.750	88.9977	36.46	Q .V . . .
(PEAK DAY 1, HOUR 0.750)			
96.833	89.2536	37.16	Q .V . . .
(PEAK DAY 1, HOUR 0.833)			
96.917	89.5120	37.53	Q .V . . .
(PEAK DAY 1, HOUR 0.917)			
97.000	89.7725	37.82	Q .V . . .
(PEAK DAY 1, HOUR 1.000)			
97.083	90.0351	38.12	Q .V . . .
(PEAK DAY 1, HOUR 1.083)			
97.167	90.2995	38.39	Q .V . . .
(PEAK DAY 1, HOUR 1.167)			
97.250	90.5654	38.61	Q .V . . .
(PEAK DAY 1, HOUR 1.250)			
97.333	90.8325	38.79	Q .V . . .
(PEAK DAY 1, HOUR 1.333)			
97.417	91.1007	38.95	Q .V . . .
(PEAK DAY 1, HOUR 1.417)			
97.500	91.3700	39.10	Q .V . . .
(PEAK DAY 1, HOUR 1.500)			
97.583	91.6403	39.25	Q .V . . .
(PEAK DAY 1, HOUR 1.583)			
97.667	91.9117	39.41	Q .V . . .
(PEAK DAY 1, HOUR 1.667)			
97.750	92.1842	39.56	Q .V . . .
(PEAK DAY 1, HOUR 1.750)			
97.833	92.4577	39.71	Q .V . . .
(PEAK DAY 1, HOUR 1.833)			
97.917	92.7323	39.87	Q .V . . .
(PEAK DAY 1, HOUR 1.917)			
98.000	93.0079	40.03	.Q .V . . .
(PEAK DAY 1, HOUR 2.000)			
98.083	93.2847	40.18	.Q .V . . .
(PEAK DAY 1, HOUR 2.083)			
98.167	93.5625	40.34	.Q .V . . .
(PEAK DAY 1, HOUR 2.167)			
98.250	93.8414	40.50	.Q .V . . .
(PEAK DAY 1, HOUR 2.250)			
98.333	94.1214	40.66	.Q .V . . .
(PEAK DAY 1, HOUR 2.333)			
98.417	94.4026	40.82	.Q .V . . .
(PEAK DAY 1, HOUR 2.417)			
98.500	94.6848	40.98	.Q .V . . .
(PEAK DAY 1, HOUR 2.500)			
98.583	94.9682	41.14	.Q .V . . .
(PEAK DAY 1, HOUR 2.583)			
98.667	95.2526	41.31	.Q .V . . .
(PEAK DAY 1, HOUR 2.667)			
98.750	95.5383	41.47	.Q .V . . .
(PEAK DAY 1, HOUR 2.750)			
98.833	95.8250	41.63	.Q .V . . .
(PEAK DAY 1, HOUR 2.833)			
98.917	96.1129	41.80	.Q .V . . .
(PEAK DAY 1, HOUR 2.917)			
99.000	96.4019	41.97	.Q .V . . .
(PEAK DAY 1, HOUR 3.000)			
99.083	96.6921	42.14	.Q .V . . .
(PEAK DAY 1, HOUR 3.083)			
99.167	96.9835	42.31	.Q . V . . .
(PEAK DAY 1, HOUR 3.167)			
99.250	97.2760	42.48	.Q . V . . .
(PEAK DAY 1, HOUR 3.250)			
99.333	97.5697	42.65	.Q . V . . .
(PEAK DAY 1, HOUR 3.333)			
99.417	97.8646	42.82	.Q . V . . .
(PEAK DAY 1, HOUR 3.417)			
99.500	98.1607	42.99	.Q . V . . .
(PEAK DAY 1, HOUR 3.500)			
99.583	98.4580	43.17	.Q . V . . .
(PEAK DAY 1, HOUR 3.583)			
99.667	98.7566	43.35	.Q . V . . .
(PEAK DAY 1, HOUR 3.667)			
99.750	99.0563	43.53	.Q . V . . .
(PEAK DAY 1, HOUR 3.750)			
99.833	99.3573	43.71	.Q . V . . .
(PEAK DAY 1, HOUR 3.833)			
99.917	99.6596	43.89	.Q . V . . .
(PEAK DAY 1, HOUR 3.917)			
100.000	99.9632	44.08	.Q . V . . .
(PEAK DAY 1, HOUR 4.000)			
100.083	100.2680	44.26	.Q . V . . .
(PEAK DAY 1, HOUR 4.083)			
100.167	100.5742	44.45	.Q . V . . .
(PEAK DAY 1, HOUR 4.167)			
100.250	100.8816	44.65	.Q . V . . .
(PEAK DAY 1, HOUR 4.250)			
100.333	101.1905	44.84	.Q . V . . .
(PEAK DAY 1, HOUR 4.333)			
100.417	101.5006	45.04	.Q . V . . .
(PEAK DAY 1, HOUR 4.417)			
100.500	101.8121	45.23	.Q . V . . .
(PEAK DAY 1, HOUR 4.500)			
100.583	102.1251	45.43	.Q . V . . .
(PEAK DAY 1, HOUR 4.583)			
100.667	102.4394	45.64	.Q . V . . .
(PEAK DAY 1, HOUR 4.667)			
100.750	102.7551	45.84	.Q . V . . .
(PEAK DAY 1, HOUR 4.750)			
100.833	103.0722	46.05	.Q . V . . .
(PEAK DAY 1, HOUR 4.833)			
100.917	103.3908	46.26	.Q . V . . .
(PEAK DAY 1, HOUR 4.917)			
101.000	103.7108	46.47	.Q . V . . .
(PEAK DAY 1, HOUR 5.000)			
101.083	104.0324	46.68	.Q . V . . .
(PEAK DAY 1, HOUR 5.083)			

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 101.167    104.3554     46.90  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.167)
 101.250    104.6799     47.12  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.250)
 101.333    105.0059     47.34  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.333)
 101.417    105.3335     47.56  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.417)
 101.500    105.6626     47.79  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.500)
 101.583    105.9933     48.02  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.583)
 101.667    106.3257     48.25  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.667)
 101.750    106.6596     48.49  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.750)
 101.833    106.9952     48.73  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.833)
 101.917    107.3325     48.97  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.917)
 102.000    107.6714     49.21  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.000)
 102.083    108.0120     49.46  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.083)
 102.167    108.3544     49.71  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.167)
 102.250    108.6985     49.97  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.250)
 102.333    109.0444     50.23  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.333)
 102.417    109.3922     50.49  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.417)
 102.500    109.7417     50.75  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.500)
 102.583    110.0931     51.02  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.583)
 102.667    110.4463     51.29  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.667)
 102.750    110.8015     51.57  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.750)
 102.833    111.1586     51.85  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.833)
 102.917    111.5177     52.14  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.917)
 103.000    111.8787     52.42  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.000)
 103.083    112.2418     52.72  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.083)
 103.167    112.6068     53.01  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.167)
 103.250    112.9740     53.31  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.250)
 103.333    113.3433     53.62  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.333)
 103.417    113.7147     53.93  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.417)
 103.500    114.0882     54.24  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.500)
 103.583    114.4640     54.56  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.583)
 103.667    114.8420     54.89  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.667)
 103.750    115.2223     55.22  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.750)
 103.833    115.6049     55.55  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.833)
 103.917    115.9898     55.89  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   7.917)
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 104.000    116.3771     56.24  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.000)
 104.083    116.7669     56.59  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.083)
 104.167    117.1590     56.94  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.167)
 104.250    117.5537     57.31  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.250)
 104.333    117.9509     57.68  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.333)
 104.417    118.3508     58.05  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.417)
 104.500    118.7532     58.43  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.500)
 104.583    119.1583     58.82  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.583)
 104.667    119.5661     59.22  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.667)
 104.750    119.9767     59.62  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.750)
 104.833    120.3901     60.03  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.833)
 104.917    120.8064     60.45  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.917)
 105.000    121.2256     60.87  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.000)
 105.083    121.6478     61.30  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.083)
 105.167    122.0730     61.74  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.167)
 105.250    122.5013     62.19  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.250)
 105.333    122.9327     62.64  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.333)
 105.417    123.3674     63.11  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.417)
 105.500    123.8053     63.58  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.500)
 105.583    124.2466     64.07  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.583)
 105.667    124.6912     64.56  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.667)
 105.750    125.1393     65.07  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.750)
 105.833    125.5910     65.58  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.833)
 105.917    126.0462     66.11  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.917)
 106.000    126.5052     66.64  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.000)
 106.083    126.9679     67.19  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.083)
 106.167    127.4345     67.74  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.167)
 106.250    127.9050     68.32  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.250)
 106.333    128.3795     68.90  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.333)
 106.417    128.8582     69.50  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.417)
 106.500    129.3410     70.11  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.500)
 106.583    129.8282     70.74  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.583)
 106.667    130.3197     71.37  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.667)
 106.750    130.8158     72.03  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.750)
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106.833    131.3165     72.70  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.833)
106.917    131.8219     73.39  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  10.917)
107.000    132.3321     74.09  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.000)
107.083    132.8474     74.81  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.083)
107.167    133.3677     75.55  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.167)
107.250    133.8932     76.31  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.250)
107.333    134.4241     77.09  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.333)
107.417    134.9606     77.90  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.417)
107.500    135.5027     78.71  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.500)
107.583    136.0507     79.56  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.583)
107.667    136.6046     80.43  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  11.667)
107.750    137.1647     81.33  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.750)
107.833    137.7311     82.24  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.833)
107.917    138.3041     83.20  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  11.917)
108.000    138.8838     84.17  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.000)
108.083    139.4731     85.56  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.083)
108.167    140.0790     87.98  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.167)
108.250    140.7138     92.17  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.250)
108.333    141.3842     97.34  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.333)
108.417    142.0964    103.42  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.417)
108.500    142.8440    108.54  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.500)
108.583    143.6175    112.31  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.583)
108.667    144.4101    115.08  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.667)
108.750    145.2184    117.37  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  12.750)
108.833    146.0400    119.30  . Q       .       V .         .         .
(PEAK DAY 1, HOUR  12.833)
108.917    146.8734    121.02  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  12.917)
109.000    147.7185    122.71  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.000)
109.083    148.5758    124.48  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.083)
109.167    149.4454    126.26  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.167)
109.250    150.3275    128.09  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.250)
109.333    151.2224    129.93  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.333)
109.417    152.1305    131.86  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.417)
109.500    153.0522    133.83  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.500)
109.583    153.9883    135.93  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  13.583)
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109.667    154.9393    138.08  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  13.667)
109.750    155.9060    140.37  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  13.750)
109.833    156.8890    142.73  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  13.833)
109.917    157.8894    145.25  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  13.917)
110.000    158.9077    147.86  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  14.000)
110.083    159.9461    150.77  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  14.083)
110.167    161.0074    154.10  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  14.167)
110.250    162.0967    158.17  .  Q      .         V         .         .
(PEAK DAY 1, HOUR  14.250)
110.333    163.2173    162.70  .   Q     .         V         .         .
(PEAK DAY 1, HOUR  14.333)
110.417    164.3738    167.94  .   Q     .         V         .         .
(PEAK DAY 1, HOUR  14.417)
110.500    165.5685    173.47  .   Q     .         V         .         .
(PEAK DAY 1, HOUR  14.500)
110.583    166.8051    179.55  .   Q     .         V         .         .
(PEAK DAY 1, HOUR  14.583)
110.667    168.0883    186.32  .   Q     .         V         .         .
(PEAK DAY 1, HOUR  14.667)
110.750    169.4257    194.19  .   Q     .         .V        .         .
(PEAK DAY 1, HOUR  14.750)
110.833    170.8223    202.78  .    Q    .         .V        .         .
(PEAK DAY 1, HOUR  14.833)
110.917    172.2852    212.42  .    Q    .         .V        .         .
(PEAK DAY 1, HOUR  14.917)
111.000    173.8201    222.86  .    Q    .         .V        .         .
(PEAK DAY 1, HOUR  15.000)
111.083    175.4357    234.58  .    Q    .         .V        .         .
(PEAK DAY 1, HOUR  15.083)
111.167    177.1388    247.30  .     Q   .         .V        .         .
(PEAK DAY 1, HOUR  15.167)
111.250    178.9411    261.69  .     Q   .         . V       .         .
(PEAK DAY 1, HOUR  15.250)
111.333    180.8522    277.50  .     Q   .         . V       .         .
(PEAK DAY 1, HOUR  15.333)
111.417    182.8791    294.30  .      Q  .         . V       .         .
(PEAK DAY 1, HOUR  15.417)
111.500    185.0097    309.37  .      Q  .         . V       .         .
(PEAK DAY 1, HOUR  15.500)
111.583    187.2243    321.55  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  15.583)
111.667    189.5230    333.78  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  15.667)
111.750    191.9303    349.53  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  15.750)
111.833    194.5298    377.44  .        Q.         .   V     .         .
(PEAK DAY 1, HOUR  15.833)
111.917    197.4737    427.47  .         Q         .   V     .         .
(PEAK DAY 1, HOUR  15.917)
112.000    200.9750    508.38  .         . Q       .   V     .         .
(PEAK DAY 1, HOUR  16.000)
112.083    205.6728    682.13  .         .      Q  .    V    .         .
(PEAK DAY 1, HOUR  16.083)
112.167    212.3362    967.53  .         .         .   Q V   .         .
(PEAK DAY 1, HOUR  16.167)
112.250    221.4721   1326.53  .         .         .      V  .  Q      .
(PEAK DAY 1, HOUR  16.250)
112.333    231.8962   1513.58  .         .         .       V .      Q  .
(PEAK DAY 1, HOUR  16.333)
112.417    242.8206   1586.22  .         .         .         V        Q.
(PEAK DAY 1, HOUR  16.417)
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112.500    251.9846   1330.62  .          .          .          .V Q       .
(PEAK DAY 1, HOUR  16.500)
112.583    258.8450    996.13  .          .          .   Q      . V        .
(PEAK DAY 1, HOUR  16.583)
112.667    263.9171    736.46  .          .       Q  .          . V        .
(PEAK DAY 1, HOUR  16.667)
112.750    267.8633    572.98  .          .   Q      .          .  V       .
(PEAK DAY 1, HOUR  16.750)
112.833    270.9846    453.22  .          .Q         .          .  V       .
(PEAK DAY 1, HOUR  16.833)
112.917    273.4837    362.87  .        Q.           .          .  V       .
(PEAK DAY 1, HOUR  16.917)
113.000    275.6631    316.44  .      Q   .          .          .   V      .
(PEAK DAY 1, HOUR  17.000)
113.083    277.6262    285.04  .      Q   .          .          .   V      .
(PEAK DAY 1, HOUR  17.083)
113.167    279.3894    256.02  .     Q    .          .          .   V      .
(PEAK DAY 1, HOUR  17.167)
113.250    280.9456    225.96  .    Q     .          .          .   V      .
(PEAK DAY 1, HOUR  17.250)
113.333    282.3374    202.09  .    Q     .          .          .    V     .
(PEAK DAY 1, HOUR  17.333)
113.417    283.6112    184.96  .   Q      .          .          .    V     .
(PEAK DAY 1, HOUR  17.417)
113.500    284.8014    172.81  .   Q      .          .          .    V     .
(PEAK DAY 1, HOUR  17.500)
113.583    285.9275    163.52  .   Q      .          .          .    V     .
(PEAK DAY 1, HOUR  17.583)
113.667    287.0038    156.28  .  Q       .          .          .    V     .
(PEAK DAY 1, HOUR  17.667)
113.750    288.0374    150.07  .  Q       .          .          .    V     .
(PEAK DAY 1, HOUR  17.750)
113.833    289.0344    144.76  .  Q       .          .          .    V     .
(PEAK DAY 1, HOUR  17.833)
113.917    289.9984    139.98  .  Q       .          .          .    V     .
(PEAK DAY 1, HOUR  17.917)
114.000    290.9330    135.70  .  Q       .          .          .     V    .
(PEAK DAY 1, HOUR  18.000)
114.083    291.8382    131.44  .  Q       .          .          .     V    .
(PEAK DAY 1, HOUR  18.083)
114.167    292.7084    126.36  .  Q       .          .          .     V    .
(PEAK DAY 1, HOUR  18.167)
114.250    293.5348    119.99  . Q        .          .          .     V    .
(PEAK DAY 1, HOUR  18.250)
114.333    294.3125    112.92  . Q        .          .          .     V    .
(PEAK DAY 1, HOUR  18.333)
114.417    295.0361    105.07  . Q        .          .          .     V    .
(PEAK DAY 1, HOUR  18.417)
114.500    295.7149     98.56  . Q        .          .          .     V    .
(PEAK DAY 1, HOUR  18.500)
114.583    296.3602     93.70  . Q        .          .          .     V    .
(PEAK DAY 1, HOUR  18.583)
114.667    296.9800     89.99  . Q        .          .          .     V    .
(PEAK DAY 1, HOUR  18.667)
114.750    297.5778     86.80  . Q        .          .          .     V    .
(PEAK DAY 1, HOUR  18.750)
114.833    298.1563     84.01  . Q        .          .          .      V   .
(PEAK DAY 1, HOUR  18.833)
114.917    298.7205     81.92  . Q        .          .          .      V   .
(PEAK DAY 1, HOUR  18.917)
115.000    299.2716     80.01  . Q        .          .          .      V   .
(PEAK DAY 1, HOUR  19.000)
115.083    299.8099     78.17  .Q         .          .          .      V   .
(PEAK DAY 1, HOUR  19.083)
115.167    300.3355     76.31  .Q         .          .          .      V   .
(PEAK DAY 1, HOUR  19.167)
115.250    300.8476     74.35  .Q         .          .          .      V   .
(PEAK DAY 1, HOUR  19.250)
115.333    301.3492     72.83  .Q         .          .          .      V   .
(PEAK DAY 1, HOUR  19.333)
115.417    301.8414     71.47  .Q         .          .          .      V   .
(PEAK DAY 1, HOUR  19.417)
115.500    302.3248     70.19  .Q         .          .          .      V   .
(PEAK DAY 1, HOUR  19.500)
115.583    302.7998     68.97  .Q         .          .          .      V   .
(PEAK DAY 1, HOUR  19.583)
115.667    303.2668     67.81  .Q         .          .          .      V   .
(PEAK DAY 1, HOUR  19.667)
115.750    303.7261     66.70  .Q         .          .          .      V   .
(PEAK DAY 1, HOUR  19.750)
115.833    304.1781     65.64  .Q         .          .          .      V   .
(PEAK DAY 1, HOUR  19.833)
115.917    304.6231     64.62  .Q         .          .          .      V   .
(PEAK DAY 1, HOUR  19.917)
116.000    305.0614     63.64  .Q         .          .          .      V   .
(PEAK DAY 1, HOUR  20.000)
116.083    305.4932     62.70  .Q         .          .          .      V   .
(PEAK DAY 1, HOUR  20.083)
116.167    305.9187     61.79  .Q         .          .          .      V   .
(PEAK DAY 1, HOUR  20.167)
116.250    306.3383     60.92  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  20.250)
116.333    306.7520     60.08  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  20.333)
116.417    307.1602     59.26  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  20.417)
116.500    307.5629     58.48  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  20.500)
116.583    307.9604     57.71  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  20.583)
116.667    308.3527     56.97  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  20.667)
116.750    308.7400     56.24  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  20.750)
116.833    309.1223     55.51  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  20.833)
116.917    309.4995     54.76  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  20.917)
117.000    309.8710     53.95  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  21.000)
117.083    310.2382     53.31  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  21.083)
117.167    310.6010     52.69  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  21.167)
117.250    310.9598     52.10  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  21.250)
117.333    311.3147     51.52  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  21.333)
117.417    311.6657     50.97  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  21.417)
117.500    312.0130     50.43  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  21.500)
117.583    312.3567     49.90  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  21.583)
117.667    312.6969     49.39  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  21.667)
117.750    313.0336     48.90  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  21.750)
117.833    313.3671     48.41  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  21.833)
117.917    313.6973     47.94  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  21.917)
118.000    314.0243     47.49  .Q         .          .          .       V  .
(PEAK DAY 1, HOUR  22.000)
118.083    314.3483     47.04  .Q         .          .          .        V.
(PEAK DAY 1, HOUR  22.083)
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118.167	314.6692	46.60	.Q	.	.	.	V.
(PEAK DAY 1, HOUR 22.167)								
118.250	314.9872	46.18	.Q	.	.	.	V.
(PEAK DAY 1, HOUR 22.250)								
118.333	315.3024	45.76	.Q	.	.	.	V.
(PEAK DAY 1, HOUR 22.333)								
118.417	315.6148	45.36	.Q	.	.	.	V.
(PEAK DAY 1, HOUR 22.417)								
118.500	315.9244	44.96	.Q	.	.	.	V.
(PEAK DAY 1, HOUR 22.500)								
118.583	316.2314	44.57	.Q	.	.	.	V.
(PEAK DAY 1, HOUR 22.583)								
118.667	316.5357	44.19	.Q	.	.	.	V.
(PEAK DAY 1, HOUR 22.667)								
118.750	316.8376	43.82	.Q	.	.	.	V.
(PEAK DAY 1, HOUR 22.750)								
118.833	317.1369	43.46	.Q	.	.	.	V.
(PEAK DAY 1, HOUR 22.833)								
118.917	317.4337	43.10	.Q	.	.	.	V.
(PEAK DAY 1, HOUR 22.917)								
119.000	317.7282	42.76	.Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.000)								
119.083	318.0204	42.42	.Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.083)								
119.167	318.3102	42.09	.Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.167)								
119.250	318.5978	41.76	.Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.250)								
119.333	318.8832	41.44	.Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.333)								
119.417	319.1664	41.13	.Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.417)								
119.500	319.4476	40.82	.Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.500)								
119.583	319.7266	40.52	.Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.583)								
119.667	320.0037	40.22	.Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.667)								
119.750	320.2787	39.94	Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.750)								
119.833	320.5518	39.65	Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.833)								
119.917	320.8229	39.37	Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.917)								
120.000	321.0922	39.10	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.000)								
120.083	321.3556	38.25	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.083)								
120.167	321.6022	35.81	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.167)								
120.250	321.8137	30.70	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.250)								
120.333	321.9799	24.13	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.333)								
120.417	322.0921	16.30	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.417)								
120.500	322.1615	10.07	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.500)								
120.583	322.2036	6.12	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.583)								
120.667	322.2299	3.82	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.667)								
120.750	322.2465	2.40	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.750)								
120.833	322.2575	1.60	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.833)								
120.917	322.2662	1.26	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.917)								
121.000	322.2732	1.01	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.000)								
121.083	322.2785	0.78	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.083)								
121.167	322.2825	0.58	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.167)								
121.250	322.2857	0.46	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.250)								
121.333	322.2884	0.39	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.333)								
121.417	322.2908	0.35	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.417)								
121.500	322.2931	0.33	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.500)								
121.583	322.2951	0.30	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.583)								
121.667	322.2971	0.28	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.667)								
121.750	322.2988	0.26	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.750)								
121.833	322.3005	0.24	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.833)								
121.917	322.3020	0.22	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.917)								
122.000	322.3033	0.20	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.000)								
122.083	322.3046	0.18	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.083)								
122.167	322.3058	0.17	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.167)								
122.250	322.3068	0.15	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.250)								
122.333	322.3077	0.14	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.333)								
122.417	322.3086	0.12	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.417)								
122.500	322.3094	0.11	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.500)								
122.583	322.3100	0.10	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.583)								
122.667	322.3106	0.09	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.667)								
122.750	322.3111	0.08	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.750)								
122.833	322.3116	0.07	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.833)								
122.917	322.3120	0.06	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.917)								
123.000	322.3124	0.05	Q	.	.	.	V.
(PEAK DAY 1, HOUR 27.000)								
123.083	322.3127	0.05	Q	.	.	.	V.
(PEAK DAY 1, HOUR 27.083)								
123.167	322.3130	0.04	Q	.	.	.	V.
(PEAK DAY 1, HOUR 27.167)								
123.250	322.3133	0.04	Q	.	.	.	V.
(PEAK DAY 1, HOUR 27.250)								
123.333	322.3135	0.04	Q	.	.	.	V.
(PEAK DAY 1, HOUR 27.333)								
123.417	322.3138	0.03	Q	.	.	.	V.
(PEAK DAY 1, HOUR 27.417)								
123.500	322.3140	0.03	Q	.	.	.	V.
(PEAK DAY 1, HOUR 27.500)								
123.583	322.3142	0.03	Q	.	.	.	V.
(PEAK DAY 1, HOUR 27.583)								
123.667	322.3144	0.03	Q	.	.	.	V.
(PEAK DAY 1, HOUR 27.667)								
123.750	322.3145	0.03	Q	.	.	.	V.
(PEAK DAY 1, HOUR 27.750)								

```
 123.833    322.3147      0.02  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  27.833)
 123.917    322.3148      0.02  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  27.917)
 124.000    322.3150      0.02  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  28.000)
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6355.00 TO NODE   6355.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  6039.2 Ac. ***
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6355.00 TO NODE   6355.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  6039.2 Ac. ***

            STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
        (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      800.0    1600.0    2400.0    3200.0
--------------------------------------------------------------------------------
  96.000    612.7386    315.32  .  Q     V.         .          .          .
 (PEAK DAY 2, HOUR  24.000)
  96.083    614.9030    314.28  .  Q     V.         .          .          .
 (PEAK DAY 1, HOUR   0.083)
  96.167    617.0685    314.43  .  Q     V.         .          .          .
 (PEAK DAY 1, HOUR   0.167)
  96.250    619.2518    317.00  .  Q     V.         .          .          .
 (PEAK DAY 1, HOUR   0.250)
  96.333    621.4697    322.04  .   Q    V.         .          .          .
 (PEAK DAY 1, HOUR   0.333)
  96.417    623.7409    329.79  .   Q    V.         .          .          .
 (PEAK DAY 1, HOUR   0.417)
  96.500    626.0615    336.96  .   Q    V.         .          .          .
 (PEAK DAY 1, HOUR   0.500)
  96.583    628.4149    341.70  .   Q    V.         .          .          .
 (PEAK DAY 1, HOUR   0.583)
  96.667    630.7864    344.35  .   Q    V.         .          .          .
 (PEAK DAY 1, HOUR   0.667)
  96.750    633.1685    345.87  .   Q    V.         .          .          .
 (PEAK DAY 1, HOUR   0.750)
  96.833    635.5563    346.71  .   Q    V.         .          .          .
 (PEAK DAY 1, HOUR   0.833)
  96.917    637.9468    347.11  .   Q    V.         .          .          .
 (PEAK DAY 1, HOUR   0.917)
  97.000    640.3393    347.39  .   Q    V.         .          .          .
 (PEAK DAY 1, HOUR   1.000)
  97.083    642.7334    347.63  .   Q    V.         .          .          .
 (PEAK DAY 1, HOUR   1.083)
  97.167    645.1288    347.81  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   1.167)
  97.250    647.5249    347.92  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   1.250)
  97.333    649.9213    347.96  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   1.333)
  97.417    652.3177    347.96  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   1.417)
  97.500    654.7141    347.95  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   1.500)
  97.583    657.1104    347.94  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   1.583)
  97.667    659.5067    347.94  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   1.667)
  97.750    661.9031    347.96  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   1.750)
  97.833    664.2994    347.96  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   1.833)
  97.917    666.6955    347.91  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   1.917)
  98.000    669.0909    347.81  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   2.000)
  98.083    671.4854    347.68  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   2.083)
  98.167    673.8790    347.55  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   2.167)
  98.250    676.2717    347.43  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   2.250)
  98.333    678.6636    347.31  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   2.333)
  98.417    681.0548    347.20  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   2.417)
  98.500    683.4453    347.10  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   2.500)
  98.583    685.8351    347.00  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   2.583)
  98.667    688.2242    346.90  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   2.667)
  98.750    690.6127    346.81  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   2.750)
  98.833    693.0007    346.73  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   2.833)
  98.917    695.3881    346.65  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   2.917)
  99.000    697.7750    346.57  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   3.000)
  99.083    700.1614    346.51  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   3.083)
  99.167    702.5475    346.46  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   3.167)
  99.250    704.9334    346.42  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   3.250)
  99.333    707.3191    346.40  .   Q     V         .          .          .
 (PEAK DAY 1, HOUR   3.333)
  99.417    709.7047    346.39  .   Q     .V        .          .          .
 (PEAK DAY 1, HOUR   3.417)
  99.500    712.0903    346.40  .   Q     .V        .          .          .
 (PEAK DAY 1, HOUR   3.500)
  99.583    714.4761    346.42  .   Q     .V        .          .          .
 (PEAK DAY 1, HOUR   3.583)
  99.667    716.8622    346.45  .   Q     .V        .          .          .
 (PEAK DAY 1, HOUR   3.667)
  99.750    719.2486    346.51  .   Q     .V        .          .          .
 (PEAK DAY 1, HOUR   3.750)
  99.833    721.6354    346.57  .   Q     .V        .          .          .
 (PEAK DAY 1, HOUR   3.833)
  99.917    724.0228    346.65  .   Q     .V        .          .          .
 (PEAK DAY 1, HOUR   3.917)
 100.000    726.4108    346.73  .   Q     .V        .          .          .
 (PEAK DAY 1, HOUR   4.000)
 100.083    728.7994    346.84  .   Q     .V        .          .          .
 (PEAK DAY 1, HOUR   4.083)
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 100.167    731.1889    346.95  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   4.167)
 100.250    733.5793    347.09  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   4.250)
 100.333    735.9707    347.23  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   4.333)
 100.417    738.3632    347.39  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   4.417)
 100.500    740.7568    347.56  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   4.500)
 100.583    743.1517    347.74  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   4.583)
 100.667    745.5480    347.93  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   4.667)
 100.750    747.9456    348.14  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   4.750)
 100.833    750.3448    348.36  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   4.833)
 100.917    752.7457    348.60  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   4.917)
 101.000    755.1483    348.86  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   5.000)
 101.083    757.5527    349.12  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   5.083)
 101.167    759.9591    349.40  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   5.167)
 101.250    762.3676    349.70  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   5.250)
 101.333    764.7781    350.02  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   5.333)
 101.417    767.1910    350.34  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   5.417)
 101.500    769.6062    350.69  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   5.500)
 101.583    772.0239    351.05  .   Q     .V       .        .        .
(PEAK DAY 1, HOUR   5.583)
 101.667    774.4441    351.42  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   5.667)
 101.750    776.8671    351.81  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   5.750)
 101.833    779.2928    352.22  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   5.833)
 101.917    781.7214    352.64  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   5.917)
 102.000    784.1531    353.08  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   6.000)
 102.083    786.5880    353.54  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   6.083)
 102.167    789.0261    354.01  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   6.167)
 102.250    791.4676    354.50  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   6.250)
 102.333    793.9125    355.01  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   6.333)
 102.417    796.3611    355.53  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   6.417)
 102.500    798.8134    356.07  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   6.500)
 102.583    801.2695    356.63  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   6.583)
 102.667    803.7296    357.20  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   6.667)
 102.750    806.1937    357.80  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   6.750)
 102.833    808.6621    358.41  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   6.833)
 102.917    811.1349    359.04  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   6.917)
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 103.000    813.6121    359.69  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   7.000)
 103.083    816.0939    360.36  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   7.083)
 103.167    818.5804    361.04  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   7.167)
 103.250    821.0718    361.75  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   7.250)
 103.333    823.5682    362.48  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   7.333)
 103.417    826.0698    363.22  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   7.417)
 103.500    828.5765    363.99  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   7.500)
 103.583    831.0888    364.78  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   7.583)
 103.667    833.6066    365.58  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   7.667)
 103.750    836.1301    366.41  .   Q     . V      .        .        .
(PEAK DAY 1, HOUR   7.750)
 103.833    838.6594    367.26  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   7.833)
 103.917    841.1948    368.13  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   7.917)
 104.000    843.7363    369.02  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   8.000)
 104.083    846.2841    369.94  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   8.083)
 104.167    848.8383    370.88  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   8.167)
 104.250    851.3992    371.84  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   8.250)
 104.333    853.9669    372.82  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   8.333)
 104.417    856.5416    373.84  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   8.417)
 104.500    859.1233    374.87  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   8.500)
 104.583    861.7123    375.93  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   8.583)
 104.667    864.3088    377.01  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   8.667)
 104.750    866.9130    378.12  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   8.750)
 104.833    869.5249    379.25  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   8.833)
 104.917    872.1449    380.42  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   8.917)
 105.000    874.7731    381.61  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   9.000)
 105.083    877.4097    382.83  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   9.083)
 105.167    880.0548    384.07  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   9.167)
 105.250    882.7087    385.35  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   9.250)
 105.333    885.3716    386.66  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   9.333)
 105.417    888.0438    388.00  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   9.417)
 105.500    890.7253    389.36  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   9.500)
 105.583    893.4166    390.76  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   9.583)
 105.667    896.1176    392.19  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   9.667)
 105.750    898.8287    393.65  .   Q     .  V     .        .        .
(PEAK DAY 1, HOUR   9.750)
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 105.833    901.5496    395.08  .   Q     .  V      .         .         .
(PEAK DAY 1, HOUR   9.833)
 105.917    904.2803    396.49  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR   9.917)
 106.000    907.0204    397.88  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.000)
 106.083    909.7703    399.28  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.083)
 106.167    912.5300    400.70  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  10.167)
 106.250    915.2997    402.16  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  10.250)
 106.333    918.0796    403.64  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  10.333)
 106.417    920.8701    405.17  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  10.417)
 106.500    923.6712    406.73  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  10.500)
 106.583    926.4835    408.34  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  10.583)
 106.667    929.3069    409.97  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  10.667)
 106.750    932.1420    411.66  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  10.750)
 106.833    934.9890    413.37  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  10.833)
 106.917    937.8481    415.14  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  10.917)
 107.000    940.7196    416.95  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  11.000)
 107.083    943.6039    418.81  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  11.083)
 107.167    946.5014    420.71  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  11.167)
 107.250    949.4124    422.67  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  11.250)
 107.333    952.3370    424.67  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  11.333)
 107.417    955.2760    426.73  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  11.417)
 107.500    958.2294    428.84  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  11.500)
 107.583    961.1979    431.02  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  11.583)
 107.667    964.1816    433.24  .    Q    .   V     .         .         .
(PEAK DAY 1, HOUR  11.667)
 107.750    967.1813    435.54  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  11.750)
 107.833    970.1971    437.89  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  11.833)
 107.917    973.2296    440.33  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  11.917)
 108.000    976.2793    442.81  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  12.000)
 108.083    979.3493    445.76  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  12.083)
 108.167    982.4470    449.79  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  12.167)
 108.250    985.5873    455.97  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  12.250)
 108.333    988.7849    464.29  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  12.333)
 108.417    992.0563    475.01  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  12.417)
 108.500    995.3984    485.26  .     Q   .    V    .         .         .
(PEAK DAY 1, HOUR  12.500)
 108.583    998.7974    493.53  .     Q   .    V    .         .         .
(PEAK DAY 1, HOUR  12.583)
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 108.667   1002.2414    500.07  .     Q   .    V    .         .         .
(PEAK DAY 1, HOUR  12.667)
 108.750   1005.7246    505.76  .     Q   .    V    .         .         .
(PEAK DAY 1, HOUR  12.750)
 108.833   1009.2437    510.97  .     Q   .    V    .         .         .
(PEAK DAY 1, HOUR  12.833)
 108.917   1012.7971    515.95  .     Q   .    V    .         .         .
(PEAK DAY 1, HOUR  12.917)
 109.000   1016.3846    520.91  .     Q   .    V    .         .         .
(PEAK DAY 1, HOUR  13.000)
 109.083   1020.0073    526.00  .     Q   .    V    .         .         .
(PEAK DAY 1, HOUR  13.083)
 109.167   1023.6652    531.13  .     Q   .    V    .         .         .
(PEAK DAY 1, HOUR  13.167)
 109.250   1027.3585    536.27  .     Q   .    V    .         .         .
(PEAK DAY 1, HOUR  13.250)
 109.333   1031.0870    541.38  .     Q   .    V    .         .         .
(PEAK DAY 1, HOUR  13.333)
 109.417   1034.8516    546.61  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  13.417)
 109.500   1038.6527    551.93  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  13.500)
 109.583   1042.4919    557.46  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  13.583)
 109.667   1046.3704    563.14  .      Q  .     V   .         .         .
(PEAK DAY 1, HOUR  13.667)
 109.750   1050.2897    569.09  .      Q  .     V   .         .         .
(PEAK DAY 1, HOUR  13.750)
 109.833   1054.2513    575.23  .      Q  .     V   .         .         .
(PEAK DAY 1, HOUR  13.833)
 109.917   1058.2574    581.69  .      Q  .     V   .         .         .
(PEAK DAY 1, HOUR  13.917)
 110.000   1062.3097    588.39  .      Q  .     V   .         .         .
(PEAK DAY 1, HOUR  14.000)
 110.083   1066.4115    595.57  .      Q  .     V   .         .         .
(PEAK DAY 1, HOUR  14.083)
 110.167   1070.5669    603.36  .      Q  .     V   .         .         .
(PEAK DAY 1, HOUR  14.167)
 110.250   1074.7827    612.14  .      Q  .     V   .         .         .
(PEAK DAY 1, HOUR  14.250)
 110.333   1079.0642    621.68  .      Q  .     V   .         .         .
(PEAK DAY 1, HOUR  14.333)
 110.417   1083.4174    632.08  .      Q  .     V   .         .         .
(PEAK DAY 1, HOUR  14.417)
 110.500   1087.8435    642.68  .       Q .     V   .         .         .
(PEAK DAY 1, HOUR  14.500)
 110.583   1092.3458    653.73  .       Q .     V   .         .         .
(PEAK DAY 1, HOUR  14.583)
 110.667   1096.9293    665.52  .       Q .      V  .         .         .
(PEAK DAY 1, HOUR  14.667)
 110.750   1101.6035    678.69  .       Q .      V  .         .         .
(PEAK DAY 1, HOUR  14.750)
 110.833   1106.3765    693.02  .       Q .      V  .         .         .
(PEAK DAY 1, HOUR  14.833)
 110.917   1111.2592    708.96  .       Q .      V  .         .         .
(PEAK DAY 1, HOUR  14.917)
 111.000   1116.2618    726.39  .        Q.      V  .         .         .
(PEAK DAY 1, HOUR  15.000)
 111.083   1121.4001    746.09  .        Q.      V  .         .         .
(PEAK DAY 1, HOUR  15.083)
 111.167   1126.6895    768.01  .        Q.      V  .         .         .
(PEAK DAY 1, HOUR  15.167)
 111.250   1132.1510    793.02  .        Q.      V  .         .         .
(PEAK DAY 1, HOUR  15.250)
 111.333   1137.8042    820.84  .         Q      V  .         .         .
(PEAK DAY 1, HOUR  15.333)
 111.417   1143.6656    851.09  .         Q      V  .         .         .
(PEAK DAY 1, HOUR  15.417)
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 111.500   1149.7347    881.23  .         .Q     V  .         .         .
(PEAK DAY 1, HOUR  15.500)
 111.583   1155.9971    909.29  .         .Q     V  .         .         .
(PEAK DAY 1, HOUR  15.583)
 111.667   1162.4431    935.97  .         .Q      V .         .         .
(PEAK DAY 1, HOUR  15.667)
 111.750   1169.0837    964.21  .         . Q     V .         .         .
(PEAK DAY 1, HOUR  15.750)
 111.833   1176.0179   1006.84  .         . Q     V .         .         .
(PEAK DAY 1, HOUR  15.833)
 111.917   1183.4512   1079.30  .         .  Q    V .         .         .
(PEAK DAY 1, HOUR  15.917)
 112.000   1191.6703   1193.41  .         .   Q   V .         .         .
(PEAK DAY 1, HOUR  16.000)
 112.083   1201.4207   1415.75  .         .      QV .         .         .
(PEAK DAY 1, HOUR  16.083)
 112.167   1213.6542   1776.30  .         .       V . Q       .         .
(PEAK DAY 1, HOUR  16.167)
 112.250   1229.4529   2293.97  .         .        V.       Q .         .
(PEAK DAY 1, HOUR  16.250)
 112.333   1248.4678   2760.96  .         .        V.         .   Q     .
(PEAK DAY 1, HOUR  16.333)
 112.417   1269.9126   3113.79  .         .        V.         .       Q .
(PEAK DAY 1, HOUR  16.417)
 112.500   1289.9572   2910.47  .         .         V         .     Q   .
(PEAK DAY 1, HOUR  16.500)
 112.583   1306.5289   2406.22  .         .         V         Q         .
(PEAK DAY 1, HOUR  16.583)
 112.667   1319.9653   1950.96  .         .         V   Q     .         .
(PEAK DAY 1, HOUR  16.667)
 112.750   1331.3655   1655.31  .         .         Q         .         .
(PEAK DAY 1, HOUR  16.750)
 112.833   1341.3457   1449.13  .         .       Q V         .         .
(PEAK DAY 1, HOUR  16.833)
 112.917   1350.2609   1294.47  .         .     Q   V         .         .
(PEAK DAY 1, HOUR  16.917)
 113.000   1358.5038   1196.88  .         .   Q     .V        .         .
(PEAK DAY 1, HOUR  17.000)
 113.083   1366.2454   1124.08  .         .   Q     .V        .         .
(PEAK DAY 1, HOUR  17.083)
 113.167   1373.5485   1060.41  .         .  Q      .V        .         .
(PEAK DAY 1, HOUR  17.167)
 113.250   1380.4442   1001.26  .         . Q       .V        .         .
(PEAK DAY 1, HOUR  17.250)
 113.333   1387.0066    952.86  .         .Q        .V        .         .
(PEAK DAY 1, HOUR  17.333)
 113.417   1393.3167    916.22  .         .Q        .V        .         .
(PEAK DAY 1, HOUR  17.417)
 113.500   1399.4360    888.53  .         .Q        .V        .         .
(PEAK DAY 1, HOUR  17.500)
 113.583   1405.4136    867.94  .        Q          .V        .         .
(PEAK DAY 1, HOUR  17.583)
 113.667   1411.2781    851.53  .        Q          .V        .         .
(PEAK DAY 1, HOUR  17.667)
 113.750   1417.0464    837.57  .        Q          .V        .         .
(PEAK DAY 1, HOUR  17.750)
 113.833   1422.7268    824.80  .        Q          . V       .         .
(PEAK DAY 1, HOUR  17.833)
 113.917   1428.3286    813.38  .        Q          . V       .         .
(PEAK DAY 1, HOUR  17.917)
 114.000   1433.8538    802.26  .        Q          . V       .         .
(PEAK DAY 1, HOUR  18.000)
 114.083   1439.3054    791.57  .       Q.          . V       .         .
(PEAK DAY 1, HOUR  18.083)
 114.167   1444.6836    780.91  .       Q.          . V       .         .
(PEAK DAY 1, HOUR  18.167)
 114.250   1449.9703    767.63  .       Q.          . V       .         .
(PEAK DAY 1, HOUR  18.250)
 114.333   1455.1576    753.19  .        Q.         . V       .         .
(PEAK DAY 1, HOUR  18.333)
 114.417   1460.2372    737.56  .        Q.         . V       .         .
(PEAK DAY 1, HOUR  18.417)
 114.500   1465.2140    722.62  .        Q.         . V       .         .
(PEAK DAY 1, HOUR  18.500)
 114.583   1470.0942    708.62  .       Q .         . V       .         .
(PEAK DAY 1, HOUR  18.583)
 114.667   1474.8970    697.35  .       Q .         . V       .         .
(PEAK DAY 1, HOUR  18.667)
 114.750   1479.6395    688.63  .       Q .         . V       .         .
(PEAK DAY 1, HOUR  18.750)
 114.833   1484.3320    681.35  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  18.833)
 114.917   1488.9744    674.07  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  18.917)
 115.000   1493.5704    667.34  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  19.000)
 115.083   1498.1309    662.18  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  19.083)
 115.167   1502.6609    657.76  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  19.167)
 115.250   1507.1625    653.62  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  19.250)
 115.333   1511.6400    650.13  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  19.333)
 115.417   1516.0956    646.95  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  19.417)
 115.500   1520.5305    643.95  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  19.500)
 115.583   1524.9456    641.06  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  19.583)
 115.667   1529.3411    638.23  .     Q   .         .  V      .         .
(PEAK DAY 1, HOUR  19.667)
 115.750   1533.7172    635.41  .     Q   .         .  V      .         .
(PEAK DAY 1, HOUR  19.750)
 115.833   1538.0717    632.28  .     Q   .         .  V      .         .
(PEAK DAY 1, HOUR  19.833)
 115.917   1542.4034    628.98  .     Q   .         .  V      .         .
(PEAK DAY 1, HOUR  19.917)
 116.000   1546.7153    626.08  .     Q   .         .  V      .         .
(PEAK DAY 1, HOUR  20.000)
 116.083   1551.0099    623.57  .     Q   .         .   V     .         .
(PEAK DAY 1, HOUR  20.083)
 116.167   1555.2885    621.25  .     Q   .         .   V     .         .
(PEAK DAY 1, HOUR  20.167)
 116.250   1559.5514    618.98  .     Q   .         .   V     .         .
(PEAK DAY 1, HOUR  20.250)
 116.333   1563.7985    616.67  .     Q   .         .   V     .         .
(PEAK DAY 1, HOUR  20.333)
 116.417   1568.0253    613.74  .     Q   .         .   V     .         .
(PEAK DAY 1, HOUR  20.417)
 116.500   1572.2350    611.25  .     Q   .         .   V     .         .
(PEAK DAY 1, HOUR  20.500)
 116.583   1576.4305    609.20  .     Q   .         .   V     .         .
(PEAK DAY 1, HOUR  20.583)
 116.667   1580.6136    607.38  .     Q   .         .   V     .         .
(PEAK DAY 1, HOUR  20.667)
 116.750   1584.7849    605.66  .     Q   .         .   V     .         .
(PEAK DAY 1, HOUR  20.750)
 116.833   1588.9447    604.00  .     Q   .         .   V     .         .
(PEAK DAY 1, HOUR  20.833)
 116.917   1593.0931    602.35  .     Q   .         .   V     .         .
(PEAK DAY 1, HOUR  20.917)
 117.000   1597.2302    600.70  .     Q   .         .   V     .         .
(PEAK DAY 1, HOUR  21.000)
 117.083   1601.3572    599.23  .     Q   .         .   V     .         .
(PEAK DAY 1, HOUR  21.083)
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 117.167   1605.4744    597.82  .      Q  .          .   V     .          .
 (PEAK DAY 1, HOUR  21.167)
 117.250   1609.5822    596.45  .      Q  .          .   V     .          .
 (PEAK DAY 1, HOUR  21.250)
 117.333   1613.6808    595.12  .      Q  .          .    V    .          .
 (PEAK DAY 1, HOUR  21.333)
 117.417   1617.7704    593.82  .      Q  .          .    V    .          .
 (PEAK DAY 1, HOUR  21.417)
 117.500   1621.8513    592.55  .      Q  .          .    V    .          .
 (PEAK DAY 1, HOUR  21.500)
 117.583   1625.9237    591.31  .      Q  .          .    V    .          .
 (PEAK DAY 1, HOUR  21.583)
 117.667   1629.9877    590.10  .      Q  .          .    V    .          .
 (PEAK DAY 1, HOUR  21.667)
 117.750   1634.0436    588.91  .      Q  .          .    V    .          .
 (PEAK DAY 1, HOUR  21.750)
 117.833   1638.0914    587.75  .      Q  .          .    V    .          .
 (PEAK DAY 1, HOUR  21.833)
 117.917   1642.1315    586.62  .      Q  .          .    V    .          .
 (PEAK DAY 1, HOUR  21.917)
 118.000   1646.1639    585.51  .      Q  .          .    V    .          .
 (PEAK DAY 1, HOUR  22.000)
 118.083   1650.1890    584.43  .      Q  .          .    V    .          .
 (PEAK DAY 1, HOUR  22.083)
 118.167   1654.2065    583.36  .      Q  .          .    V    .          .
 (PEAK DAY 1, HOUR  22.167)
 118.250   1658.2169    582.31  .      Q  .          .    V    .          .
 (PEAK DAY 1, HOUR  22.250)
 118.333   1662.2202    581.28  .      Q  .          .    V    .          .
 (PEAK DAY 1, HOUR  22.333)
 118.417   1666.2167    580.28  .      Q  .          .    V    .          .
 (PEAK DAY 1, HOUR  22.417)
 118.500   1670.2063    579.29  .      Q  .          .    V    .          .
 (PEAK DAY 1, HOUR  22.500)
 118.583   1674.1892    578.32  .      Q  .          .    V    .          .
 (PEAK DAY 1, HOUR  22.583)
 118.667   1678.1655    577.37  .      Q  .          .     V   .          .
 (PEAK DAY 1, HOUR  22.667)
 118.750   1682.1354    576.43  .      Q  .          .     V   .          .
 (PEAK DAY 1, HOUR  22.750)
 118.833   1686.0989    575.50  .      Q  .          .     V   .          .
 (PEAK DAY 1, HOUR  22.833)
 118.917   1690.0562    574.59  .      Q  .          .     V   .          .
 (PEAK DAY 1, HOUR  22.917)
 119.000   1694.0072    573.70  .      Q  .          .     V   .          .
 (PEAK DAY 1, HOUR  23.000)
 119.083   1697.9521    572.81  .      Q  .          .     V   .          .
 (PEAK DAY 1, HOUR  23.083)
 119.167   1701.8911    571.94  .      Q  .          .     V   .          .
 (PEAK DAY 1, HOUR  23.167)
 119.250   1705.8242    571.08  .      Q  .          .     V   .          .
 (PEAK DAY 1, HOUR  23.250)
 119.333   1709.7515    570.23  .      Q  .          .     V   .          .
 (PEAK DAY 1, HOUR  23.333)
 119.417   1713.6729    569.39  .      Q  .          .     V   .          .
 (PEAK DAY 1, HOUR  23.417)
 119.500   1717.5886    568.56  .      Q  .          .     V   .          .
 (PEAK DAY 1, HOUR  23.500)
 119.583   1721.4987    567.74  .      Q  .          .     V   .          .
 (PEAK DAY 1, HOUR  23.583)
 119.667   1725.4032    566.94  .      Q  .          .     V   .          .
 (PEAK DAY 1, HOUR  23.667)
 119.750   1729.3022    566.14  .      Q  .          .     V   .          .
 (PEAK DAY 1, HOUR  23.750)
 119.833   1733.1958    565.35  .      Q  .          .     V   .          .
 (PEAK DAY 1, HOUR  23.833)
 119.917   1737.0840    564.57  .      Q  .          .     V   .          .
 (PEAK DAY 1, HOUR  23.917)
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 120.000   1740.9669    563.80  .      Q  .          .     V   .          .
 (PEAK DAY 1, HOUR  24.000)
 120.083   1744.8406    562.45  .      Q  .          .     V   .          .
 (PEAK DAY 1, HOUR  24.083)
 120.167   1748.6941    559.52  .     Q   .          .     V   .          .
 (PEAK DAY 1, HOUR  24.167)
 120.250   1752.5052    553.38  .     Q   .          .     V   .          .
 (PEAK DAY 1, HOUR  24.250)
 120.333   1756.2520    544.02  .     Q   .          .     V   .          .
 (PEAK DAY 1, HOUR  24.333)
 120.417   1759.9099    531.14  .     Q   .          .     V   .          .
 (PEAK DAY 1, HOUR  24.417)
 120.500   1763.4860    519.24  .     Q   .          .     V   .          .
 (PEAK DAY 1, HOUR  24.500)
 120.583   1767.0038    510.79  .     Q   .          .     V   .          .
 (PEAK DAY 1, HOUR  24.583)
 120.667   1770.4840    505.34  .     Q   .          .     V   .          .
 (PEAK DAY 1, HOUR  24.667)
 120.750   1773.9384    501.57  .     Q   .          .     V   .          .
 (PEAK DAY 1, HOUR  24.750)
 120.833   1777.3741    498.88  .     Q   .          .     V   .          .
 (PEAK DAY 1, HOUR  24.833)
 120.917   1780.7966    496.95  .     Q   .          .     V   .          .
 (PEAK DAY 1, HOUR  24.917)
 121.000   1784.2080    495.33  .     Q   .          .     V   .          .
 (PEAK DAY 1, HOUR  25.000)
 121.083   1787.6094    493.88  .     Q   .          .     V   .          .
 (PEAK DAY 1, HOUR  25.083)
 121.167   1791.0018    492.58  .     Q   .          .     V   .          .
 (PEAK DAY 1, HOUR  25.167)
 121.250   1794.3866    491.47  .     Q   .          .     V   .          .
 (PEAK DAY 1, HOUR  25.250)
 121.333   1797.7646    490.50  .     Q   .          .     V   .          .
 (PEAK DAY 1, HOUR  25.333)
 121.417   1801.1368    489.64  .     Q   .          .     V   .          .
 (PEAK DAY 1, HOUR  25.417)
 121.500   1804.5035    488.85  .     Q   .          .     V   .          .
 (PEAK DAY 1, HOUR  25.500)
 121.583   1807.8651    488.11  .     Q   .          .      V  .          .
 (PEAK DAY 1, HOUR  25.583)
 121.667   1811.2218    487.39  .     Q   .          .      V  .          .
 (PEAK DAY 1, HOUR  25.667)
 121.750   1814.5736    486.68  .     Q   .          .      V  .          .
 (PEAK DAY 1, HOUR  25.750)
 121.833   1817.9207    486.00  .     Q   .          .      V  .          .
 (PEAK DAY 1, HOUR  25.833)
 121.917   1821.2632    485.33  .     Q   .          .      V  .          .
 (PEAK DAY 1, HOUR  25.917)
 122.000   1824.6012    484.68  .     Q   .          .      V  .          .
 (PEAK DAY 1, HOUR  26.000)
 122.083   1827.9349    484.05  .     Q   .          .      V  .          .
 (PEAK DAY 1, HOUR  26.083)
 122.167   1831.2644    483.43  .     Q   .          .      V  .          .
 (PEAK DAY 1, HOUR  26.167)
 122.250   1834.5897    482.83  .     Q   .          .      V  .          .
 (PEAK DAY 1, HOUR  26.250)
 122.333   1837.9110    482.25  .     Q   .          .      V  .          .
 (PEAK DAY 1, HOUR  26.333)
 122.417   1841.2284    481.68  .     Q   .          .      V  .          .
 (PEAK DAY 1, HOUR  26.417)
 122.500   1844.5419    481.12  .     Q   .          .      V  .          .
 (PEAK DAY 1, HOUR  26.500)
 122.583   1847.8517    480.59  .     Q   .          .      V  .          .
 (PEAK DAY 1, HOUR  26.583)
 122.667   1851.1580    480.07  .     Q   .          .      V  .          .
 (PEAK DAY 1, HOUR  26.667)
 122.750   1854.4608    479.57  .    Q    .          .      V  .          .
 (PEAK DAY 1, HOUR  26.750)
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 122.833   1857.7603    479.08  .    Q    .         .       V .         .
 (PEAK DAY 1, HOUR  26.833)
 122.917   1861.0564    478.60  .    Q    .         .       V .         .
 (PEAK DAY 1, HOUR  26.917)
 123.000   1864.3494    478.14  .    Q    .         .       V .         .
 (PEAK DAY 1, HOUR  27.000)
 123.083   1867.6392    477.68  .    Q    .         .       V .         .
 (PEAK DAY 1, HOUR  27.083)
 123.167   1870.9259    477.23  .    Q    .         .        V.         .
 (PEAK DAY 1, HOUR  27.167)
 123.250   1874.2095    476.78  .    Q    .         .        V.         .
 (PEAK DAY 1, HOUR  27.250)
 123.333   1877.4900    476.34  .    Q    .         .        V.         .
 (PEAK DAY 1, HOUR  27.333)
 123.417   1880.7675    475.89  .    Q    .         .        V.         .
 (PEAK DAY 1, HOUR  27.417)
 123.500   1884.0419    475.44  .    Q    .         .        V.         .
 (PEAK DAY 1, HOUR  27.500)
 123.583   1887.3132    475.00  .    Q    .         .        V.         .
 (PEAK DAY 1, HOUR  27.583)
 123.667   1890.5815    474.55  .    Q    .         .        V.         .
 (PEAK DAY 1, HOUR  27.667)
 123.750   1893.8468    474.11  .    Q    .         .        V.         .
 (PEAK DAY 1, HOUR  27.750)
 123.833   1897.1090    473.67  .    Q    .         .        V.         .
 (PEAK DAY 1, HOUR  27.833)
 123.917   1900.3682    473.23  .    Q    .         .        V.         .
 (PEAK DAY 1, HOUR  27.917)
 124.000   1903.6244    472.80  .    Q    .         .        V.         .
 (PEAK DAY 1, HOUR  28.000)
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
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*******************************************************************************
  FLOW PROCESS FROM NODE   6355.00 TO NODE   6371.00 IS CODE = 5.2
-------------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
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         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  6039.2 Ac. ***

         THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
         TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
         INTERVALS(Reference: the National Engineering Handbook,
         Hydrology, Chapter 17, page 17-52, August,1972,
         U.S. Department of Commerce).


         ASSUMED REGULAR CHANNEL INFORMATION:
           BASEWIDTH(FT) =   30.00     CHANNEL Z =  1.00
           UPSTREAM ELEVATION(FT) =     314.00
           DOWNSTREAM ELEVATION(FT) =     220.00
           CHANNEL LENGTH(FT) =    5919.00     MANNING'S FACTOR = 0.040
           CONSTANT LOSS RATE(CFS) =    0.00


         CHANNEL ROUTING COEFFICIENT ESTIMATED:
           MAXIMUM INFLOW(CFS) =  3113.79
           AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  2358.50
           CHANNEL NORMAL VELOCITY FOR Q =  2358.50 CFS =  12.27 FPS
           ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.878

         MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
         UNIT INTERVALS IS CSTAR = 0.817
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CONVEX METHOD CHANNEL ROUTING RESULTS:

PEAK DAY	TIME (HRS)	CLOCK TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
2	24.000	96.000	315.32	317.74	317.74
1	0.083	96.083	314.28	316.26	316.26
1	0.167	96.167	314.43	314.99	314.99
1	0.250	96.250	317.00	314.48	314.48
1	0.333	96.333	322.04	315.68	315.68
1	0.417	96.417	329.79	319.18	319.18
1	0.500	96.500	336.96	325.23	325.23
1	0.583	96.583	341.70	332.39	332.39
1	0.667	96.667	344.35	338.40	338.40
1	0.750	96.750	345.87	342.37	342.37
1	0.833	96.833	346.71	344.72	344.72
1	0.917	96.917	347.11	346.06	346.06
1	1.000	97.000	347.39	346.78	346.78
1	1.083	97.083	347.63	347.18	347.18
1	1.167	97.167	347.81	347.47	347.47
1	1.250	97.250	347.92	347.69	347.69
1	1.333	97.333	347.96	347.84	347.84
1	1.417	97.417	347.96	347.92	347.92
1	1.500	97.500	347.95	347.95	347.95
1	1.583	97.583	347.94	347.95	347.95
1	1.667	97.667	347.94	347.95	347.95
1	1.750	97.750	347.96	347.94	347.94
1	1.833	97.833	347.96	347.95	347.95
1	1.917	97.917	347.91	347.96	347.96
1	2.000	98.000	347.81	347.93	347.93
1	2.083	98.083	347.68	347.86	347.86
1	2.167	98.167	347.55	347.76	347.76
1	2.250	98.250	347.43	347.63	347.63
1	2.333	98.333	347.31	347.51	347.51
1	2.417	98.417	347.20	347.38	347.38
1	2.500	98.500	347.10	347.27	347.27
1	2.583	98.583	347.00	347.16	347.16
1	2.667	98.667	346.90	347.07	347.07
1	2.750	98.750	346.81	346.97	346.97
1	2.833	98.833	346.73	346.87	346.87
1	2.917	98.917	346.65	346.78	346.78
1	3.000	99.000	346.57	346.70	346.70
1	3.083	99.083	346.51	346.62	346.62
1	3.167	99.167	346.46	346.55	346.55
1	3.250	99.250	346.42	346.49	346.49
1	3.333	99.333	346.40	346.45	346.45
1	3.417	99.417	346.39	346.42	346.42
1	3.500	99.500	346.40	346.40	346.40
1	3.583	99.583	346.42	346.39	346.39
1	3.667	99.667	346.45	346.41	346.41
1	3.750	99.750	346.51	346.43	346.43
1	3.833	99.833	346.57	346.47	346.47
1	3.917	99.917	346.65	346.53	346.53
1	4.000	100.000	346.73	346.60	346.60
1	4.083	100.083	346.84	346.68	346.68
1	4.167	100.167	346.95	346.77	346.77
1	4.250	100.250	347.09	346.88	346.88
1	4.333	100.333	347.23	347.00	347.00
1	4.417	100.417	347.39	347.14	347.14
1	4.500	100.500	347.56	347.29	347.29
1	4.583	100.583	347.74	347.45	347.45
1	4.667	100.667	347.93	347.62	347.62
1	4.750	100.750	348.14	347.81	347.81
1	4.833	100.833	348.36	348.01	348.01
1	4.917	100.917	348.60	348.22	348.22
1	5.000	101.000	348.86	348.45	348.45

1	5.083	101.083	349.12	348.70	348.70
1	5.167	101.167	349.40	348.96	348.96
1	5.250	101.250	349.70	349.23	349.23
1	5.333	101.333	350.02	349.52	349.52
1	5.417	101.417	350.34	349.82	349.82
1	5.500	101.500	350.69	350.14	350.14
1	5.583	101.583	351.05	350.47	350.47
1	5.667	101.667	351.42	350.82	350.82
1	5.750	101.750	351.81	351.19	351.19
1	5.833	101.833	352.22	351.57	351.57
1	5.917	101.917	352.64	351.96	351.96
1	6.000	102.000	353.08	352.38	352.38
1	6.083	102.083	353.54	352.81	352.81
1	6.167	102.167	354.01	353.25	353.25
1	6.250	102.250	354.50	353.71	353.71
1	6.333	102.333	355.01	354.19	354.19
1	6.417	102.417	355.53	354.69	354.69
1	6.500	102.500	356.07	355.20	355.20
1	6.583	102.583	356.63	355.73	355.73
1	6.667	102.667	357.20	356.28	356.28
1	6.750	102.750	357.80	356.84	356.84
1	6.833	102.833	358.41	357.42	357.42
1	6.917	102.917	359.04	358.02	358.02
1	7.000	103.000	359.69	358.64	358.64
1	7.083	103.083	360.36	359.28	359.28
1	7.167	103.167	361.04	359.94	359.94
1	7.250	103.250	361.75	360.61	360.61
1	7.333	103.333	362.48	361.31	361.31
1	7.417	103.417	363.22	362.02	362.02
1	7.500	103.500	363.99	362.75	362.75
1	7.583	103.583	364.78	363.50	363.50
1	7.667	103.667	365.58	364.28	364.28
1	7.750	103.750	366.41	365.07	365.07
1	7.833	103.833	367.26	365.89	365.89
1	7.917	103.917	368.13	366.72	366.72
1	8.000	104.000	369.02	367.58	367.58
1	8.083	104.083	369.94	368.46	368.46
1	8.167	104.167	370.88	369.36	369.36
1	8.250	104.250	371.84	370.28	370.28
1	8.333	104.333	372.82	371.23	371.23
1	8.417	104.417	373.84	372.20	372.20
1	8.500	104.500	374.87	373.20	373.20
1	8.583	104.583	375.93	374.21	374.21
1	8.667	104.667	377.01	375.26	375.26
1	8.750	104.750	378.12	376.32	376.32
1	8.833	104.833	379.25	377.42	377.42
1	8.917	104.917	380.42	378.54	378.54
1	9.000	105.000	381.61	379.68	379.68
1	9.083	105.083	382.83	380.86	380.86
1	9.167	105.167	384.07	382.06	382.06
1	9.250	105.250	385.35	383.29	383.29
1	9.333	105.333	386.66	384.54	384.54
1	9.417	105.417	388.00	385.83	385.83
1	9.500	105.500	389.36	387.15	387.15
1	9.583	105.583	390.76	388.50	388.50
1	9.667	105.667	392.19	389.88	389.88
1	9.750	105.750	393.65	391.29	391.29
1	9.833	105.833	395.08	392.73	392.73
1	9.917	105.917	396.49	394.17	394.17
1	10.000	106.000	397.88	395.59	395.59
1	10.083	106.083	399.28	396.99	396.99
1	10.167	106.167	400.70	398.39	398.39
1	10.250	106.250	402.16	399.80	399.80
1	10.333	106.333	403.64	401.24	401.24
1	10.417	106.417	405.17	402.70	402.70
1	10.500	106.500	406.73	404.21	404.21
1	10.583	106.583	408.34	405.74	405.74
1	10.667	106.667	409.97	407.32	407.32
1	10.750	106.750	411.66	408.93	408.93
1	10.833	106.833	413.37	410.59	410.59
1	10.917	106.917	415.14	412.28	412.28
1	11.000	107.000	416.95	414.02	414.02
1	11.083	107.083	418.81	415.80	415.80
1	11.167	107.167	420.71	417.63	417.63
1	11.250	107.250	422.67	419.51	419.51
1	11.333	107.333	424.67	421.43	421.43
1	11.417	107.417	426.73	423.40	423.40
1	11.500	107.500	428.84	425.43	425.43
1	11.583	107.583	431.02	427.51	427.51
1	11.667	107.667	433.24	429.64	429.64
1	11.750	107.750	435.54	431.84	431.84
1	11.833	107.833	437.89	434.09	434.09
1	11.917	107.917	440.33	436.41	436.41
1	12.000	108.000	442.81	438.79	438.79
1	12.083	108.083	445.76	441.24	441.24
1	12.167	108.167	449.79	443.94	443.94
1	12.250	108.250	455.97	447.36	447.36
1	12.333	108.333	464.29	452.31	452.31
1	12.417	108.417	475.01	459.30	459.30
1	12.500	108.500	485.26	468.52	468.52
1	12.583	108.583	493.53	478.75	478.75
1	12.667	108.667	500.07	488.04	488.04
1	12.750	108.750	505.76	495.66	495.66
1	12.833	108.833	510.97	502.00	502.00
1	12.917	108.917	515.95	507.57	507.57
1	13.000	109.000	520.91	512.74	512.74
1	13.083	109.083	526.00	517.74	517.74
1	13.167	109.167	531.13	522.78	522.78
1	13.250	109.250	536.27	527.87	527.87
1	13.333	109.333	541.38	533.00	533.00
1	13.417	109.417	546.61	538.13	538.13
1	13.500	109.500	551.93	543.30	543.30
1	13.583	109.583	557.46	548.56	548.56
1	13.667	109.667	563.14	553.97	553.97
1	13.750	109.750	569.09	559.55	559.55
1	13.833	109.833	575.23	565.34	565.34
1	13.917	109.917	581.69	571.35	571.35
1	14.000	110.000	588.39	577.62	577.62
1	14.083	110.083	595.57	584.17	584.17
1	14.167	110.167	603.36	591.07	591.07
1	14.250	110.250	612.14	598.49	598.49
1	14.333	110.333	621.68	606.69	606.69
1	14.417	110.417	632.08	615.72	615.72
1	14.500	110.500	642.68	625.58	625.58
1	14.583	110.583	653.73	635.98	635.98
1	14.667	110.667	665.52	646.76	646.76
1	14.750	110.750	678.69	658.12	658.12
1	14.833	110.833	693.02	670.49	670.49
1	14.917	110.917	708.96	684.07	684.07
1	15.000	111.000	726.39	699.04	699.04
1	15.083	111.083	746.09	715.51	715.51
1	15.167	111.167	768.01	733.86	733.86
1	15.250	111.250	793.02	754.37	754.37
1	15.333	111.333	820.84	777.52	777.52
1	15.417	111.417	851.09	803.54	803.54
1	15.500	111.500	881.23	832.20	832.20
1	15.583	111.583	909.29	862.11	862.11
1	15.667	111.667	935.97	891.20	891.20
1	15.750	111.750	964.21	918.79	918.79
1	15.833	111.833	1006.84	946.38	946.38
1	15.917	111.917	1079.30	981.42	981.42
1	16.000	112.000	1193.41	1036.98	1036.98
1	16.083	112.083	1415.75	1126.35	1126.35
1	16.167	112.167	1776.30	1287.90	1287.90
1	16.250	112.250	2293.97	1565.48	1565.48
1	16.333	112.333	2760.96	1986.29	1986.29

1	16.417	112.417	3113.79	2461.87	2461.87
1	16.500	112.500	2910.47	2875.60	2875.60
1	16.583	112.583	2406.22	2972.49	2972.49
1	16.667	112.667	1950.96	2679.65	2679.65
1	16.750	112.750	1655.31	2237.68	2237.68
1	16.833	112.833	1449.13	1861.51	1861.51
1	16.917	112.917	1294.47	1594.08	1594.08
1	17.000	113.000	1196.88	1401.42	1401.42
1	17.083	113.083	1124.08	1267.20	1267.20
1	17.167	113.167	1060.41	1174.80	1174.80
1	17.250	113.250	1001.26	1102.79	1102.79
1	17.333	113.333	952.86	1039.77	1039.77
1	17.417	113.417	916.22	985.07	985.07
1	17.500	113.500	888.53	941.17	941.17
1	17.583	113.583	867.94	907.49	907.49
1	17.667	113.667	851.53	882.12	882.12
1	17.750	113.750	837.57	862.66	862.66
1	17.833	113.833	824.80	846.86	846.86
1	17.917	113.917	813.38	833.14	833.14
1	18.000	114.000	802.26	820.84	820.84
1	18.083	114.083	791.57	809.41	809.41
1	18.167	114.167	780.91	798.44	798.44
1	18.250	114.250	767.63	787.71	787.71
1	18.333	114.333	753.19	775.78	775.78
1	18.417	114.417	737.56	762.19	762.19
1	18.500	114.500	722.62	747.33	747.33
1	18.583	114.583	708.62	732.18	732.18
1	18.667	114.667	697.35	717.65	717.65
1	18.750	114.750	688.63	704.86	704.86
1	18.833	114.833	681.35	694.54	694.54
1	18.917	114.917	674.07	686.21	686.21
1	19.000	115.000	667.34	678.75	678.75
1	19.083	115.083	662.18	671.70	671.70
1	19.167	115.167	657.76	665.66	665.66
1	19.250	115.250	653.62	660.69	660.69
1	19.333	115.333	650.13	656.31	656.31
1	19.417	115.417	646.95	652.44	652.44
1	19.500	115.500	643.95	649.03	649.03
1	19.583	115.583	641.06	645.89	645.89
1	19.667	115.667	638.23	642.92	642.92
1	19.750	115.750	635.41	640.04	640.04
1	19.833	115.833	632.28	637.21	637.21
1	19.917	115.917	628.98	634.23	634.23
1	20.000	116.000	626.08	631.05	631.05
1	20.083	116.083	623.57	627.97	627.97
1	20.167	116.167	621.25	625.22	625.22
1	20.250	116.250	618.98	622.76	622.76
1	20.333	116.333	616.67	620.44	620.44
1	20.417	116.417	613.74	618.14	618.14
1	20.500	116.500	611.25	615.53	615.53
1	20.583	116.583	609.20	612.87	612.87
1	20.667	116.667	607.38	610.56	610.56
1	20.750	116.750	605.66	608.58	608.58
1	20.833	116.833	604.00	606.77	606.77
1	20.917	116.917	602.35	605.07	605.07
1	21.000	117.000	600.70	603.40	603.40
1	21.083	117.083	599.23	601.75	601.75
1	21.167	117.167	597.82	600.19	600.19
1	21.250	117.250	596.45	598.73	598.73
1	21.333	117.333	595.12	597.33	597.33
1	21.417	117.417	593.82	595.97	595.97
1	21.500	117.500	592.55	594.65	594.65
1	21.583	117.583	591.31	593.36	593.36
1	21.667	117.667	590.10	592.10	592.10
1	21.750	117.750	588.91	590.87	590.87
1	21.833	117.833	587.75	589.67	589.67
1	21.917	117.917	586.62	588.49	588.49
1	22.000	118.000	585.51	587.34	587.34

1	22.083	118.083	584.43	586.22	586.22
1	22.167	118.167	583.36	585.12	585.12
1	22.250	118.250	582.31	584.04	584.04
1	22.333	118.333	581.28	582.98	582.98
1	22.417	118.417	580.28	581.94	581.94
1	22.500	118.500	579.29	580.92	580.92
1	22.583	118.583	578.32	579.92	579.92
1	22.667	118.667	577.37	578.94	578.94
1	22.750	118.750	576.43	577.98	577.98
1	22.833	118.833	575.50	577.03	577.03
1	22.917	118.917	574.59	576.09	576.09
1	23.000	119.000	573.70	575.17	575.17
1	23.083	119.083	572.81	574.27	574.27
1	23.167	119.167	571.94	573.38	573.38
1	23.250	119.250	571.08	572.50	572.50
1	23.333	119.333	570.23	571.63	571.63
1	23.417	119.417	569.39	570.77	570.77
1	23.500	119.500	568.56	569.93	569.93
1	23.583	119.583	567.74	569.09	569.09
1	23.667	119.667	566.94	568.27	568.27
1	23.750	119.750	566.14	567.45	567.45
1	23.833	119.833	565.35	566.65	566.65
1	23.917	119.917	564.57	565.85	565.85
1	24.000	120.000	563.80	565.07	565.07
1	24.083	120.083	562.45	564.29	564.29
1	24.167	120.167	559.52	563.24	563.24
1	24.250	120.250	553.38	561.19	561.19
1	24.333	120.333	544.02	556.88	556.88
1	24.417	120.417	531.14	549.53	549.53
1	24.500	120.500	519.24	538.84	538.84
1	24.583	120.583	510.79	526.84	526.84
1	24.667	120.667	505.34	516.57	516.57
1	24.750	120.750	501.57	509.23	509.23
1	24.833	120.833	498.88	504.24	504.24
1	24.917	120.917	496.95	500.77	500.77
1	25.000	121.000	495.33	498.30	498.30
1	25.083	121.083	493.88	496.42	496.42
1	25.167	121.167	492.58	494.84	494.84
1	25.250	121.250	491.47	493.43	493.43
1	25.333	121.333	490.50	492.20	492.20
1	25.417	121.417	489.64	491.14	491.14
1	25.500	121.500	488.85	490.20	490.20
1	25.583	121.583	488.11	489.37	489.37
1	25.667	121.667	487.39	488.59	488.59
1	25.750	121.750	486.68	487.85	487.85
1	25.833	121.833	486.00	487.13	487.13
1	25.917	121.917	485.33	486.44	486.44
1	26.000	122.000	484.68	485.76	485.76
1	26.083	122.083	484.05	485.10	485.10
1	26.167	122.167	483.43	484.46	484.46
1	26.250	122.250	482.83	483.83	483.83
1	26.333	122.333	482.25	483.22	483.22
1	26.417	122.417	481.68	482.62	482.62
1	26.500	122.500	481.12	482.05	482.05
1	26.583	122.583	480.59	481.48	481.48
1	26.667	122.667	480.07	480.93	480.93
1	26.750	122.750	479.57	480.40	480.40
1	26.833	122.833	479.08	479.89	479.89
1	26.917	122.917	478.60	479.39	479.39
1	27.000	123.000	478.14	478.91	478.91
1	27.083	123.083	477.68	478.43	478.43
1	27.167	123.167	477.23	477.97	477.97
1	27.250	123.250	476.78	477.52	477.52
1	27.333	123.333	476.34	477.07	477.07
1	27.417	123.417	475.89	476.62	476.62
1	27.500	123.500	475.44	476.17	476.17
1	27.583	123.583	475.00	475.73	475.73
1	27.667	123.667	474.55	475.28	475.28

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  1   27.750 123.750       474.11      474.84      474.84
  1   27.833 123.833       473.67      474.39      474.39
  1   27.917 123.917       473.23      473.95      473.95
  1   28.000 124.000       472.80      473.51      473.51
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
================================================================================
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   2578.951 AF
    OUTFLOW VOLUME =   2578.949 AF
    LOSS    VOLUME =      0.000 AF
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6360.00 TO NODE   6371.00 IS CODE =   1
--------------------------------------------------------------------------------

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of   922.3 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
================================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #2)

        WATERSHED AREA =     922.300 ACRES
        BASEFLOW =   0.000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    0.250 HOURS
         CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
         THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
         MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
        VALLEY(DEVELOPED):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.900
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
        VALLEY(UNDEVELOPED)/DESERT:
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:
        +------------------+--------+--------+--------+--------+--------+
        | RAINFALL DEPTHS & |        |        |        |        |        |
        |    LOSS RATES     |  DAY 1 |  DAY 2 |  DAY 3 |  DAY 4 |  DAY 5 |
        |==================+========+========+========+========+========|
        | 5-MINUTE (INCHES) |    0.58|    0.27|    0.12|    0.06|    0.04|
        |30-MINUTE (INCHES) |    1.22|    0.56|    0.24|    0.13|    0.09|
        |   1-HOUR (INCHES) |    1.62|    0.75|    0.33|    0.17|    0.12|
        |   3-HOUR (INCHES) |    2.71|    1.25|    0.54|    0.28|    0.21|
        |   6-HOUR (INCHES) |    3.75|    1.73|    0.75|    0.39|    0.29|
        |  24-HOUR (INCHES) |    6.28|    2.89|    1.26|    0.66|    0.48|
        |==================+========+========+========+========+========|
        | LOSS RATE(IN/HR)  |   0.120|   0.120|   0.120|   0.120|   0.120|
        | LOW LOSS FRACTION |   0.510|   0.760|   0.950|   0.990|   0.990|
        +------------------+--------+--------+--------+--------+--------+
          5-MINUTE FACTOR = 0.959
         30-MINUTE FACTOR = 0.959
          1-HOUR FACTOR = 0.959
          3-HOUR FACTOR = 0.994
          6-HOUR FACTOR = 0.997
         24-HOUR FACTOR = 0.998

        UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
        UNIT INTERVAL PERCENTAGE OF LAG-TIME =  33.333


        RUNOFF HYDROGRAPH LISTING LIMITS:
        MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  96.00
        MODEL TIME(HOURS) FOR END OF RESULTS = 124.00
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                      UNIT HYDROGRAPH DETERMINATION

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    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------------
       1                2.292               255.704
       2               13.821              1285.900
       3               35.522              2420.567
       4               62.164              2971.648
       5               80.648              2061.668
       6               89.997              1042.866
       7               94.646               518.513
       8               96.625               220.790
       9               97.489                96.296
      10               98.211                80.598
      11               98.708                55.360
      12               99.005                33.223
      13               99.174                18.845
      14               99.253                 8.821
      15               99.326                 8.100
      16               99.394                 7.535
      17               99.458                 7.164
      18               99.518                 6.727
      19               99.574                 6.257
      20               99.626                 5.759
      21               99.675                 5.514
      22               99.718                 4.708
      23               99.759                 4.643
      24               99.799                 4.443
      25               99.827                 3.130
      26               99.851                 2.675
      27               99.875                 2.675
      28               99.897                 2.469
      29               99.906                 1.014
      30               99.913                 0.730
      31               99.919                 0.731
      32               99.926                 0.729
      33               99.932                 0.731
      34               99.939                 0.729
      35               99.946                 0.730
      36               99.952                 0.729
      37               99.959                 0.729
      38               99.965                 0.729
      39               99.972                 0.730
      40               99.978                 0.729
      41               99.985                 0.729
      42               99.991                 0.729
      43               99.998                 0.729
      44              100.000                 0.237


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    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =     433.5397
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =     453.8287
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5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	650.0	1300.0	1950.0	2600.0
96.000	126.4908	10.29	Q	.V	.	.	.
(PEAK DAY 2, HOUR 24.000)							
96.083	126.5666	11.01	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.083)							
96.167	126.6693	14.91	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.167)							
96.250	126.8231	22.33	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.250)							
96.333	127.0401	31.50	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.333)							
96.417	127.3012	37.92	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.417)							
96.500	127.5853	41.24	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.500)							
96.583	127.8812	42.97	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.583)							
96.667	128.1828	43.79	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.667)							
96.750	128.4874	44.23	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.750)							
96.833	128.7947	44.62	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.833)							
96.917	129.1042	44.94	Q	.V	.	.	.
(PEAK DAY 1, HOUR 0.917)							
97.000	129.4155	45.20	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.000)							
97.083	129.7283	45.41	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.083)							
97.167	130.0422	45.59	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.167)							
97.250	130.3575	45.77	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.250)							
97.333	130.6740	45.95	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.333)							
97.417	130.9917	46.14	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.417)							
97.500	131.3107	46.32	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.500)							
97.583	131.6310	46.50	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.583)							
97.667	131.9525	46.68	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.667)							
97.750	132.2753	46.87	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.750)							
97.833	132.5993	47.05	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.833)							
97.917	132.9246	47.23	Q	.V	.	.	.
(PEAK DAY 1, HOUR 1.917)							
98.000	133.2512	47.42	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.000)							
98.083	133.5791	47.60	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.083)							
98.167	133.9082	47.79	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.167)							
98.250	134.2386	47.97	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.250)							
98.333	134.5703	48.16	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.333)							
98.417	134.9032	48.34	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.417)							
98.500	135.2374	48.53	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.500)							
98.583	135.5729	48.71	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.583)							
98.667	135.9097	48.90	Q	.V	.	.	.
(PEAK DAY 1, HOUR 2.667)							
98.750	136.2478	49.09	Q	. V	.	.	.
(PEAK DAY 1, HOUR 2.750)							
98.833	136.5872	49.28	Q	. V	.	.	.
(PEAK DAY 1, HOUR 2.833)							
98.917	136.9279	49.48	Q	. V	.	.	.
(PEAK DAY 1, HOUR 2.917)							
99.000	137.2700	49.67	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.000)							
99.083	137.6135	49.87	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.083)							
99.167	137.9583	50.07	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.167)							
99.250	138.3045	50.27	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.250)							
99.333	138.6522	50.48	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.333)							
99.417	139.0012	50.68	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.417)							
99.500	139.3517	50.89	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.500)							
99.583	139.7036	51.10	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.583)							
99.667	140.0570	51.31	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.667)							
99.750	140.4118	51.52	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.750)							
99.833	140.7682	51.74	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.833)							
99.917	141.1260	51.95	Q	. V	.	.	.
(PEAK DAY 1, HOUR 3.917)							
100.000	141.4853	52.18	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.000)							
100.083	141.8462	52.40	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.083)							
100.167	142.2086	52.62	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.167)							
100.250	142.5726	52.85	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.250)							
100.333	142.9381	53.08	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.333)							
100.417	143.3053	53.31	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.417)							
100.500	143.6741	53.55	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.500)							
100.583	144.0445	53.78	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.583)							
100.667	144.4165	54.02	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.667)							
100.750	144.7903	54.27	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.750)							
100.833	145.1657	54.51	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.833)							
100.917	145.5429	54.76	Q	. V	.	.	.
(PEAK DAY 1, HOUR 4.917)							
101.000	145.9218	55.02	Q	. V	.	.	.
(PEAK DAY 1, HOUR 5.000)							
101.083	146.3024	55.27	Q	. V	.	.	.
(PEAK DAY 1, HOUR 5.083)							

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101.167    146.6848     55.53  Q          . V        .          .          .
(PEAK DAY 1, HOUR   5.167)
101.250    147.0691     55.79  Q          . V        .          .          .
(PEAK DAY 1, HOUR   5.250)
101.333    147.4551     56.05  Q          . V        .          .          .
(PEAK DAY 1, HOUR   5.333)
101.417    147.8430     56.32  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   5.417)
101.500    148.2327     56.59  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   5.500)
101.583    148.6244     56.87  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   5.583)
101.667    149.0179     57.14  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   5.667)
101.750    149.4134     57.42  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   5.750)
101.833    149.8109     57.71  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   5.833)
101.917    150.2103     58.00  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   5.917)
102.000    150.6118     58.29  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   6.000)
102.083    151.0152     58.59  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   6.083)
102.167    151.4208     58.89  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   6.167)
102.250    151.8285     59.19  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   6.250)
102.333    152.2383     59.50  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   6.333)
102.417    152.6502     59.81  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   6.417)
102.500    153.0643     60.13  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   6.500)
102.583    153.4807     60.45  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   6.583)
102.667    153.8993     60.78  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   6.667)
102.750    154.3201     61.11  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   6.750)
102.833    154.7433     61.45  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   6.833)
102.917    155.1688     61.78  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   6.917)
103.000    155.5967     62.13  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   7.000)
103.083    156.0270     62.48  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   7.083)
103.167    156.4598     62.84  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   7.167)
103.250    156.8950     63.19  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   7.250)
103.333    157.3327     63.56  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   7.333)
103.417    157.7730     63.93  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   7.417)
103.500    158.2159     64.31  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   7.500)
103.583    158.6615     64.69  Q          .  V       .          .          .
(PEAK DAY 1, HOUR   7.583)
103.667    159.1097     65.08  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   7.667)
103.750    159.5606     65.47  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   7.750)
103.833    160.0143     65.88  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   7.833)
103.917    160.4708     66.28  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   7.917)
104.000    160.9302     66.70  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   8.000)
104.083    161.3924     67.12  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   8.083)
104.167    161.8577     67.55  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   8.167)
104.250    162.3259     67.98  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   8.250)
104.333    162.7971     68.43  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   8.333)
104.417    163.2715     68.88  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   8.417)
104.500    163.7490     69.34  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   8.500)
104.583    164.2297     69.80  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   8.583)
104.667    164.7137     70.28  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   8.667)
104.750    165.2010     70.76  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   8.750)
104.833    165.6917     71.25  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   8.833)
104.917    166.1859     71.75  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   8.917)
105.000    166.6836     72.26  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   9.000)
105.083    167.1848     72.78  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   9.083)
105.167    167.6897     73.31  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   9.167)
105.250    168.1983     73.85  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   9.250)
105.333    168.7106     74.40  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   9.333)
105.417    169.2269     74.96  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   9.417)
105.500    169.7471     75.53  .Q         .   V      .          .          .
(PEAK DAY 1, HOUR   9.500)
105.583    170.2712     76.11  .Q         .    V     .          .          .
(PEAK DAY 1, HOUR   9.583)
105.667    170.7995     76.71  .Q         .    V     .          .          .
(PEAK DAY 1, HOUR   9.667)
105.750    171.3320     77.31  .Q         .    V     .          .          .
(PEAK DAY 1, HOUR   9.750)
105.833    171.8687     77.93  .Q         .    V     .          .          .
(PEAK DAY 1, HOUR   9.833)
105.917    172.4097     78.56  .Q         .    V     .          .          .
(PEAK DAY 1, HOUR   9.917)
106.000    172.9553     79.21  .Q         .    V     .          .          .
(PEAK DAY 1, HOUR  10.000)
106.083    173.5053     79.87  .Q         .    V     .          .          .
(PEAK DAY 1, HOUR  10.083)
106.167    174.0600     80.55  .Q         .    V     .          .          .
(PEAK DAY 1, HOUR  10.167)
106.250    174.6195     81.23  .Q         .    V     .          .          .
(PEAK DAY 1, HOUR  10.250)
106.333    175.1838     81.94  .Q         .    V     .          .          .
(PEAK DAY 1, HOUR  10.333)
106.417    175.7531     82.66  .Q         .    V     .          .          .
(PEAK DAY 1, HOUR  10.417)
106.500    176.3275     83.40  .Q         .    V     .          .          .
(PEAK DAY 1, HOUR  10.500)
106.583    176.9070     84.15  .Q         .    V     .          .          .
(PEAK DAY 1, HOUR  10.583)
106.667    177.4919     84.93  .Q         .    V     .          .          .
(PEAK DAY 1, HOUR  10.667)
106.750    178.0822     85.71  .Q         .    V     .          .          .
(PEAK DAY 1, HOUR  10.750)
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106.833    178.6782     86.53  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.833)
106.917    179.2798     87.36  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.917)
107.000    179.8873     88.21  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  11.000)
107.083    180.5009     89.08  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  11.083)
107.167    181.1206     89.99  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  11.167)
107.250    181.7466     90.90  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.250)
107.333    182.3792     91.85  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.333)
107.417    183.0185     92.82  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.417)
107.500    183.6647     93.83  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.500)
107.583    184.3179     94.85  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.583)
107.667    184.9784     95.91  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.667)
107.750    185.6464     96.99  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.750)
107.833    186.3222     98.12  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.833)
107.917    187.0058     99.27  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.917)
108.000    187.6978    100.47  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  12.000)
108.083    188.4071    103.00  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  12.083)
108.167    189.1709    110.90  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  12.167)
108.250    190.0303    124.79  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  12.250)
108.333    191.0077    141.92  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.333)
108.417    192.0742    154.86  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.417)
108.500    193.1971    163.04  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.500)
108.583    194.3594    168.77  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.583)
108.667    195.5523    173.20  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.667)
108.750    196.7720    177.11  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.750)
108.833    198.0194    181.12  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.833)
108.917    199.2942    185.10  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.917)
109.000    200.5969    189.16  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  13.000)
109.083    201.9279    193.26  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  13.083)
109.167    203.2883    197.53  .  Q      .      V  .         .         .
(PEAK DAY 1, HOUR  13.167)
109.250    204.6788    201.90  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.250)
109.333    206.1012    206.52  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.333)
109.417    207.5563    211.28  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.417)
109.500    209.0460    216.31  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.500)
109.583    210.5715    221.50  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.583)
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109.667    212.1349    227.01  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.667)
109.750    213.7376    232.71  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.750)
109.833    215.3821    238.78  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.833)
109.917    217.0699    245.07  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  13.917)
110.000    218.8041    251.80  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  14.000)
110.083    220.5902    259.34  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  14.083)
110.167    222.4465    269.54  .   Q     .        V.         .         .
(PEAK DAY 1, HOUR  14.167)
110.250    224.3919    282.46  .   Q     .        V.         .         .
(PEAK DAY 1, HOUR  14.250)
110.333    226.4383    297.14  .   Q     .        V.         .         .
(PEAK DAY 1, HOUR  14.333)
110.417    228.5758    310.36  .   Q     .         V         .         .
(PEAK DAY 1, HOUR  14.417)
110.500    230.7948    322.20  .   Q     .         V         .         .
(PEAK DAY 1, HOUR  14.500)
110.583    233.0915    333.49  .    Q    .         V         .         .
(PEAK DAY 1, HOUR  14.583)
110.667    235.4680    345.08  .    Q    .         V         .         .
(PEAK DAY 1, HOUR  14.667)
110.750    237.9275    357.12  .    Q    .         V         .         .
(PEAK DAY 1, HOUR  14.750)
110.833    240.4778    370.30  .    Q    .         .V        .         .
(PEAK DAY 1, HOUR  14.833)
110.917    243.1250    384.38  .    Q    .         .V        .         .
(PEAK DAY 1, HOUR  14.917)
111.000    245.8795    399.94  .     Q   .         .V        .         .
(PEAK DAY 1, HOUR  15.000)
111.083    248.7500    416.80  .     Q   .         .V        .         .
(PEAK DAY 1, HOUR  15.083)
111.167    251.7508    435.72  .     Q   .         . V       .         .
(PEAK DAY 1, HOUR  15.167)
111.250    254.8950    456.54  .      Q  .         . V       .         .
(PEAK DAY 1, HOUR  15.250)
111.333    258.2032    480.36  .      Q  .         . V       .         .
(PEAK DAY 1, HOUR  15.333)
111.417    261.6745    504.03  .      Q  .         .  V      .         .
(PEAK DAY 1, HOUR  15.417)
111.500    265.2556    519.98  .      Q  .         .  V      .         .
(PEAK DAY 1, HOUR  15.500)
111.583    268.8864    527.19  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  15.583)
111.667    272.5746    535.52  .       Q .         .   V     .         .
(PEAK DAY 1, HOUR  15.667)
111.750    276.4615    564.39  .       Q .         .   V     .         .
(PEAK DAY 1, HOUR  15.750)
111.833    280.7536    623.20  .        Q.         .   V     .         .
(PEAK DAY 1, HOUR  15.833)
111.917    285.6821    715.63  .         .Q        .    V    .         .
(PEAK DAY 1, HOUR  15.917)
112.000    291.6738    869.99  .          . Q      .    V    .         .
(PEAK DAY 1, HOUR  16.000)
112.083    299.9257   1198.18  .          .       Q .     V   .         .
(PEAK DAY 1, HOUR  16.083)
112.167    312.6125   1842.12  .          .         .      VQ .         .
(PEAK DAY 1, HOUR  16.167)
112.250    329.2037   2409.04  .          .         .        V.      Q  .
(PEAK DAY 1, HOUR  16.250)
112.333    346.6870   2538.58  .          .         .         V        Q.
(PEAK DAY 1, HOUR  16.333)
112.417    360.1437   1953.91  .          .         .         QV       .
(PEAK DAY 1, HOUR  16.417)
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112.500    369.2429   1321.20  .          .          Q          . V        .
(PEAK DAY 1, HOUR  16.500)
112.583    375.7551    945.57  .          .   Q      .          .  V       .
(PEAK DAY 1, HOUR  16.583)
112.667    380.7361    723.23  .          .Q         .          .  V       .
(PEAK DAY 1, HOUR  16.667)
112.750    384.8868    602.69  .        Q.           .          .  V       .
(PEAK DAY 1, HOUR  16.750)
112.833    388.6063    540.07  .       Q .           .          .   V      .
(PEAK DAY 1, HOUR  16.833)
112.917    391.9329    483.02  .      Q  .           .          .   V      .
(PEAK DAY 1, HOUR  16.917)
113.000    394.9217    433.96  .     Q   .           .          .   V      .
(PEAK DAY 1, HOUR  17.000)
113.083    397.6353    394.02  .     Q   .           .          .    V     .
(PEAK DAY 1, HOUR  17.083)
113.167    400.1144    359.97  .    Q    .           .          .    V     .
(PEAK DAY 1, HOUR  17.167)
113.250    402.3992    331.75  .    Q    .           .          .    V     .
(PEAK DAY 1, HOUR  17.250)
113.333    404.5044    305.67  .   Q     .           .          .    V     .
(PEAK DAY 1, HOUR  17.333)
113.417    406.4601    283.98  .   Q     .           .          .    V     .
(PEAK DAY 1, HOUR  17.417)
113.500    408.2940    266.28  .   Q     .           .          .    V     .
(PEAK DAY 1, HOUR  17.500)
113.583    410.0247    251.30  .  Q      .           .          .     V    .
(PEAK DAY 1, HOUR  17.583)
113.667    411.6657    238.27  .  Q      .           .          .     V    .
(PEAK DAY 1, HOUR  17.667)
113.750    413.2271    226.73  .  Q      .           .          .     V    .
(PEAK DAY 1, HOUR  17.750)
113.833    414.7146    215.98  .  Q      .           .          .     V    .
(PEAK DAY 1, HOUR  17.833)
113.917    416.1360    206.38  .  Q      .           .          .     V    .
(PEAK DAY 1, HOUR  17.917)
114.000    417.4958    197.44  .  Q      .           .          .     V    .
(PEAK DAY 1, HOUR  18.000)
114.083    418.7867    187.45  . Q       .           .          .     V    .
(PEAK DAY 1, HOUR  18.083)
114.167    419.9803    173.31  . Q       .           .          .      V   .
(PEAK DAY 1, HOUR  18.167)
114.250    421.0444    154.50  . Q       .           .          .      V   .
(PEAK DAY 1, HOUR  18.250)
114.333    421.9666    133.89  . Q       .           .          .      V   .
(PEAK DAY 1, HOUR  18.333)
114.417    422.7832    118.57  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  18.417)
114.500    423.5391    109.76  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  18.500)
114.583    424.2572    104.27  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  18.583)
114.667    424.9502    100.61  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  18.667)
114.750    425.6237     97.79  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  18.750)
114.833    426.2794     95.21  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  18.833)
114.917    426.9191     92.90  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  18.917)
115.000    427.5446     90.82  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.000)
115.083    428.1571     88.93  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.083)
115.167    428.7575     87.18  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.167)
115.250    429.3465     85.52  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.250)
115.333    429.9244     83.92  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.333)
115.417    430.4919     82.39  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.417)
115.500    431.0491     80.91  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.500)
115.583    431.5964     79.46  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  19.583)
115.667    432.1327     77.87  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  19.667)
115.750    432.6594     76.47  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  19.750)
115.833    433.1776     75.24  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  19.833)
115.917    433.6878     74.08  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  19.917)
116.000    434.1903     72.96  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.000)
116.083    434.6854     71.89  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.083)
116.167    435.1735     70.87  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.167)
116.250    435.6548     69.88  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.250)
116.333    436.1295     68.93  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.333)
116.417    436.5980     68.02  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.417)
116.500    437.0605     67.15  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.500)
116.583    437.5171     66.30  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.583)
116.667    437.9680     65.48  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.667)
116.750    438.4135     64.69  Q         .           .          .       V  .
(PEAK DAY 1, HOUR  20.750)
116.833    438.8538     63.92  Q         .           .          .       V  .
(PEAK DAY 1, HOUR  20.833)
116.917    439.2888     63.18  Q         .           .          .       V  .
(PEAK DAY 1, HOUR  20.917)
117.000    439.7190     62.45  Q         .           .          .       V  .
(PEAK DAY 1, HOUR  21.000)
117.083    440.1443     61.75  Q         .           .          .       V  .
(PEAK DAY 1, HOUR  21.083)
117.167    440.5648     61.07  Q         .           .          .       V  .
(PEAK DAY 1, HOUR  21.167)
117.250    440.9809     60.41  Q         .           .          .       V  .
(PEAK DAY 1, HOUR  21.250)
117.333    441.3925     59.77  Q         .           .          .       V  .
(PEAK DAY 1, HOUR  21.333)
117.417    441.7998     59.14  Q         .           .          .       V  .
(PEAK DAY 1, HOUR  21.417)
117.500    442.2029     58.53  Q         .           .          .       V  .
(PEAK DAY 1, HOUR  21.500)
117.583    442.6020     57.94  Q         .           .          .        V.
(PEAK DAY 1, HOUR  21.583)
117.667    442.9971     57.37  Q         .           .          .        V.
(PEAK DAY 1, HOUR  21.667)
117.750    443.3883     56.81  Q         .           .          .        V.
(PEAK DAY 1, HOUR  21.750)
117.833    443.7758     56.26  Q         .           .          .        V.
(PEAK DAY 1, HOUR  21.833)
117.917    444.1596     55.73  Q         .           .          .        V.
(PEAK DAY 1, HOUR  21.917)
118.000    444.5399     55.21  Q         .           .          .        V.
(PEAK DAY 1, HOUR  22.000)
118.083    444.9166     54.71  Q         .           .          .        V.
(PEAK DAY 1, HOUR  22.083)
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 118.167    445.2900     54.21  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  22.167)
 118.250    445.6600     53.73  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  22.250)
 118.333    446.0268     53.26  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  22.333)
 118.417    446.3904     52.79  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  22.417)
 118.500    446.7509     52.34  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  22.500)
 118.583    447.1083     51.90  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  22.583)
 118.667    447.4628     51.47  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  22.667)
 118.750    447.8144     51.05  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  22.750)
 118.833    448.1631     50.64  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  22.833)
 118.917    448.5091     50.23  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  22.917)
 119.000    448.8523     49.83  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  23.000)
 119.083    449.1928     49.45  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  23.083)
 119.167    449.5307     49.06  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  23.167)
 119.250    449.8661     48.69  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  23.250)
 119.333    450.1989     48.33  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  23.333)
 119.417    450.5292     47.97  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  23.417)
 119.500    450.8572     47.62  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  23.500)
 119.583    451.1827     47.27  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  23.583)
 119.667    451.5060     46.93  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  23.667)
 119.750    451.8269     46.60  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  23.750)
 119.833    452.1455     46.27  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  23.833)
 119.917    452.4620     45.95  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  23.917)
 120.000    452.7763     45.64  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  24.000)
 120.083    453.0815     44.31  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  24.083)
 120.167    453.3494     38.91  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  24.167)
 120.250    453.5494     29.03  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  24.250)
 120.333    453.6667     17.04  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  24.333)
 120.417    453.7269      8.73  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  24.417)
 120.500    453.7581      4.53  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  24.500)
 120.583    453.7749      2.44  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  24.583)
 120.667    453.7856      1.55  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  24.667)
 120.750    453.7936      1.16  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  24.750)
 120.833    453.7993      0.83  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  24.833)
 120.917    453.8034      0.60  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  24.917)
 121.000    453.8066      0.47  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  25.000)
 121.083    453.8093      0.39  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  25.083)
 121.167    453.8117      0.35  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  25.167)
 121.250    453.8139      0.32  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  25.250)
 121.333    453.8159      0.28  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  25.333)
 121.417    453.8176      0.25  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  25.417)
 121.500    453.8192      0.23  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  25.500)
 121.583    453.8205      0.20  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  25.583)
 121.667    453.8217      0.17  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  25.667)
 121.750    453.8228      0.15  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  25.750)
 121.833    453.8237      0.13  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  25.833)
 121.917    453.8244      0.11  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  25.917)
 122.000    453.8251      0.09  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  26.000)
 122.083    453.8256      0.08  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  26.083)
 122.167    453.8261      0.07  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  26.167)
 122.250    453.8265      0.06  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  26.250)
 122.333    453.8268      0.05  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  26.333)
 122.417    453.8271      0.04  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  26.417)
 122.500    453.8274      0.04  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  26.500)
 122.583    453.8277      0.04  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  26.583)
 122.667    453.8279      0.03  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  26.667)
 122.750    453.8281      0.03  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  26.750)
 122.833    453.8283      0.03  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  26.833)
 122.917    453.8285      0.02  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  26.917)
 123.000    453.8286      0.02  Q          .          .          .          V.
 (PEAK DAY 1, HOUR  27.000)
 123.083    453.8288      0.02  Q          .          .          .           V
 (PEAK DAY 1, HOUR  27.083)
 123.167    453.8289      0.02  Q          .          .          .           V
 (PEAK DAY 1, HOUR  27.167)
 123.250    453.8290      0.01  Q          .          .          .           V
 (PEAK DAY 1, HOUR  27.250)
 123.333    453.8290      0.01  Q          .          .          .           V
 (PEAK DAY 1, HOUR  27.333)
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********************************************************************************
  FLOW PROCESS FROM NODE   6371.00 TO NODE   6371.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================

        *** Note: This link/process output is based on its ***
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        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  6961.5 Ac. ***
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6371.00 TO NODE   6371.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================

        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of  6961.5 Ac. ***

           STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
       (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.     1150.0    2300.0    3450.0    4600.0
--------------------------------------------------------------------------------
  96.000    735.6683    328.03  . Q      V.          .         .         .
 (PEAK DAY 2, HOUR  24.000)
  96.083    737.9222    327.26  . Q      V.          .         .         .
 (PEAK DAY 1, HOUR   0.083)
  96.167    740.1942    329.90  . Q      V.          .         .         .
 (PEAK DAY 1, HOUR   0.167)
  96.250    742.5139    336.82  . Q      V.          .         .         .
 (PEAK DAY 1, HOUR   0.250)
  96.333    744.9049    347.18  .  Q     V.          .         .         .
 (PEAK DAY 1, HOUR   0.333)
  96.417    747.3643    357.10  .  Q     V.          .         .         .
 (PEAK DAY 1, HOUR   0.417)
  96.500    749.8882    366.48  .  Q     V.          .         .         .
 (PEAK DAY 1, HOUR   0.500)
  96.583    752.4734    375.36  .  Q     V.          .         .         .
 (PEAK DAY 1, HOUR   0.583)
  96.667    755.1055    382.19  .  Q     V.          .         .         .
 (PEAK DAY 1, HOUR   0.667)
  96.750    757.7681    386.60  .  Q     V.          .         .         .
 (PEAK DAY 1, HOUR   0.750)
  96.833    760.4495    389.34  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   0.833)
  96.917    763.1423    391.00  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   0.917)
  97.000    765.8419    391.98  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   1.000)
  97.083    768.5457    392.59  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   1.083)
  97.167    771.2527    393.06  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   1.167)
  97.250    773.9625    393.46  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   1.250)
  97.333    776.6746    393.80  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   1.333)
  97.417    779.3885    394.06  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   1.417)
  97.500    782.1039    394.27  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   1.500)
  97.583    784.8205    394.45  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   1.583)
  97.667    787.5383    394.63  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   1.667)
  97.750    790.2574    394.81  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   1.750)
  97.833    792.9778    395.00  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   1.833)
  97.917    795.6995    395.19  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   1.917)
  98.000    798.4223    395.35  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   2.000)
  98.083    801.1459    395.47  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   2.083)
  98.167    803.8701    395.54  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   2.167)
  98.250    806.5946    395.61  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   2.250)
  98.333    809.3196    395.67  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   2.333)
  98.417    812.0450    395.73  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   2.417)
  98.500    814.7709    395.80  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   2.500)
  98.583    817.4973    395.88  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   2.583)
  98.667    820.2244    395.97  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   2.667)
  98.750    822.9520    396.06  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   2.750)
  98.833    825.6804    396.15  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   2.833)
  98.917    828.4094    396.26  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   2.917)
  99.000    831.1393    396.37  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   3.000)
  99.083    833.8699    396.49  .  Q      V          .         .         .
 (PEAK DAY 1, HOUR   3.083)
  99.167    836.6015    396.62  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   3.167)
  99.250    839.3340    396.77  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   3.250)
  99.333    842.0677    396.92  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   3.333)
  99.417    844.8025    397.10  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   3.417)
  99.500    847.5386    397.29  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   3.500)
  99.583    850.2762    397.49  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   3.583)
  99.667    853.0153    397.72  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   3.667)
  99.750    855.7560    397.96  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   3.750)
  99.833    858.4985    398.21  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   3.833)
  99.917    861.2429    398.49  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   3.917)
 100.000    863.9893    398.77  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   4.000)
 100.083    866.7377    399.08  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   4.083)
 100.167    869.4884    399.40  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   4.167)
 100.250    872.2413    399.73  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   4.250)
 100.333    874.9967    400.08  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   4.333)
 100.417    877.7546    400.45  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   4.417)
 100.500    880.5153    400.84  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   4.500)
 100.583    883.2786    401.23  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   4.583)
 100.667    886.0447    401.65  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   4.667)
 100.750    888.8138    402.08  .  Q      .V         .         .         .
 (PEAK DAY 1, HOUR   4.750)
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100.833	891.5861	402.52	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	4.833)								
100.917	894.3615	402.99	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	4.917)								
101.000	897.1401	403.47	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	5.000)								
101.083	899.9223	403.97	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	5.083)								
101.167	902.7080	404.48	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	5.167)								
101.250	905.4974	405.02	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	5.250)								
101.333	908.2906	405.57	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	5.333)								
101.417	911.0877	406.14	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.417)								
101.500	913.8889	406.73	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.500)								
101.583	916.6942	407.34	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.583)								
101.667	919.5039	407.96	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.667)								
101.750	922.3180	408.61	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.750)								
101.833	925.1367	409.28	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.833)								
101.917	927.9601	409.96	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.917)								
102.000	930.7885	410.67	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.000)								
102.083	933.6217	411.39	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.083)								
102.167	936.4601	412.14	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.167)								
102.250	939.3038	412.90	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.250)								
102.333	942.1530	413.69	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.333)								
102.417	945.0076	414.50	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.417)								
102.500	947.8680	415.33	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.500)								
102.583	950.7343	416.18	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.583)								
102.667	953.6066	417.06	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.667)								
102.750	956.4850	417.95	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.750)								
102.833	959.3698	418.87	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.833)								
102.917	962.2610	419.81	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.917)								
103.000	965.1589	420.77	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.000)								
103.083	968.0636	421.76	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.083)								
103.167	970.9753	422.77	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.167)								
103.250	973.8940	423.80	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.250)								
103.333	976.8201	424.87	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.333)								
103.417	979.7537	425.95	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.417)								
103.500	982.6949	427.06	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.500)								
103.583	985.6439	428.20	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.583)								
103.667	988.6009	429.36	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.667)								
103.750	991.5661	430.55	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.750)								
103.833	994.5397	431.77	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.833)								
103.917	997.5218	433.01	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.917)								
104.000	1000.5127	434.28	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.000)								
104.083	1003.5126	435.58	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.083)								
104.167	1006.5216	436.91	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.167)								
104.250	1009.5400	438.27	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.250)								
104.333	1012.5679	439.66	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.333)								
104.417	1015.6057	441.08	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.417)								
104.500	1018.6534	442.53	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.500)								
104.583	1021.7113	444.01	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.583)								
104.667	1024.7797	445.53	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.667)								
104.750	1027.8588	447.08	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.750)								
104.833	1030.9487	448.67	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.833)								
104.917	1034.0499	450.29	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.917)								
105.000	1037.1625	451.95	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.000)								
105.083	1040.2866	453.63	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.083)								
105.167	1043.4227	455.37	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.167)								
105.250	1046.5710	457.13	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.250)								
105.333	1049.7318	458.94	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.333)								
105.417	1052.9053	460.79	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.417)								
105.500	1056.0918	462.68	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.500)								
105.583	1059.2915	464.60	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.583)								
105.667	1062.5049	466.58	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.667)								
105.750	1065.7322	468.60	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.750)								
105.833	1068.9736	470.66	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.833)								
105.917	1072.2294	472.73	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.917)								
106.000	1075.4994	474.80	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	10.000)								
106.083	1078.7836	476.86	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	10.083)								
106.167	1082.0820	478.93	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	10.167)								
106.250	1085.3949	481.03	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	10.250)								
106.333	1088.7225	483.18	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	10.333)								
106.417	1092.0652	485.36	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	10.417)								

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 106.500   1095.4233    487.61  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.500)
 106.583   1098.7972    489.89  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.583)
 106.667   1102.1874    492.25  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.667)
 106.750   1105.5940    494.65  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.750)
 106.833   1109.0177    497.12  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.833)
 106.917   1112.4587    499.64  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  10.917)
 107.000   1115.9177    502.24  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  11.000)
 107.083   1119.3949    504.89  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  11.083)
 107.167   1122.8909    507.62  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  11.167)
 107.250   1126.4061    510.41  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  11.250)
 107.333   1129.9412    513.28  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  11.333)
 107.417   1133.4965    516.22  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  11.417)
 107.500   1137.0726    519.25  .   Q     .   V     .         .         .
(PEAK DAY 1, HOUR  11.500)
 107.583   1140.6700    522.35  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.583)
 107.667   1144.2896    525.55  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.667)
 107.750   1147.9316    528.83  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.750)
 107.833   1151.5970    532.21  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.833)
 107.917   1155.2863    535.68  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  11.917)
 108.000   1159.0001    539.26  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  12.000)
 108.083   1162.7483    544.24  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  12.083)
 108.167   1166.5695    554.84  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  12.167)
 108.250   1170.5099    572.15  .   Q     .    V    .         .         .
(PEAK DAY 1, HOUR  12.250)
 108.333   1174.6024    594.23  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  12.333)
 108.417   1178.8322    614.16  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  12.417)
 108.500   1183.1818    631.57  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  12.500)
 108.583   1187.6412    647.51  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  12.583)
 108.667   1192.1952    661.24  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  12.667)
 108.750   1196.8286    672.77  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  12.750)
 108.833   1201.5333    683.12  .    Q    .    V    .         .         .
(PEAK DAY 1, HOUR  12.833)
 108.917   1206.3038    692.67  .     Q   .    V    .         .         .
(PEAK DAY 1, HOUR  12.917)
 109.000   1211.1378    701.90  .     Q   .    V    .         .         .
(PEAK DAY 1, HOUR  13.000)
 109.083   1216.0345    711.00  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  13.083)
 109.167   1220.9954    720.30  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  13.167)
 109.250   1226.0214    729.78  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  13.250)
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 109.333   1231.1145    739.52  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  13.333)
 109.417   1236.2758    749.41  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  13.417)
 109.500   1241.5072    759.61  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  13.500)
 109.583   1246.8107    770.06  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  13.583)
 109.667   1252.1893    780.98  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  13.667)
 109.750   1257.6456    792.26  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  13.750)
 109.833   1263.1836    804.12  .     Q   .     V   .         .         .
(PEAK DAY 1, HOUR  13.833)
 109.917   1268.8064    816.43  .      Q  .     V   .         .         .
(PEAK DAY 1, HOUR  13.917)
 110.000   1274.5187    829.43  .      Q  .     V   .         .         .
(PEAK DAY 1, HOUR  14.000)
 110.083   1280.3280    843.51  .      Q  .     V   .         .         .
(PEAK DAY 1, HOUR  14.083)
 110.167   1286.2550    860.61  .      Q  .     V   .         .         .
(PEAK DAY 1, HOUR  14.167)
 110.250   1292.3221    880.95  .      Q  .      V  .         .         .
(PEAK DAY 1, HOUR  14.250)
 110.333   1298.5469    903.83  .      Q  .      V  .         .         .
(PEAK DAY 1, HOUR  14.333)
 110.417   1304.9248    926.08  .       Q .      V  .         .         .
(PEAK DAY 1, HOUR  14.417)
 110.500   1311.4521    947.78  .       Q .      V  .         .         .
(PEAK DAY 1, HOUR  14.500)
 110.583   1318.1289    969.47  .       Q .      V  .         .         .
(PEAK DAY 1, HOUR  14.583)
 110.667   1324.9597    991.84  .       Q .      V  .         .         .
(PEAK DAY 1, HOUR  14.667)
 110.750   1331.9517   1015.23  .       Q .      V  .         .         .
(PEAK DAY 1, HOUR  14.750)
 110.833   1339.1196   1040.79  .        Q.      V  .         .         .
(PEAK DAY 1, HOUR  14.833)
 110.917   1346.4780   1068.45  .        Q.      V  .         .         .
(PEAK DAY 1, HOUR  14.917)
 111.000   1354.0468   1098.98  .        Q.      V  .         .         .
(PEAK DAY 1, HOUR  15.000)
 111.083   1361.8451   1132.31  .        Q.      V  .         .         .
(PEAK DAY 1, HOUR  15.083)
 111.167   1369.9000   1169.58  .         Q       V .         .         .
(PEAK DAY 1, HOUR  15.167)
 111.250   1378.2396   1210.92  .         Q       V .         .         .
(PEAK DAY 1, HOUR  15.250)
 111.333   1386.9027   1257.88  .         Q       V .         .         .
(PEAK DAY 1, HOUR  15.333)
 111.417   1395.9080   1307.57  .         .Q      V .         .         .
(PEAK DAY 1, HOUR  15.417)
 111.500   1405.2205   1352.18  .         .Q      V .         .         .
(PEAK DAY 1, HOUR  15.500)
 111.583   1414.7886   1389.30  .         . Q     V .         .         .
(PEAK DAY 1, HOUR  15.583)
 111.667   1424.6145   1426.72  .         . Q     V .         .         .
(PEAK DAY 1, HOUR  15.667)
 111.750   1434.8292   1483.18  .         . Q     V .         .         .
(PEAK DAY 1, HOUR  15.750)
 111.833   1445.6390   1569.59  .         .  Q     V.         .         .
(PEAK DAY 1, HOUR  15.833)
 111.917   1457.3267   1697.05  .         .   Q    V.         .         .
(PEAK DAY 1, HOUR  15.917)
 112.000   1470.4601   1906.97  .         .     Q  V.         .         .
(PEAK DAY 1, HOUR  16.000)
 112.083   1486.4692   2324.53  .         .        VQ         .         .
(PEAK DAY 1, HOUR  16.083)
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 112.167   1508.0259   3130.02  .          .        V.      Q  .          .
(PEAK DAY 1, HOUR  16.167)
 112.250   1535.3987   3974.52  .          .        V          .   Q      .
(PEAK DAY 1, HOUR  16.250)
 112.333   1566.5618   4524.87  .          .        V          .        Q.
(PEAK DAY 1, HOUR  16.333)
 112.417   1596.9734   4415.77  .          .        .V         .       Q .
(PEAK DAY 1, HOUR  16.417)
 112.500   1625.8770   4196.80  .          .        .V         .     Q   .
(PEAK DAY 1, HOUR  16.500)
 112.583   1652.8608   3918.06  .          .        .V         .   Q     .
(PEAK DAY 1, HOUR  16.583)
 112.667   1676.2968   3402.89  .          .        . V      Q.          .
(PEAK DAY 1, HOUR  16.667)
 112.750   1695.8585   2840.37  .          .        . V Q      .         .
(PEAK DAY 1, HOUR  16.750)
 112.833   1712.3983   2401.58  .          .        Q V        .         .
(PEAK DAY 1, HOUR  16.833)
 112.917   1726.7034   2077.10  .          .       Q . V       .         .
(PEAK DAY 1, HOUR  16.917)
 113.000   1739.3438   1835.38  .          .    Q    . V       .         .
(PEAK DAY 1, HOUR  17.000)
 113.083   1750.7847   1661.22  .          .   Q      . V       .         .
(PEAK DAY 1, HOUR  17.083)
 113.167   1761.3547   1534.77  .          .  Q       . V       .         .
(PEAK DAY 1, HOUR  17.167)
 113.250   1771.2345   1434.55  .          . Q        . V       .         .
(PEAK DAY 1, HOUR  17.250)
 113.333   1780.5006   1345.43  .          .Q         . V       .         .
(PEAK DAY 1, HOUR  17.333)
 113.417   1789.2406   1269.05  .          .Q         . V       .         .
(PEAK DAY 1, HOUR  17.417)
 113.500   1797.5564   1207.45  .          Q          . V       .         .
(PEAK DAY 1, HOUR  17.500)
 113.583   1805.5370   1158.79  .          Q          . V       .         .
(PEAK DAY 1, HOUR  17.583)
 113.667   1813.2532   1120.38  .        Q.           . V       .         .
(PEAK DAY 1, HOUR  17.667)
 113.750   1820.7559   1089.38  .        Q.           .   V     .         .
(PEAK DAY 1, HOUR  17.750)
 113.833   1828.0757   1062.84  .        Q.           .   V     .         .
(PEAK DAY 1, HOUR  17.833)
 113.917   1835.2349   1039.52  .        Q.           .   V     .         .
(PEAK DAY 1, HOUR  17.917)
 114.000   1842.2479   1018.29  .       Q .           .   V     .         .
(PEAK DAY 1, HOUR  18.000)
 114.083   1849.1133    996.85  .       Q .           .   V     .         .
(PEAK DAY 1, HOUR  18.083)
 114.167   1855.8058    971.75  .       Q .           .   V     .         .
(PEAK DAY 1, HOUR  18.167)
 114.250   1862.2948    942.21  .       Q .           .   V     .         .
(PEAK DAY 1, HOUR  18.250)
 114.333   1868.5598    909.67  .      Q  .           .   V     .         .
(PEAK DAY 1, HOUR  18.333)
 114.417   1874.6256    880.76  .      Q  .           .   V     .         .
(PEAK DAY 1, HOUR  18.417)
 114.500   1880.5284    857.10  .      Q  .           .   V     .         .
(PEAK DAY 1, HOUR  18.500)
 114.583   1886.2891    836.45  .      Q  .           .   V     .         .
(PEAK DAY 1, HOUR  18.583)
 114.667   1891.9244    818.26  .      Q  .           .   V     .         .
(PEAK DAY 1, HOUR  18.667)
 114.750   1897.4524    802.65  .     Q   .           .    V    .         .
(PEAK DAY 1, HOUR  18.750)
 114.833   1902.8914    789.74  .     Q   .           .    V    .         .
(PEAK DAY 1, HOUR  18.833)
 114.917   1908.2571    779.11  .     Q   .           .    V    .         .
(PEAK DAY 1, HOUR  18.917)
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 115.000   1913.5571    769.57  .     Q   .           .    V    .         .
(PEAK DAY 1, HOUR  19.000)
 115.083   1918.7957    760.63  .     Q   .           .    V    .         .
(PEAK DAY 1, HOUR  19.083)
 115.167   1923.9805    752.84  .     Q   .           .    V    .         .
(PEAK DAY 1, HOUR  19.167)
 115.250   1929.1196    746.21  .     Q   .           .    V    .         .
(PEAK DAY 1, HOUR  19.250)
 115.333   1934.2177    740.23  .     Q   .           .    V    .         .
(PEAK DAY 1, HOUR  19.333)
 115.417   1939.2784    734.83  .     Q   .           .    V    .         .
(PEAK DAY 1, HOUR  19.417)
 115.500   1944.3055    729.94  .     Q   .           .    V    .         .
(PEAK DAY 1, HOUR  19.500)
 115.583   1949.3010    725.35  .     Q   .           .    V    .         .
(PEAK DAY 1, HOUR  19.583)
 115.667   1954.2651    720.79  .     Q   .           .    V    .         .
(PEAK DAY 1, HOUR  19.667)
 115.750   1959.1998    716.51  .     Q   .           .    V    .         .
(PEAK DAY 1, HOUR  19.750)
 115.833   1964.1066    712.45  .     Q   .           .    V    .         .
(PEAK DAY 1, HOUR  19.833)
 115.917   1968.9847    708.31  .     Q   .           .    V    .         .
(PEAK DAY 1, HOUR  19.917)
 116.000   1973.8334    704.02  .     Q   .           .     V   .         .
(PEAK DAY 1, HOUR  20.000)
 116.083   1978.6533    699.86  .     Q   .           .     V   .         .
(PEAK DAY 1, HOUR  20.083)
 116.167   1983.4474    696.09  .     Q   .           .     V   .         .
(PEAK DAY 1, HOUR  20.167)
 116.250   1988.2177    692.64  .     Q   .           .     V   .         .
(PEAK DAY 1, HOUR  20.250)
 116.333   1992.9653    689.37  .    Q    .           .     V   .         .
(PEAK DAY 1, HOUR  20.333)
 116.417   1997.6909    686.16  .    Q    .           .     V   .         .
(PEAK DAY 1, HOUR  20.417)
 116.500   2002.3926    682.68  .    Q    .           .     V   .         .
(PEAK DAY 1, HOUR  20.500)
 116.583   2007.0701    679.17  .    Q    .           .     V   .         .
(PEAK DAY 1, HOUR  20.583)
 116.667   2011.7261    676.05  .    Q    .           .     V   .         .
(PEAK DAY 1, HOUR  20.667)
 116.750   2016.3629    673.27  .    Q    .           .     V   .         .
(PEAK DAY 1, HOUR  20.750)
 116.833   2020.9821    670.69  .    Q    .           .     V   .         .
(PEAK DAY 1, HOUR  20.833)
 116.917   2025.5842    668.24  .    Q    .           .     V   .         .
(PEAK DAY 1, HOUR  20.917)
 117.000   2030.1700    665.86  .    Q    .           .     V   .         .
(PEAK DAY 1, HOUR  21.000)
 117.083   2034.7396    663.50  .    Q    .           .     V   .         .
(PEAK DAY 1, HOUR  21.083)
 117.167   2039.2937    661.26  .    Q    .           .     V   .         .
(PEAK DAY 1, HOUR  21.167)
 117.250   2043.8333    659.14  .    Q    .           .     V   .         .
(PEAK DAY 1, HOUR  21.250)
 117.333   2048.3586    657.10  .    Q    .           .      V  .         .
(PEAK DAY 1, HOUR  21.333)
 117.417   2052.8704    655.11  .    Q    .           .      V  .         .
(PEAK DAY 1, HOUR  21.417)
 117.500   2057.3689    653.18  .    Q    .           .      V  .         .
(PEAK DAY 1, HOUR  21.500)
 117.583   2061.8545    651.30  .    Q    .           .      V  .         .
(PEAK DAY 1, HOUR  21.583)
 117.667   2066.3274    649.47  .    Q    .           .      V  .         .
(PEAK DAY 1, HOUR  21.667)
 117.750   2070.7881    647.68  .    Q    .           .      V  .         .
(PEAK DAY 1, HOUR  21.750)
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117.833   2075.2366    645.93  .    Q    .         .         V  .         .
(PEAK DAY 1, HOUR  21.833)
117.917   2079.6733    644.22  .    Q    .         .         V  .         .
(PEAK DAY 1, HOUR  21.917)
118.000   2084.0986    642.55  .    Q    .         .         V  .         .
(PEAK DAY 1, HOUR  22.000)
118.083   2088.5127    640.93  .    Q    .         .         V  .         .
(PEAK DAY 1, HOUR  22.083)
118.167   2092.9158    639.33  .    Q    .         .         V  .         .
(PEAK DAY 1, HOUR  22.167)
118.250   2097.3081    637.77  .    Q    .         .         V  .         .
(PEAK DAY 1, HOUR  22.250)
118.333   2101.6899    636.24  .    Q    .         .         V  .         .
(PEAK DAY 1, HOUR  22.333)
118.417   2106.0615    634.74  .    Q    .         .         V  .         .
(PEAK DAY 1, HOUR  22.417)
118.500   2110.4229    633.27  .    Q    .         .         V  .         .
(PEAK DAY 1, HOUR  22.500)
118.583   2114.7742    631.83  .    Q    .         .         V  .         .
(PEAK DAY 1, HOUR  22.583)
118.667   2119.1160    630.41  .    Q    .         .         V  .         .
(PEAK DAY 1, HOUR  22.667)
118.750   2123.4480    629.03  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  22.750)
118.833   2127.7708    627.66  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  22.833)
118.917   2132.0842    626.33  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  22.917)
119.000   2136.3887    625.01  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  23.000)
119.083   2140.6843    623.71  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  23.083)
119.167   2144.9712    622.44  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  23.167)
119.250   2149.2493    621.19  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  23.250)
119.333   2153.5188    619.95  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  23.333)
119.417   2157.7800    618.74  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  23.417)
119.500   2162.0330    617.54  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  23.500)
119.583   2166.2778    616.36  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  23.583)
119.667   2170.5146    615.20  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  23.667)
119.750   2174.7437    614.05  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  23.750)
119.833   2178.9648    612.92  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  23.833)
119.917   2183.1785    611.80  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  23.917)
120.000   2187.3845    610.70  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  24.000)
120.083   2191.5759    608.60  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  24.083)
120.167   2195.7229    602.15  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  24.167)
120.250   2199.7878    590.22  .    Q    .         .           V.         .
(PEAK DAY 1, HOUR  24.250)
120.333   2203.7405    573.92  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  24.333)
120.417   2207.5852    558.26  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  24.417)
120.500   2211.3274    543.38  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  24.500)
120.583   2214.9727    529.28  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  24.583)
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120.667   2218.5410    518.12  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  24.667)
120.750   2222.0562    510.39  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  24.750)
120.833   2225.5347    505.07  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  24.833)
120.917   2228.9875    501.37  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  24.917)
121.000   2232.4226    498.76  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  25.000)
121.083   2235.8442    496.81  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  25.083)
121.167   2239.2546    495.19  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  25.167)
121.250   2242.6550    493.75  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  25.250)
121.333   2246.0469    492.49  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  25.333)
121.417   2249.4312    491.39  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  25.417)
121.500   2252.8088    490.43  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  25.500)
121.583   2256.1804    489.56  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  25.583)
121.667   2259.5466    488.76  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  25.667)
121.750   2262.9075    488.00  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  25.750)
121.833   2266.2632    487.26  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  25.833)
121.917   2269.6140    486.55  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  25.917)
122.000   2272.9602    485.85  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  26.000)
122.083   2276.3018    485.18  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  26.083)
122.167   2279.6387    484.52  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  26.167)
122.250   2282.9712    483.89  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  26.250)
122.333   2286.2996    483.26  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  26.333)
122.417   2289.6238    482.67  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  26.417)
122.500   2292.9438    482.09  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  26.500)
122.583   2296.2600    481.52  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  26.583)
122.667   2299.5725    480.96  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  26.667)
122.750   2302.8813    480.43  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  26.750)
122.833   2306.1865    479.92  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  26.833)
122.917   2309.4883    479.42  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  26.917)
123.000   2312.7866    478.93  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  27.000)
123.083   2316.0818    478.45  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  27.083)
123.167   2319.3738    477.99  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  27.167)
123.250   2322.6626    477.53  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  27.250)
123.333   2325.9482    477.08  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  27.333)
123.417   2329.2307    476.63  .   Q     .         .            V         .
(PEAK DAY 1, HOUR  27.417)
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 123.500   2332.5103    476.18  .   Q     .         .         V         .
 (PEAK DAY 1, HOUR  27.500)
 123.583   2335.7866    475.73  .   Q     .         .         V         .
 (PEAK DAY 1, HOUR  27.583)
 123.667   2339.0598    475.28  .   Q     .         .         V         .
 (PEAK DAY 1, HOUR  27.667)
 123.750   2342.3301    474.84  .   Q     .         .         V         .
 (PEAK DAY 1, HOUR  27.750)
 123.833   2345.5972    474.39  .   Q     .         .         V         .
 (PEAK DAY 1, HOUR  27.833)
 123.917   2348.8613    473.95  .   Q     .         .         V         .
 (PEAK DAY 1, HOUR  27.917)
 124.000   2352.1223    473.51  .   Q     .         .         .V        .
 (PEAK DAY 1, HOUR  28.000)
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
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  FLOW PROCESS FROM NODE   6371.00 TO NODE   6395.00 IS CODE = 5.2
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  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
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         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  6961.5 Ac. ***

         THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
         TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
         INTERVALS(Reference: the National Engineering Handbook,
         Hydrology, Chapter 17, page 17-52, August,1972,
         U.S. Department of Commerce).


         ASSUMED REGULAR CHANNEL INFORMATION:
           BASEWIDTH(FT) =   35.00     CHANNEL Z =  1.00
           UPSTREAM ELEVATION(FT) =     220.00
           DOWNSTREAM ELEVATION(FT) =     213.00
           CHANNEL LENGTH(FT) =     959.00     MANNING'S FACTOR = 0.040
           CONSTANT LOSS RATE(CFS) =    0.00


         CHANNEL ROUTING COEFFICIENT ESTIMATED:
           MAXIMUM INFLOW(CFS) =  4524.87
           AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  3512.94
           CHANNEL NORMAL VELOCITY FOR Q =  3512.94 CFS =  10.37 FPS
           ESTIMATED CHANNEL ROUTING COEFFICIENT = 0.859

         MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
         UNIT INTERVALS IS CSTAR = 0.996


         CONVEX METHOD CHANNEL ROUTING RESULTS:
                                                 OUTFLOW LESS
                CLOCK        INFLOW     ROUTED      LOSS
PEAK    TIME    TIME       (STREAM 1)    FLOW     (STREAM 1)
 DAY   (HRS)   (HRS)         (CFS)       (CFS)      (CFS)
  2   24.000  96.000       328.03      328.45      328.45
  1    0.083  96.083       327.26      327.47      327.47
  1    0.167  96.167       329.90      329.19      329.19
  1    0.250  96.250       336.82      334.96      334.96
  1    0.333  96.333       347.18      344.40      344.40
  1    0.417  96.417       357.10      354.44      354.44
  1    0.500  96.500       366.48      363.96      363.96
  1    0.583  96.583       375.36      372.98      372.98
  1    0.667  96.667       382.19      380.35      380.35
  1    0.750  96.750       386.60      385.41      385.41
  1    0.833  96.833       389.34      388.60      388.60
  1    0.917  96.917       391.00      390.55      390.55
  1    1.000  97.000       391.98      391.72      391.72
  1    1.083  97.083       392.59      392.43      392.43
  1    1.167  97.167       393.06      392.93      392.93
  1    1.250  97.250       393.46      393.35      393.35
  1    1.333  97.333       393.80      393.71      393.71
  1    1.417  97.417       394.06      393.99      393.99
  1    1.500  97.500       394.27      394.21      394.21
  1    1.583  97.583       394.45      394.40      394.40
  1    1.667  97.667       394.63      394.58      394.58
  1    1.750  97.750       394.81      394.76      394.76
  1    1.833  97.833       395.00      394.95      394.95
  1    1.917  97.917       395.19      395.14      395.14
  1    2.000  98.000       395.35      395.31      395.31
  1    2.083  98.083       395.47      395.44      395.44
  1    2.167  98.167       395.54      395.52      395.52
  1    2.250  98.250       395.61      395.59      395.59
  1    2.333  98.333       395.67      395.65      395.65
  1    2.417  98.417       395.73      395.71      395.71
  1    2.500  98.500       395.80      395.78      395.78
  1    2.583  98.583       395.88      395.86      395.86
  1    2.667  98.667       395.97      395.94      395.94
  1    2.750  98.750       396.06      396.03      396.03
  1    2.833  98.833       396.15      396.13      396.13
  1    2.917  98.917       396.26      396.23      396.23
  1    3.000  99.000       396.37      396.34      396.34
  1    3.083  99.083       396.49      396.46      396.46
  1    3.167  99.167       396.62      396.59      396.59
  1    3.250  99.250       396.77      396.73      396.73
  1    3.333  99.333       396.92      396.88      396.88
  1    3.417  99.417       397.10      397.05      397.05
  1    3.500  99.500       397.29      397.24      397.24
  1    3.583  99.583       397.49      397.44      397.44
  1    3.667  99.667       397.72      397.66      397.66
  1    3.750  99.750       397.96      397.89      397.89
  1    3.833  99.833       398.21      398.14      398.14
  1    3.917  99.917       398.49      398.41      398.41
  1    4.000 100.000       398.77      398.70      398.70
  1    4.083 100.083       399.08      398.99      398.99
  1    4.167 100.167       399.40      399.31      399.31
  1    4.250 100.250       399.73      399.64      399.64
  1    4.333 100.333       400.08      399.99      399.99
  1    4.417 100.417       400.45      400.35      400.35
  1    4.500 100.500       400.84      400.73      400.73
  1    4.583 100.583       401.23      401.13      401.13
  1    4.667 100.667       401.65      401.54      401.54
  1    4.750 100.750       402.08      401.96      401.96
  1    4.833 100.833       402.52      402.40      402.40
  1    4.917 100.917       402.99      402.86      402.86
  1    5.000 101.000       403.47      403.34      403.34
  1    5.083 101.083       403.97      403.83      403.83
  1    5.167 101.167       404.48      404.35      404.35
  1    5.250 101.250       405.02      404.87      404.87
  1    5.333 101.333       405.57      405.42      405.42
  1    5.417 101.417       406.14      405.99      405.99
  1    5.500 101.500       406.73      406.57      406.57
  1    5.583 101.583       407.34      407.17      407.17
  1    5.667 101.667       407.96      407.80      407.80
  1    5.750 101.750       408.61      408.44      408.44
  1    5.833 101.833       409.28      409.10      409.10
  1    5.917 101.917       409.96      409.78      409.78
  1    6.000 102.000       410.67      410.48      410.48
  1    6.083 102.083       411.39      411.20      411.20
  1    6.167 102.167       412.14      411.94      411.94
  1    6.250 102.250       412.90      412.70      412.70
  1    6.333 102.333       413.69      413.48      413.48
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1	6.417	102.417	414.50	414.28	414.28
1	6.500	102.500	415.33	415.11	415.11
1	6.583	102.583	416.18	415.95	415.95
1	6.667	102.667	417.06	416.82	416.82
1	6.750	102.750	417.95	417.71	417.71
1	6.833	102.833	418.87	418.62	418.62
1	6.917	102.917	419.81	419.56	419.56
1	7.000	103.000	420.77	420.51	420.51
1	7.083	103.083	421.76	421.49	421.49
1	7.167	103.167	422.77	422.50	422.50
1	7.250	103.250	423.80	423.53	423.53
1	7.333	103.333	424.87	424.58	424.58
1	7.417	103.417	425.95	425.66	425.66
1	7.500	103.500	427.06	426.76	426.76
1	7.583	103.583	428.20	427.89	427.89
1	7.667	103.667	429.36	429.05	429.05
1	7.750	103.750	430.55	430.23	430.23
1	7.833	103.833	431.77	431.44	431.44
1	7.917	103.917	433.01	432.67	432.67
1	8.000	104.000	434.28	433.94	433.94
1	8.083	104.083	435.58	435.23	435.23
1	8.167	104.167	436.91	436.55	436.55
1	8.250	104.250	438.27	437.90	437.90
1	8.333	104.333	439.66	439.29	439.29
1	8.417	104.417	441.08	440.70	440.70
1	8.500	104.500	442.53	442.14	442.14
1	8.583	104.583	444.01	443.62	443.62
1	8.667	104.667	445.53	445.13	445.13
1	8.750	104.750	447.08	446.67	446.67
1	8.833	104.833	448.67	448.24	448.24
1	8.917	104.917	450.29	449.85	449.85
1	9.000	105.000	451.95	451.50	451.50
1	9.083	105.083	453.63	453.18	453.18
1	9.167	105.167	455.37	454.90	454.90
1	9.250	105.250	457.13	456.66	456.66
1	9.333	105.333	458.94	458.46	458.46
1	9.417	105.417	460.79	460.29	460.29
1	9.500	105.500	462.68	462.17	462.17
1	9.583	105.583	464.60	464.09	464.09
1	9.667	105.667	466.58	466.05	466.05
1	9.750	105.750	468.60	468.06	468.06
1	9.833	105.833	470.66	470.10	470.10
1	9.917	105.917	472.73	472.17	472.17
1	10.000	106.000	474.80	474.24	474.24
1	10.083	106.083	476.86	476.31	476.31
1	10.167	106.167	478.93	478.38	478.38
1	10.250	106.250	481.03	480.47	480.47
1	10.333	106.333	483.18	482.60	482.60
1	10.417	106.417	485.36	484.77	484.77
1	10.500	106.500	487.61	487.00	487.00
1	10.583	106.583	489.89	489.28	489.28
1	10.667	106.667	492.25	491.62	491.62
1	10.750	106.750	494.65	494.00	494.00
1	10.833	106.833	497.12	496.46	496.46
1	10.917	106.917	499.64	498.96	498.96
1	11.000	107.000	502.24	501.54	501.54
1	11.083	107.083	504.89	504.18	504.18
1	11.167	107.167	507.62	506.88	506.88
1	11.250	107.250	510.41	509.66	509.66
1	11.333	107.333	513.28	512.51	512.51
1	11.417	107.417	516.22	515.43	515.43
1	11.500	107.500	519.25	518.44	518.44
1	11.583	107.583	522.35	521.52	521.52
1	11.667	107.667	525.55	524.69	524.69
1	11.750	107.750	528.83	527.95	527.95
1	11.833	107.833	532.21	531.30	531.30
1	11.917	107.917	535.68	534.75	534.75
1	12.000	108.000	539.26	538.30	538.30

1	12.083	108.083	544.24	542.90	542.90
1	12.167	108.167	554.84	552.00	552.00
1	12.250	108.250	572.15	567.51	567.51
1	12.333	108.333	594.23	588.30	588.30
1	12.417	108.417	614.16	608.80	608.80
1	12.500	108.500	631.57	626.89	626.89
1	12.583	108.583	647.51	643.23	643.23
1	12.667	108.667	661.24	657.55	657.55
1	12.750	108.750	672.77	669.67	669.67
1	12.833	108.833	683.12	680.34	680.34
1	12.917	108.917	692.67	690.10	690.10
1	13.000	109.000	701.90	699.42	699.42
1	13.083	109.083	711.00	708.56	708.56
1	13.167	109.167	720.30	717.81	717.81
1	13.250	109.250	729.78	727.23	727.23
1	13.333	109.333	739.52	736.91	736.91
1	13.417	109.417	749.41	746.75	746.75
1	13.500	109.500	759.61	756.87	756.87
1	13.583	109.583	770.06	767.25	767.25
1	13.667	109.667	780.98	778.04	778.04
1	13.750	109.750	792.26	789.23	789.23
1	13.833	109.833	804.12	800.93	800.93
1	13.917	109.917	816.43	813.12	813.12
1	14.000	110.000	829.43	825.94	825.94
1	14.083	110.083	843.51	839.73	839.73
1	14.167	110.167	860.61	856.02	856.02
1	14.250	110.250	880.95	875.49	875.49
1	14.333	110.333	903.83	897.69	897.69
1	14.417	110.417	926.08	920.11	920.11
1	14.500	110.500	947.78	941.95	941.95
1	14.583	110.583	969.47	963.64	963.64
1	14.667	110.667	991.84	985.83	985.83
1	14.750	110.750	1015.23	1008.95	1008.95
1	14.833	110.833	1040.79	1033.92	1033.92
1	14.917	110.917	1068.45	1061.02	1061.02
1	15.000	111.000	1098.98	1090.78	1090.78
1	15.083	111.083	1132.31	1123.36	1123.36
1	15.167	111.167	1169.58	1159.57	1159.57
1	15.250	111.250	1210.92	1199.82	1199.82
1	15.333	111.333	1257.88	1245.27	1245.27
1	15.417	111.417	1307.57	1294.23	1294.23
1	15.500	111.500	1352.18	1340.19	1340.19
1	15.583	111.583	1389.30	1379.32	1379.32
1	15.667	111.667	1426.72	1416.67	1416.67
1	15.750	111.750	1483.18	1468.03	1468.03
1	15.833	111.833	1569.59	1546.41	1546.41
1	15.917	111.917	1697.05	1662.85	1662.85
1	16.000	112.000	1906.97	1850.67	1850.67
1	16.083	112.083	2324.53	2212.59	2212.59
1	16.167	112.167	3130.02	2914.07	2914.07
1	16.250	112.250	3974.52	3747.75	3747.75
1	16.333	112.333	4524.87	4376.76	4376.76
1	16.417	112.417	4415.77	4444.41	4444.41
1	16.500	112.500	4196.80	4255.50	4255.50
1	16.583	112.583	3918.06	3992.86	3992.86
1	16.667	112.667	3402.89	3541.01	3541.01
1	16.750	112.750	2840.37	2991.40	2991.40
1	16.833	112.833	2401.58	2519.56	2519.56
1	16.917	112.917	2077.10	2164.36	2164.36
1	17.000	113.000	1835.38	1900.38	1900.38
1	17.083	113.083	1661.22	1708.07	1708.07
1	17.167	113.167	1534.77	1568.78	1568.78
1	17.250	113.250	1434.55	1461.49	1461.49
1	17.333	113.333	1345.43	1369.38	1369.38
1	17.417	113.417	1269.05	1289.58	1289.58
1	17.500	113.500	1207.45	1224.01	1224.01
1	17.583	113.583	1158.79	1171.87	1171.87
1	17.667	113.667	1120.38	1130.71	1130.71

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  1   17.750 113.750      1089.38     1097.72     1097.72
  1   17.833 113.833      1062.84     1069.98     1069.98
  1   17.917 113.917      1039.52     1045.79     1045.79
  1   18.000 114.000      1018.29     1023.99     1023.99
  1   18.083 114.083       996.85     1002.61     1002.61
  1   18.167 114.167       971.75      978.49      978.49
  1   18.250 114.250       942.21      950.14      950.14
  1   18.333 114.333       909.67      918.41      918.41
  1   18.417 114.417       880.76      888.53      888.53
  1   18.500 114.500       857.10      863.46      863.46
  1   18.583 114.583       836.45      841.99      841.99
  1   18.667 114.667       818.26      823.15      823.15
  1   18.750 114.750       802.65      806.85      806.85
  1   18.833 114.833       789.74      793.21      793.21
  1   18.917 114.917       779.11      781.97      781.97
  1   19.000 115.000       769.57      772.13      772.13
  1   19.083 115.083       760.63      763.03      763.03
  1   19.167 115.167       752.84      754.93      754.93
  1   19.250 115.250       746.21      747.99      747.99
  1   19.333 115.333       740.23      741.84      741.84
  1   19.417 115.417       734.83      736.28      736.28
  1   19.500 115.500       729.94      731.25      731.25
  1   19.583 115.583       725.35      726.58      726.58
  1   19.667 115.667       720.79      722.02      722.02
  1   19.750 115.750       716.51      717.66      717.66
  1   19.833 115.833       712.45      713.54      713.54
  1   19.917 115.917       708.31      709.42      709.42
  1   20.000 116.000       704.02      705.17      705.17
  1   20.083 116.083       699.86      700.98      700.98
  1   20.167 116.167       696.09      697.11      697.11
  1   20.250 116.250       692.64      693.57      693.57
  1   20.333 116.333       689.37      690.25      690.25
  1   20.417 116.417       686.16      687.02      687.02
  1   20.500 116.500       682.68      683.62      683.62
  1   20.583 116.583       679.17      680.11      680.11
  1   20.667 116.667       676.05      676.89      676.89
  1   20.750 116.750       673.27      674.01      674.01
  1   20.833 116.833       670.69      671.38      671.38
  1   20.917 116.917       668.24      668.90      668.90
  1   21.000 117.000       665.86      666.50      666.50
  1   21.083 117.083       663.50      664.14      664.14
  1   21.167 117.167       661.26      661.86      661.86
  1   21.250 117.250       659.14      659.71      659.71
  1   21.333 117.333       657.10      657.65      657.65
  1   21.417 117.417       655.11      655.65      655.65
  1   21.500 117.500       653.18      653.70      653.70
  1   21.583 117.583       651.30      651.81      651.81
  1   21.667 117.667       649.47      649.96      649.96
  1   21.750 117.750       647.68      648.16      648.16
  1   21.833 117.833       645.93      646.40      646.40
  1   21.917 117.917       644.22      644.68      644.68
  1   22.000 118.000       642.55      643.00      643.00
  1   22.083 118.083       640.93      641.36      641.36
  1   22.167 118.167       639.33      639.76      639.76
  1   22.250 118.250       637.77      638.19      638.19
  1   22.333 118.333       636.24      636.65      636.65
  1   22.417 118.417       634.74      635.14      635.14
  1   22.500 118.500       633.27      633.66      633.66
  1   22.583 118.583       631.83      632.21      632.21
  1   22.667 118.667       630.41      630.79      630.79
  1   22.750 118.750       629.03      629.40      629.40
  1   22.833 118.833       627.66      628.03      628.03
  1   22.917 118.917       626.33      626.68      626.68
  1   23.000 119.000       625.01      625.36      625.36
  1   23.083 119.083       623.71      624.06      624.06
  1   23.167 119.167       622.44      622.78      622.78
  1   23.250 119.250       621.19      621.52      621.52
  1   23.333 119.333       619.95      620.28      620.28
  1   23.417 119.417       618.74      619.06      619.06
  1   23.500 119.500       617.54      617.86      617.86
  1   23.583 119.583       616.36      616.68      616.68
  1   23.667 119.667       615.20      615.51      615.51
  1   23.750 119.750       614.05      614.36      614.36
  1   23.833 119.833       612.92      613.22      613.22
  1   23.917 119.917       611.80      612.10      612.10
  1   24.000 120.000       610.70      611.00      611.00
  1   24.083 120.083       608.60      609.16      609.16
  1   24.167 120.167       602.15      603.88      603.88
  1   24.250 120.250       590.22      593.42      593.42
  1   24.333 120.333       573.92      578.29      578.29
  1   24.417 120.417       558.26      562.47      562.47
  1   24.500 120.500       543.38      547.38      547.38
  1   24.583 120.583       529.28      533.07      533.07
  1   24.667 120.667       518.12      521.12      521.12
  1   24.750 120.750       510.39      512.47      512.47
  1   24.833 120.833       505.07      506.50      506.50
  1   24.917 120.917       501.37      502.36      502.36
  1   25.000 121.000       498.76      499.47      499.47
  1   25.083 121.083       496.81      497.34      497.34
  1   25.167 121.167       495.19      495.62      495.62
  1   25.250 121.250       493.75      494.14      494.14
  1   25.333 121.333       492.49      492.83      492.83
  1   25.417 121.417       491.39      491.69      491.69
  1   25.500 121.500       490.43      490.69      490.69
  1   25.583 121.583       489.56      489.80      489.80
  1   25.667 121.667       488.76      488.98      488.98
  1   25.750 121.750       488.00      488.20      488.20
  1   25.833 121.833       487.26      487.46      487.46
  1   25.917 121.917       486.55      486.74      486.74
  1   26.000 122.000       485.85      486.04      486.04
  1   26.083 122.083       485.18      485.36      485.36
  1   26.167 122.167       484.52      484.70      484.70
  1   26.250 122.250       483.89      484.06      484.06
  1   26.333 122.333       483.26      483.43      483.43
  1   26.417 122.417       482.67      482.83      482.83
  1   26.500 122.500       482.09      482.24      482.24
  1   26.583 122.583       481.52      481.67      481.67
  1   26.667 122.667       480.96      481.11      481.11
  1   26.750 122.750       480.43      480.58      480.58
  1   26.833 122.833       479.92      480.06      480.06
  1   26.917 122.917       479.42      479.55      479.55
  1   27.000 123.000       478.93      479.06      479.06
  1   27.083 123.083       478.45      478.58      478.58
  1   27.167 123.167       477.99      478.11      478.11
  1   27.250 123.250       477.53      477.66      477.66
  1   27.333 123.333       477.08      477.20      477.20
  1   27.417 123.417       476.63      476.75      476.75
  1   27.500 123.500       476.18      476.30      476.30
  1   27.583 123.583       475.73      475.85      475.85
  1   27.667 123.667       475.28      475.40      475.40
  1   27.750 123.750       474.84      474.96      474.96
  1   27.833 123.833       474.39      474.51      474.51
  1   27.917 123.917       473.95      474.07      474.07
  1   28.000 124.000       473.51      473.63      473.63
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
 ===============================================================================
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   3032.779 AF
    OUTFLOW VOLUME =   3032.779 AF
    LOSS    VOLUME =      0.000 AF
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 *******************************************************************************
  FLOW PROCESS FROM NODE   6380.00 TO NODE   6395.00 IS CODE =   1
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        *** Note: This link/process output is based on its ***
        *** tributary area being adjusted, for depth-area  ***
        *** effects, using a specified area of   329.6 Ac. ***
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
================================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #2)

         WATERSHED AREA =     329.600 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    0.330 HOURS
          CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
          THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
          MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.900
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.050
         VALLEY(UNDEVELOPED)/DESERT:
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
         BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:
         +------------------+--------+--------+--------+--------+--------+
         | RAINFALL DEPTHS & |        |        |        |        |        |
         |    LOSS RATES     |  DAY 1 |  DAY 2 |  DAY 3 |  DAY 4 |  DAY 5 |
         |==================+========+========+========+========+========|
         | 5-MINUTE (INCHES) |    0.58|    0.27|    0.12|    0.06|    0.04|
         |30-MINUTE (INCHES) |    1.22|    0.56|    0.24|    0.13|    0.09|
         |   1-HOUR (INCHES) |    1.62|    0.75|    0.33|    0.17|    0.12|
         |   3-HOUR (INCHES) |    2.71|    1.25|    0.54|    0.28|    0.21|
         |   6-HOUR (INCHES) |    3.75|    1.73|    0.75|    0.39|    0.29|
         |  24-HOUR (INCHES) |    6.28|    2.89|    1.26|    0.66|    0.48|
         |==================+========+========+========+========+========|
         | LOSS RATE(IN/HR)  |   0.150|   0.150|   0.150|   0.150|   0.150|
         | LOW LOSS FRACTION |   0.500|   0.750|   0.950|   0.990|   0.990|
         +------------------+--------+--------+--------+--------+--------+
           5-MINUTE FACTOR = 0.985
          30-MINUTE FACTOR = 0.985
           1-HOUR FACTOR = 0.985
           3-HOUR FACTOR = 0.998
           6-HOUR FACTOR = 0.999
          24-HOUR FACTOR = 0.999

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  25.253


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  96.00
         MODEL TIME(HOURS) FOR END OF RESULTS = 124.00


================================================================================
                      UNIT HYDROGRAPH DETERMINATION

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     INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
      NUMBER         MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------------
         1                1.602               63.859
         2                7.797              246.932
         3               21.404              542.405
         4               39.370              716.138
         5               60.064              824.885
         6               75.891              630.876
         7               85.613              387.515
         8               91.167              221.417
         9               94.489              132.407
        10               96.293               71.884
        11               97.026               29.243
        12               97.665               25.478
        13               98.270               24.118
        14               98.850               23.087
        15               98.984                5.349
        16               99.089                4.176
        17               99.176                3.468
        18               99.236                2.391
        19               99.292                2.234
        20               99.345                2.124
        21               99.396                2.026
        22               99.445                1.965
        23               99.491                1.826
        24               99.536                1.815
        25               99.577                1.639
        26               99.617                1.559
        27               99.656                1.556
        28               99.690                1.365
        29               99.721                1.257
        30               99.753                1.257
        31               99.784                1.254
        32               99.812                1.082
        33               99.830                0.737
        34               99.848                0.724
        35               99.866                0.724
        36               99.885                0.724
        37               99.900                0.614
        38               99.906                0.230
        39               99.911                0.198
        40               99.916                0.197
        41               99.921                0.199
        42               99.926                0.197
        43               99.930                0.197
        44               99.935                0.198
        45               99.940                0.198
        46               99.945                0.197
        47               99.950                0.199
        48               99.955                0.197
        49               99.960                0.197
        50               99.965                0.196
        51               99.970                0.197
        52               99.975                0.197
        53               99.980                0.197
        54               99.985                0.196
        55               99.990                0.197
        56               99.995                0.197
        57              100.000                0.197
        58              100.000                0.013


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    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =     162.7269
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =     154.7721
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5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 200.0 400.0 600.0 800.0
96.000	41.7912	3.86	Q V . . .
(PEAK DAY 2, HOUR 24.000)			
96.083	41.8189	4.03	Q V . . .
(PEAK DAY 1, HOUR 0.083)			
96.167	41.8518	4.78	Q V . . .
(PEAK DAY 1, HOUR 0.167)			
96.250	41.8963	6.45	Q V . . .
(PEAK DAY 1, HOUR 0.250)			
96.333	41.9561	8.68	Q V . . .
(PEAK DAY 1, HOUR 0.333)			
96.417	42.0337	11.27	Q V . . .
(PEAK DAY 1, HOUR 0.417)			
96.500	42.1251	13.26	Q V . . .
(PEAK DAY 1, HOUR 0.500)			
96.583	42.2250	14.51	Q V . . .
(PEAK DAY 1, HOUR 0.583)			
96.667	42.3300	15.24	Q V . . .
(PEAK DAY 1, HOUR 0.667)			
96.750	42.4381	15.70	Q V . . .
(PEAK DAY 1, HOUR 0.750)			
96.833	42.5482	15.98	Q V . . .
(PEAK DAY 1, HOUR 0.833)			
96.917	42.6592	16.12	Q .V . . .
(PEAK DAY 1, HOUR 0.917)			
97.000	42.7712	16.26	Q .V . . .
(PEAK DAY 1, HOUR 1.000)			
97.083	42.8840	16.39	Q .V . . .
(PEAK DAY 1, HOUR 1.083)			
97.167	42.9978	16.51	Q .V . . .
(PEAK DAY 1, HOUR 1.167)			
97.250	43.1120	16.59	Q .V . . .
(PEAK DAY 1, HOUR 1.250)			
97.333	43.2267	16.66	Q .V . . .
(PEAK DAY 1, HOUR 1.333)			
97.417	43.3419	16.73	Q .V . . .
(PEAK DAY 1, HOUR 1.417)			
97.500	43.4576	16.79	Q .V . . .
(PEAK DAY 1, HOUR 1.500)			
97.583	43.5737	16.86	Q .V . . .
(PEAK DAY 1, HOUR 1.583)			
97.667	43.6902	16.92	Q .V . . .
(PEAK DAY 1, HOUR 1.667)			
97.750	43.8072	16.99	Q .V . . .
(PEAK DAY 1, HOUR 1.750)			
97.833	43.9247	17.06	Q .V . . .
(PEAK DAY 1, HOUR 1.833)			
97.917	44.0426	17.12	Q .V . . .
(PEAK DAY 1, HOUR 1.917)			
98.000	44.1610	17.19	Q .V . . .
(PEAK DAY 1, HOUR 2.000)			
98.083	44.2799	17.26	Q .V . . .
(PEAK DAY 1, HOUR 2.083)			
98.167	44.3992	17.33	Q .V . . .
(PEAK DAY 1, HOUR 2.167)			
98.250	44.5190	17.40	Q .V . . .
(PEAK DAY 1, HOUR 2.250)			
98.333	44.6393	17.46	Q .V . . .
(PEAK DAY 1, HOUR 2.333)			
98.417	44.7600	17.53	Q .V . . .
(PEAK DAY 1, HOUR 2.417)			
98.500	44.8812	17.60	Q .V . . .
(PEAK DAY 1, HOUR 2.500)			
98.583	45.0029	17.67	Q .V . . .
(PEAK DAY 1, HOUR 2.583)			
98.667	45.1251	17.74	Q .V . . .
(PEAK DAY 1, HOUR 2.667)			
98.750	45.2478	17.81	Q .V . . .
(PEAK DAY 1, HOUR 2.750)			
98.833	45.3710	17.88	Q .V . . .
(PEAK DAY 1, HOUR 2.833)			
98.917	45.4946	17.95	Q .V . . .
(PEAK DAY 1, HOUR 2.917)			
99.000	45.6188	18.03	Q .V . . .
(PEAK DAY 1, HOUR 3.000)			
99.083	45.7434	18.10	Q .V . . .
(PEAK DAY 1, HOUR 3.083)			
99.167	45.8686	18.17	Q .V . . .
(PEAK DAY 1, HOUR 3.167)			
99.250	45.9942	18.24	Q .V . . .
(PEAK DAY 1, HOUR 3.250)			
99.333	46.1204	18.32	Q .V . . .
(PEAK DAY 1, HOUR 3.333)			
99.417	46.2470	18.39	Q .V . . .
(PEAK DAY 1, HOUR 3.417)			
99.500	46.3742	18.47	Q .V . . .
(PEAK DAY 1, HOUR 3.500)			
99.583	46.5019	18.54	Q . V . . .
(PEAK DAY 1, HOUR 3.583)			
99.667	46.6301	18.62	Q . V . . .
(PEAK DAY 1, HOUR 3.667)			
99.750	46.7589	18.70	Q . V . . .
(PEAK DAY 1, HOUR 3.750)			
99.833	46.8882	18.77	Q . V . . .
(PEAK DAY 1, HOUR 3.833)			
99.917	47.0181	18.85	Q . V . . .
(PEAK DAY 1, HOUR 3.917)			
100.000	47.1484	18.93	Q . V . . .
(PEAK DAY 1, HOUR 4.000)			
100.083	47.2794	19.01	Q . V . . .
(PEAK DAY 1, HOUR 4.083)			
100.167	47.4109	19.09	Q . V . . .
(PEAK DAY 1, HOUR 4.167)			
100.250	47.5430	19.18	Q . V . . .
(PEAK DAY 1, HOUR 4.250)			
100.333	47.6756	19.26	Q . V . . .
(PEAK DAY 1, HOUR 4.333)			
100.417	47.8089	19.35	Q . V . . .
(PEAK DAY 1, HOUR 4.417)			
100.500	47.9427	19.43	Q . V . . .
(PEAK DAY 1, HOUR 4.500)			
100.583	48.0771	19.52	Q . V . . .
(PEAK DAY 1, HOUR 4.583)			
100.667	48.2121	19.60	Q . V . . .
(PEAK DAY 1, HOUR 4.667)			
100.750	48.3477	19.69	Q . V . . .
(PEAK DAY 1, HOUR 4.750)			
100.833	48.4840	19.78	Q . V . . .
(PEAK DAY 1, HOUR 4.833)			
100.917	48.6208	19.87	Q . V . . .
(PEAK DAY 1, HOUR 4.917)			
101.000	48.7583	19.96	Q . V . . .
(PEAK DAY 1, HOUR 5.000)			
101.083	48.8964	20.05	.Q . V . . .
(PEAK DAY 1, HOUR 5.083)			

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101.167     49.0351     20.15  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.167)
101.250     49.1745     20.24  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.250)
101.333     49.3146     20.34  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.333)
101.417     49.4553     20.43  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.417)
101.500     49.5967     20.53  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.500)
101.583     49.7388     20.63  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.583)
101.667     49.8815     20.73  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.667)
101.750     50.0250     20.83  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.750)
101.833     50.1692     20.93  .Q        . V       .         .         .
(PEAK DAY 1, HOUR   5.833)
101.917     50.3140     21.04  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   5.917)
102.000     50.4596     21.14  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.000)
102.083     50.6060     21.25  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.083)
102.167     50.7531     21.36  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.167)
102.250     50.9009     21.47  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.250)
102.333     51.0495     21.58  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.333)
102.417     51.1989     21.69  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.417)
102.500     51.3491     21.80  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.500)
102.583     51.5000     21.92  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.583)
102.667     51.6518     22.04  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.667)
102.750     51.8044     22.16  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.750)
102.833     51.9578     22.28  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.833)
102.917     52.1121     22.40  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   6.917)
103.000     52.2672     22.52  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.000)
103.083     52.4232     22.65  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.083)
103.167     52.5800     22.78  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.167)
103.250     52.7378     22.91  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.250)
103.333     52.8965     23.04  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.333)
103.417     53.0560     23.17  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.417)
103.500     53.2166     23.31  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.500)
103.583     53.3780     23.44  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.583)
103.667     53.5404     23.58  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.667)
103.750     53.7038     23.73  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.750)
103.833     53.8682     23.87  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.833)
103.917     54.0336     24.02  .Q        .  V      .         .         .
(PEAK DAY 1, HOUR   7.917)
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104.000     54.2001     24.16  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.000)
104.083     54.3675     24.32  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.083)
104.167     54.5361     24.47  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.167)
104.250     54.7057     24.63  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.250)
104.333     54.8764     24.78  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.333)
104.417     55.0482     24.95  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.417)
104.500     55.2211     25.11  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.500)
104.583     55.3952     25.28  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.583)
104.667     55.5705     25.45  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.667)
104.750     55.7469     25.62  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.750)
104.833     55.9246     25.80  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.833)
104.917     56.1035     25.98  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   8.917)
105.000     56.2836     26.16  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.000)
105.083     56.4651     26.35  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.083)
105.167     56.6478     26.53  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.167)
105.250     56.8319     26.73  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.250)
105.333     57.0173     26.92  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.333)
105.417     57.2041     27.13  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.417)
105.500     57.3923     27.33  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.500)
105.583     57.5820     27.54  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.583)
105.667     57.7731     27.75  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.667)
105.750     57.9657     27.97  .Q        .   V     .         .         .
(PEAK DAY 1, HOUR   9.750)
105.833     58.1598     28.19  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.833)
105.917     58.3555     28.41  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR   9.917)
106.000     58.5528     28.64  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.000)
106.083     58.7517     28.88  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.083)
106.167     58.9523     29.12  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.167)
106.250     59.1545     29.37  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.250)
106.333     59.3585     29.62  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.333)
106.417     59.5643     29.88  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.417)
106.500     59.7718     30.14  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.500)
106.583     59.9813     30.41  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.583)
106.667     60.1926     30.68  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.667)
106.750     60.4058     30.97  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.750)
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106.833     60.6211     31.25  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.833)
106.917     60.8384     31.55  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  10.917)
107.000     61.0578     31.85  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  11.000)
107.083     61.2793     32.17  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  11.083)
107.167     61.5030     32.48  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  11.167)
107.250     61.7290     32.81  .Q        .    V    .         .         .
(PEAK DAY 1, HOUR  11.250)
107.333     61.9573     33.15  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.333)
107.417     62.1880     33.50  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.417)
107.500     62.4211     33.85  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.500)
107.583     62.6567     34.21  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.583)
107.667     62.8950     34.59  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.667)
107.750     63.1358     34.98  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.750)
107.833     63.3794     35.37  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.833)
107.917     63.6259     35.78  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  11.917)
108.000     63.8752     36.20  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  12.000)
108.083     64.1287     36.80  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  12.083)
108.167     64.3896     37.88  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  12.167)
108.250     64.6632     39.74  .Q        .     V   .         .         .
(PEAK DAY 1, HOUR  12.250)
108.333     64.9529     42.06  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.333)
108.417     65.2611     44.75  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.417)
108.500     65.5850     47.04  . Q       .     V   .         .         .
(PEAK DAY 1, HOUR  12.500)
108.583     65.9215     48.85  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.583)
108.667     66.2684     50.37  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.667)
108.750     66.6252     51.80  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.750)
108.833     66.9912     53.15  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.833)
108.917     67.3665     54.49  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  12.917)
109.000     67.7512     55.86  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  13.000)
109.083     68.1459     57.30  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  13.083)
109.167     68.5507     58.79  . Q       .      V  .         .         .
(PEAK DAY 1, HOUR  13.167)
109.250     68.9661     60.31  .  Q      .      V  .         .         .
(PEAK DAY 1, HOUR  13.250)
109.333     69.3921     61.87  .  Q      .      V  .         .         .
(PEAK DAY 1, HOUR  13.333)
109.417     69.8296     63.52  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.417)
109.500     70.2787     65.21  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.500)
109.583     70.7402     67.01  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.583)
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109.667     71.2144     68.86  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.667)
109.750     71.7022     70.83  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.750)
109.833     72.2041     72.87  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.833)
109.917     72.7209     75.04  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  13.917)
110.000     73.2533     77.30  .  Q      .       V .         .         .
(PEAK DAY 1, HOUR  14.000)
110.083     73.8026     79.76  .  Q      .        V.         .         .
(PEAK DAY 1, HOUR  14.083)
110.167     74.3704     82.45  .   Q     .        V.         .         .
(PEAK DAY 1, HOUR  14.167)
110.250     74.9596     85.54  .   Q     .        V.         .         .
(PEAK DAY 1, HOUR  14.250)
110.333     75.5717     88.89  .   Q     .        V.         .         .
(PEAK DAY 1, HOUR  14.333)
110.417     76.2090     92.53  .   Q     .        V.         .         .
(PEAK DAY 1, HOUR  14.417)
110.500     76.8715     96.20  .   Q     .        V.         .         .
(PEAK DAY 1, HOUR  14.500)
110.583     77.5600     99.96  .   Q     .         V         .         .
(PEAK DAY 1, HOUR  14.583)
110.667     78.2749    103.81  .    Q    .         V         .         .
(PEAK DAY 1, HOUR  14.667)
110.750     79.0182    107.93  .    Q    .         V         .         .
(PEAK DAY 1, HOUR  14.750)
110.833     79.7914    112.27  .    Q    .         V         .         .
(PEAK DAY 1, HOUR  14.833)
110.917     80.5973    117.01  .    Q    .         V         .         .
(PEAK DAY 1, HOUR  14.917)
111.000     81.4383    122.11  .     Q   .         .V        .         .
(PEAK DAY 1, HOUR  15.000)
111.083     82.3183    127.78  .     Q   .         .V        .         .
(PEAK DAY 1, HOUR  15.083)
111.167     83.2408    133.95  .     Q   .         .V        .         .
(PEAK DAY 1, HOUR  15.167)
111.250     84.2112    140.89  .      Q  .         .V        .         .
(PEAK DAY 1, HOUR  15.250)
111.333     85.2343    148.56  .      Q  .         . V       .         .
(PEAK DAY 1, HOUR  15.333)
111.417     86.3140    156.77  .      Q  .         . V       .         .
(PEAK DAY 1, HOUR  15.417)
111.500     87.4461    164.38  .       Q .         . V       .         .
(PEAK DAY 1, HOUR  15.500)
111.583     88.6237    170.99  .       Q .         . V       .         .
(PEAK DAY 1, HOUR  15.583)
111.667     89.8487    177.87  .       Q .         .  V      .         .
(PEAK DAY 1, HOUR  15.667)
111.750     91.1366    187.00  .        Q.         .  V      .         .
(PEAK DAY 1, HOUR  15.750)
111.833     92.5291    202.19  .         Q         .  V      .         .
(PEAK DAY 1, HOUR  15.833)
111.917     94.0982    227.84  .         .Q        .   V     .         .
(PEAK DAY 1, HOUR  15.917)
112.000     95.9486    268.68  .         .  Q      .   V     .         .
(PEAK DAY 1, HOUR  16.000)
112.083     98.3970    355.50  .         .      Q  .    V    .         .
(PEAK DAY 1, HOUR  16.083)
112.167    101.8439    500.50  .         .         .    QV   .         .
(PEAK DAY 1, HOUR  16.167)
112.250    106.5117    677.76  .         .         .      V  .  Q      .
(PEAK DAY 1, HOUR  16.250)
112.333    111.8129    769.73  .         .         .       V .       Q .
(PEAK DAY 1, HOUR  16.333)
112.417    117.2284    786.33  .         .         .        V        Q.
(PEAK DAY 1, HOUR  16.417)
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112.500    121.6811    646.54  .          .          .          .VQ        .
(PEAK DAY 1, HOUR  16.500)
112.583    124.9948    481.15  .          .          .   Q      . V        .
(PEAK DAY 1, HOUR  16.583)
112.667    127.4627    358.33  .          .      Q   .          . V        .
(PEAK DAY 1, HOUR  16.667)
112.750    129.3967    280.83  .          .   Q      .          .  V       .
(PEAK DAY 1, HOUR  16.750)
112.833    130.9455    224.88  .          .Q         .          .  V       .
(PEAK DAY 1, HOUR  16.833)
112.917    132.2140    184.19  .        Q.           .          .   V      .
(PEAK DAY 1, HOUR  16.917)
113.000    133.3513    165.13  .       Q .           .          .   V      .
(PEAK DAY 1, HOUR  17.000)
113.083    134.3849    150.08  .      Q  .           .          .   V      .
(PEAK DAY 1, HOUR  17.083)
113.167    135.3235    136.28  .     Q   .           .          .   V      .
(PEAK DAY 1, HOUR  17.167)
113.250    136.1315    117.32  .    Q    .           .          .    V     .
(PEAK DAY 1, HOUR  17.250)
113.333    136.8693    107.13  .    Q    .           .          .    V     .
(PEAK DAY 1, HOUR  17.333)
113.417    137.5491     98.70  .   Q     .           .          .    V     .
(PEAK DAY 1, HOUR  17.417)
113.500    138.1786     91.40  .   Q     .           .          .    V     .
(PEAK DAY 1, HOUR  17.500)
113.583    138.7664     85.36  .   Q     .           .          .    V     .
(PEAK DAY 1, HOUR  17.583)
113.667    139.3183     80.13  .   Q     .           .          .     V    .
(PEAK DAY 1, HOUR  17.667)
113.750    139.8382     75.50  .  Q      .           .          .     V    .
(PEAK DAY 1, HOUR  17.750)
113.833    140.3296     71.35  .  Q      .           .          .     V    .
(PEAK DAY 1, HOUR  17.833)
113.917    140.7949     67.57  .  Q      .           .          .     V    .
(PEAK DAY 1, HOUR  17.917)
114.000    141.2367     64.15  .  Q      .           .          .     V    .
(PEAK DAY 1, HOUR  18.000)
114.083    141.6554     60.80  .  Q      .           .          .     V    .
(PEAK DAY 1, HOUR  18.083)
114.167    142.0503     57.33  . Q       .           .          .     V    .
(PEAK DAY 1, HOUR  18.167)
114.250    142.4188     53.51  . Q       .           .          .     V    .
(PEAK DAY 1, HOUR  18.250)
114.333    142.7600     49.55  . Q       .           .          .     V    .
(PEAK DAY 1, HOUR  18.333)
114.417    143.0749     45.72  . Q       .           .          .     V    .
(PEAK DAY 1, HOUR  18.417)
114.500    143.3691     42.72  . Q       .           .          .      V   .
(PEAK DAY 1, HOUR  18.500)
114.583    143.6481     40.51  . Q       .           .          .      V   .
(PEAK DAY 1, HOUR  18.583)
114.667    143.9151     38.78  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  18.667)
114.750    144.1721     37.31  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  18.750)
114.833    144.4216     36.23  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  18.833)
114.917    144.6648     35.31  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  18.917)
115.000    144.9020     34.45  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.000)
115.083    145.1332     33.56  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.083)
115.167    145.3579     32.63  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.167)
115.250    145.5779     31.94  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.250)
115.333    145.7936     31.32  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.333)
115.417    146.0053     30.74  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.417)
115.500    146.2132     30.18  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.500)
115.583    146.4174     29.65  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.583)
115.667    146.6181     29.15  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.667)
115.750    146.8156     28.67  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.750)
115.833    147.0098     28.20  .Q        .           .          .      V   .
(PEAK DAY 1, HOUR  19.833)
115.917    147.2010     27.76  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  19.917)
116.000    147.3893     27.34  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.000)
116.083    147.5748     26.93  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.083)
116.167    147.7575     26.54  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.167)
116.250    147.9377     26.16  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.250)
116.333    148.1153     25.80  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.333)
116.417    148.2906     25.44  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.417)
116.500    148.4634     25.10  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.500)
116.583    148.6340     24.76  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.583)
116.667    148.8022     24.43  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.667)
116.750    148.9682     24.10  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.750)
116.833    149.1315     23.71  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.833)
116.917    149.2927     23.41  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  20.917)
117.000    149.4519     23.12  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  21.000)
117.083    149.6093     22.85  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  21.083)
117.167    149.7649     22.59  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  21.167)
117.250    149.9187     22.34  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  21.250)
117.333    150.0708     22.09  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  21.333)
117.417    150.2213     21.85  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  21.417)
117.500    150.3702     21.62  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  21.500)
117.583    150.5176     21.40  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  21.583)
117.667    150.6634     21.18  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  21.667)
117.750    150.8078     20.96  .Q        .           .          .       V  .
(PEAK DAY 1, HOUR  21.750)
117.833    150.9508     20.76  .Q        .           .          .        V.
(PEAK DAY 1, HOUR  21.833)
117.917    151.0923     20.56  .Q        .           .          .        V.
(PEAK DAY 1, HOUR  21.917)
118.000    151.2325     20.36  .Q        .           .          .        V.
(PEAK DAY 1, HOUR  22.000)
118.083    151.3714     20.17  .Q        .           .          .        V.
(PEAK DAY 1, HOUR  22.083)
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118.167	151.5090	19.98	Q	.	.	.	V.
(PEAK DAY 1, HOUR 22.167)								
118.250	151.6454	19.80	Q	.	.	.	V.
(PEAK DAY 1, HOUR 22.250)								
118.333	151.7805	19.62	Q	.	.	.	V.
(PEAK DAY 1, HOUR 22.333)								
118.417	151.9144	19.45	Q	.	.	.	V.
(PEAK DAY 1, HOUR 22.417)								
118.500	152.0472	19.28	Q	.	.	.	V.
(PEAK DAY 1, HOUR 22.500)								
118.583	152.1788	19.11	Q	.	.	.	V.
(PEAK DAY 1, HOUR 22.583)								
118.667	152.3093	18.95	Q	.	.	.	V.
(PEAK DAY 1, HOUR 22.667)								
118.750	152.4387	18.79	Q	.	.	.	V.
(PEAK DAY 1, HOUR 22.750)								
118.833	152.5670	18.63	Q	.	.	.	V.
(PEAK DAY 1, HOUR 22.833)								
118.917	152.6943	18.48	Q	.	.	.	V.
(PEAK DAY 1, HOUR 22.917)								
119.000	152.8205	18.33	Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.000)								
119.083	152.9458	18.19	Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.083)								
119.167	153.0701	18.05	Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.167)								
119.250	153.1934	17.91	Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.250)								
119.333	153.3158	17.77	Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.333)								
119.417	153.4372	17.64	Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.417)								
119.500	153.5578	17.50	Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.500)								
119.583	153.6774	17.38	Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.583)								
119.667	153.7962	17.25	Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.667)								
119.750	153.9142	17.12	Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.750)								
119.833	154.0313	17.00	Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.833)								
119.917	154.1475	16.88	Q	.	.	.	V.
(PEAK DAY 1, HOUR 23.917)								
120.000	154.2630	16.77	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.000)								
120.083	154.3759	16.39	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.083)								
120.167	154.4811	15.28	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.167)								
120.250	154.5705	12.98	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.250)								
120.333	154.6393	9.99	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.333)								
120.417	154.6846	6.58	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.417)								
120.500	154.7121	3.98	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.500)								
120.583	154.7285	2.38	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.583)								
120.667	154.7386	1.47	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.667)								
120.750	154.7450	0.92	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.750)								
120.833	154.7493	0.63	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.833)								
120.917	154.7528	0.50	Q	.	.	.	V.
(PEAK DAY 1, HOUR 24.917)								

121.000	154.7555	0.40	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.000)								
121.083	154.7576	0.30	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.083)								
121.167	154.7589	0.20	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.167)								
121.250	154.7602	0.18	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.250)								
121.333	154.7613	0.16	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.333)								
121.417	154.7623	0.14	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.417)								
121.500	154.7632	0.13	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.500)								
121.583	154.7640	0.12	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.583)								
121.667	154.7648	0.11	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.667)								
121.750	154.7655	0.11	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.750)								
121.833	154.7662	0.10	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.833)								
121.917	154.7668	0.09	Q	.	.	.	V.
(PEAK DAY 1, HOUR 25.917)								
122.000	154.7674	0.08	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.000)								
122.083	154.7679	0.07	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.083)								
122.167	154.7683	0.07	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.167)								
122.250	154.7688	0.06	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.250)								
122.333	154.7691	0.05	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.333)								
122.417	154.7695	0.05	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.417)								
122.500	154.7697	0.04	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.500)								
122.583	154.7700	0.04	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.583)								
122.667	154.7702	0.03	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.667)								
122.750	154.7704	0.03	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.750)								
122.833	154.7706	0.03	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.833)								
122.917	154.7708	0.02	Q	.	.	.	V.
(PEAK DAY 1, HOUR 26.917)								
123.000	154.7709	0.02	Q	.	.	.	V.
(PEAK DAY 1, HOUR 27.000)								
123.083	154.7710	0.02	Q	.	.	.	V.
(PEAK DAY 1, HOUR 27.083)								
123.167	154.7711	0.02	Q	.	.	.	V.
(PEAK DAY 1, HOUR 27.167)								
123.250	154.7712	0.02	Q	.	.	.	V.
(PEAK DAY 1, HOUR 27.250)								
123.333	154.7713	0.01	Q	.	.	.	V.
(PEAK DAY 1, HOUR 27.333)								
123.417	154.7714	0.01	Q	.	.	.	V.
(PEAK DAY 1, HOUR 27.417)								
123.500	154.7715	0.01	Q	.	.	.	V.
(PEAK DAY 1, HOUR 27.500)								
123.583	154.7716	0.01	Q	.	.	.	V.
(PEAK DAY 1, HOUR 27.583)								
123.667	154.7717	0.01	Q	.	.	.	V.
(PEAK DAY 1, HOUR 27.667)								
123.750	154.7718	0.01	Q	.	.	.	V.
(PEAK DAY 1, HOUR 27.750)								

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 123.833    154.7718      0.01  Q          .          .          .        V.
 (PEAK DAY 1, HOUR  27.833)
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********************************************************************************
  FLOW PROCESS FROM NODE   6395.00 TO NODE   6395.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  7291.1 Ac. ***
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE   6395.00 TO NODE   6395.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================

         *** Note: This link/process output is based on its ***
         *** tributary area being adjusted, for depth-area  ***
         *** effects, using a specified area of  7291.1 Ac. ***

            STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
        (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.     1325.0    2650.0    3975.0    5300.0
--------------------------------------------------------------------------------
  96.000    776.8526    332.31  . Q      V.          .          .          .
 (PEAK DAY 2, HOUR  24.000)
  96.083    779.1357    331.50  . Q      V.          .          .          .
 (PEAK DAY 1, HOUR   0.083)
  96.167    781.4358    333.97  . Q      V.          .          .          .
 (PEAK DAY 1, HOUR   0.167)
  96.250    783.7872    341.42  . Q      V.          .          .          .
 (PEAK DAY 1, HOUR   0.250)
  96.333    786.2189    353.08  . Q      V.          .          .          .
 (PEAK DAY 1, HOUR   0.333)
  96.417    788.7375    365.71  . Q      V.          .          .          .
 (PEAK DAY 1, HOUR   0.417)
  96.500    791.3354    377.22  . Q      V.          .          .          .
 (PEAK DAY 1, HOUR   0.500)
  96.583    794.0041    387.49  . Q      V.          .          .          .
 (PEAK DAY 1, HOUR   0.583)
  96.667    796.7286    395.60  . Q      V.          .          .          .
 (PEAK DAY 1, HOUR   0.667)
  96.750    799.4911    401.12  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   0.750)
  96.833    802.2775    404.58  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   0.833)
  96.917    805.0783    406.68  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   0.917)
  97.000    807.8881    407.97  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.000)
  97.083    810.7036    408.81  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.083)
  97.167    813.5235    409.45  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.167)
  97.250    816.3467    409.94  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.250)
  97.333    819.1729    410.36  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.333)
  97.417    822.0015    410.71  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.417)
  97.500    824.8322    411.01  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.500)
  97.583    827.6646    411.26  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.583)
  97.667    830.4986    411.51  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.667)
  97.750    833.3344    411.75  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.750)
  97.833    836.1719    412.01  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.833)
  97.917    839.0112    412.26  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   1.917)
  98.000    841.8521    412.50  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   2.000)
  98.083    844.6944    412.70  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   2.083)
  98.167    847.5377    412.85  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   2.167)
  98.250    850.3820    412.98  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   2.250)
  98.333    853.2271    413.11  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   2.333)
  98.417    856.0731    413.24  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   2.417)
  98.500    858.9201    413.38  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   2.500)
  98.583    861.7681    413.53  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   2.583)
  98.667    864.6171    413.69  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   2.667)
  98.750    867.4673    413.84  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   2.750)
  98.833    870.3186    414.01  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   2.833)
  98.917    873.1711    414.18  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   2.917)
  99.000    876.0248    414.37  .  Q      V          .          .          .
 (PEAK DAY 1, HOUR   3.000)
  99.083    878.8799    414.56  .  Q      .V         .          .          .
 (PEAK DAY 1, HOUR   3.083)
  99.167    881.7364    414.76  .  Q      .V         .          .          .
 (PEAK DAY 1, HOUR   3.167)
  99.250    884.5943    414.97  .  Q      .V         .          .          .
 (PEAK DAY 1, HOUR   3.250)
  99.333    887.4538    415.20  .  Q      .V         .          .          .
 (PEAK DAY 1, HOUR   3.333)
  99.417    890.3149    415.44  .  Q      .V         .          .          .
 (PEAK DAY 1, HOUR   3.417)
  99.500    893.1779    415.70  .  Q      .V         .          .          .
 (PEAK DAY 1, HOUR   3.500)
  99.583    896.0428    415.98  .  Q      .V         .          .          .
 (PEAK DAY 1, HOUR   3.583)
  99.667    898.9097    416.28  .  Q      .V         .          .          .
 (PEAK DAY 1, HOUR   3.667)
  99.750    901.7787    416.59  .  Q      .V         .          .          .
 (PEAK DAY 1, HOUR   3.750)
  99.833    904.6501    416.92  .  Q      .V         .          .          .
 (PEAK DAY 1, HOUR   3.833)
  99.917    907.5238    417.27  .  Q      .V         .          .          .
 (PEAK DAY 1, HOUR   3.917)
 100.000    910.4000    417.63  .  Q      .V         .          .          .
 (PEAK DAY 1, HOUR   4.000)
 100.083    913.2789    418.01  .  Q      .V         .          .          .
 (PEAK DAY 1, HOUR   4.083)
 100.167    916.1605    418.40  .  Q      .V         .          .          .
 (PEAK DAY 1, HOUR   4.167)
 100.250    919.0449    418.82  .  Q      .V         .          .          .
 (PEAK DAY 1, HOUR   4.250)
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100.333	921.9323	419.25	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	4.333)								
100.417	924.8228	419.70	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	4.417)								
100.500	927.7164	420.16	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	4.500)								
100.583	930.6134	420.64	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	4.583)								
100.667	933.5138	421.14	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	4.667)								
100.750	936.4177	421.65	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	4.750)								
100.833	939.3253	422.18	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	4.833)								
100.917	942.2367	422.73	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	4.917)								
101.000	945.1520	423.30	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	5.000)								
101.083	948.0713	423.89	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	5.083)								
101.167	950.9948	424.49	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	5.167)								
101.250	953.9225	425.11	.	Q	.V	.	.	.	
(PEAK DAY 1, HOUR	5.250)								
101.333	956.8547	425.76	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.333)								
101.417	959.7915	426.42	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.417)								
101.500	962.7330	427.10	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.500)								
101.583	965.6793	427.80	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.583)								
101.667	968.6306	428.52	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.667)								
101.750	971.5869	429.27	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.750)								
101.833	974.5486	430.03	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.833)								
101.917	977.5156	430.81	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	5.917)								
102.000	980.4882	431.62	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.000)								
102.083	983.4665	432.45	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.083)								
102.167	986.4506	433.30	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.167)								
102.250	989.4407	434.17	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.250)								
102.333	992.4370	435.06	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.333)								
102.417	995.4396	435.97	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.417)								
102.500	998.4486	436.91	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.500)								
102.583	1001.4643	437.87	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.583)								
102.667	1004.4868	438.86	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.667)								
102.750	1007.5161	439.87	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.750)								
102.833	1010.5526	440.90	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.833)								
102.917	1013.5964	441.96	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	6.917)								
103.000	1016.6476	443.04	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.000)								
103.083	1019.7064	444.14	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.083)								
103.167	1022.7731	445.28	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.167)								
103.250	1025.8477	446.43	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.250)								
103.333	1028.9304	447.62	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.333)								
103.417	1032.0215	448.83	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.417)								
103.500	1035.1211	450.07	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.500)								
103.583	1038.2295	451.34	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.583)								
103.667	1041.3468	452.63	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.667)								
103.750	1044.4733	453.95	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.750)								
103.833	1047.6090	455.31	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.833)								
103.917	1050.7543	456.69	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	7.917)								
104.000	1053.9093	458.10	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.000)								
104.083	1057.0742	459.55	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.083)								
104.167	1060.2493	461.02	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.167)								
104.250	1063.4347	462.53	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.250)								
104.333	1066.6307	464.07	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.333)								
104.417	1069.8376	465.64	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.417)								
104.500	1073.0557	467.25	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.500)								
104.583	1076.2849	468.89	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.583)								
104.667	1079.5258	470.57	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.667)								
104.750	1082.7784	472.29	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.750)								
104.833	1086.0432	474.04	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.833)								
104.917	1089.3203	475.83	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	8.917)								
105.000	1092.6100	477.66	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.000)								
105.083	1095.9125	479.53	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.083)								
105.167	1099.2281	481.44	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.167)								
105.250	1102.5573	483.39	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.250)								
105.333	1105.9001	485.38	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.333)								
105.417	1109.2570	487.42	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.417)								
105.500	1112.6282	489.50	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.500)								
105.583	1116.0140	491.63	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.583)								
105.667	1119.4149	493.80	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.667)								
105.750	1122.8311	496.02	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.750)								
105.833	1126.2628	498.29	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.833)								
105.917	1129.7103	500.59	.	Q	. V	.	.	.	
(PEAK DAY 1, HOUR	9.917)								

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106.000   1133.1737    502.89  .  Q      .   V     .        .        .
(PEAK DAY 1, HOUR  10.000)
106.083   1136.6530    505.19  .  Q      .   V     .        .        .
(PEAK DAY 1, HOUR  10.083)
106.167   1140.1481    507.50  .  Q      .   V     .        .        .
(PEAK DAY 1, HOUR  10.167)
106.250   1143.6593    509.83  .  Q      .   V     .        .        .
(PEAK DAY 1, HOUR  10.250)
106.333   1147.1870    512.22  .  Q      .   V     .        .        .
(PEAK DAY 1, HOUR  10.333)
106.417   1150.7314    514.65  .  Q      .   V     .        .        .
(PEAK DAY 1, HOUR  10.417)
106.500   1154.2930    517.14  .  Q      .   V     .        .        .
(PEAK DAY 1, HOUR  10.500)
106.583   1157.8721    519.69  .  Q      .   V     .        .        .
(PEAK DAY 1, HOUR  10.583)
106.667   1161.4691    522.30  .  Q      .   V     .        .        .
(PEAK DAY 1, HOUR  10.667)
106.750   1165.0846    524.97  .  Q      .   V     .        .        .
(PEAK DAY 1, HOUR  10.750)
106.833   1168.7190    527.71  .  Q      .   V     .        .        .
(PEAK DAY 1, HOUR  10.833)
106.917   1172.3727    530.52  .   Q      .   V     .        .        .
(PEAK DAY 1, HOUR  10.917)
107.000   1176.0461    533.39  .   Q      .   V     .        .        .
(PEAK DAY 1, HOUR  11.000)
107.083   1179.7400    536.34  .   Q      .   V     .        .        .
(PEAK DAY 1, HOUR  11.083)
107.167   1183.4547    539.37  .   Q      .   V     .        .        .
(PEAK DAY 1, HOUR  11.167)
107.250   1187.1908    542.47  .   Q      .   V     .        .        .
(PEAK DAY 1, HOUR  11.250)
107.333   1190.9487    545.66  .   Q      .   V     .        .        .
(PEAK DAY 1, HOUR  11.333)
107.417   1194.7292    548.93  .   Q      .   V     .        .        .
(PEAK DAY 1, HOUR  11.417)
107.500   1198.5328    552.29  .   Q      .    V    .        .        .
(PEAK DAY 1, HOUR  11.500)
107.583   1202.3602    555.73  .   Q      .    V    .        .        .
(PEAK DAY 1, HOUR  11.583)
107.667   1206.2120    559.28  .   Q      .    V    .        .        .
(PEAK DAY 1, HOUR  11.667)
107.750   1210.0889    562.92  .   Q      .    V    .        .        .
(PEAK DAY 1, HOUR  11.750)
107.833   1213.9916    566.67  .   Q      .    V    .        .        .
(PEAK DAY 1, HOUR  11.833)
107.917   1217.9208    570.53  .   Q      .    V    .        .        .
(PEAK DAY 1, HOUR  11.917)
108.000   1221.8773    574.50  .   Q      .    V    .        .        .
(PEAK DAY 1, HOUR  12.000)
108.083   1225.8698    579.71  .   Q      .    V    .        .        .
(PEAK DAY 1, HOUR  12.083)
108.167   1229.9323    589.88  .   Q      .    V    .        .        .
(PEAK DAY 1, HOUR  12.167)
108.250   1234.1144    607.24  .   Q      .    V    .        .        .
(PEAK DAY 1, HOUR  12.250)
108.333   1238.4558    630.37  .   Q      .    V    .        .        .
(PEAK DAY 1, HOUR  12.333)
108.417   1242.9568    653.55  .   Q      .    V    .        .        .
(PEAK DAY 1, HOUR  12.417)
108.500   1247.5981    673.93  .    Q     .    V    .        .        .
(PEAK DAY 1, HOUR  12.500)
108.583   1252.3645    692.08  .    Q     .    V    .        .        .
(PEAK DAY 1, HOUR  12.583)
108.667   1257.2400    707.92  .    Q     .    V    .        .        .
(PEAK DAY 1, HOUR  12.667)
108.750   1262.2089    721.47  .    Q     .    V    .        .        .
(PEAK DAY 1, HOUR  12.750)
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108.833   1267.2605    733.49  .    Q     .    V    .        .        .
(PEAK DAY 1, HOUR  12.833)
108.917   1272.3885    744.59  .    Q     .    V    .        .        .
(PEAK DAY 1, HOUR  12.917)
109.000   1277.5902    755.28  .    Q     .     V   .        .        .
(PEAK DAY 1, HOUR  13.000)
109.083   1282.8647    765.86  .    Q     .     V   .        .        .
(PEAK DAY 1, HOUR  13.083)
109.167   1288.2131    776.59  .    Q     .     V   .        .        .
(PEAK DAY 1, HOUR  13.167)
109.250   1293.6370    787.54  .    Q     .     V   .        .        .
(PEAK DAY 1, HOUR  13.250)
109.333   1299.1382    798.77  .     Q    .     V   .        .        .
(PEAK DAY 1, HOUR  13.333)
109.417   1304.7185    810.27  .     Q    .     V   .        .        .
(PEAK DAY 1, HOUR  13.417)
109.500   1310.3802    822.08  .     Q    .     V   .        .        .
(PEAK DAY 1, HOUR  13.500)
109.583   1316.1259    834.26  .     Q    .     V   .        .        .
(PEAK DAY 1, HOUR  13.583)
109.667   1321.9585    846.91  .     Q    .     V   .        .        .
(PEAK DAY 1, HOUR  13.667)
109.750   1327.8818    860.06  .     Q    .     V   .        .        .
(PEAK DAY 1, HOUR  13.750)
109.833   1333.8998    873.80  .     Q    .     V   .        .        .
(PEAK DAY 1, HOUR  13.833)
109.917   1340.0166    888.16  .     Q    .     V   .        .        .
(PEAK DAY 1, HOUR  13.917)
110.000   1346.2372    903.23  .     Q    .     V   .        .        .
(PEAK DAY 1, HOUR  14.000)
110.083   1352.5697    919.48  .     Q    .     V   .        .        .
(PEAK DAY 1, HOUR  14.083)
110.167   1359.0330    938.47  .      Q   .      V  .        .        .
(PEAK DAY 1, HOUR  14.167)
110.250   1365.6516    961.03  .      Q   .      V  .        .        .
(PEAK DAY 1, HOUR  14.250)
110.333   1372.4462    986.58  .      Q   .      V  .        .        .
(PEAK DAY 1, HOUR  14.333)
110.417   1379.4203   1012.64  .      Q   .      V  .        .        .
(PEAK DAY 1, HOUR  14.417)
110.500   1386.5701   1038.15  .      Q   .      V  .        .        .
(PEAK DAY 1, HOUR  14.500)
110.583   1393.8951   1063.60  .       Q  .      V  .        .        .
(PEAK DAY 1, HOUR  14.583)
110.667   1401.3995   1089.64  .       Q  .      V  .        .        .
(PEAK DAY 1, HOUR  14.667)
110.750   1409.0916   1116.88  .       Q  .      V  .        .        .
(PEAK DAY 1, HOUR  14.750)
110.833   1416.9855   1146.19  .       Q  .      V  .        .        .
(PEAK DAY 1, HOUR  14.833)
110.917   1425.0986   1178.03  .       Q  .      V  .        .        .
(PEAK DAY 1, HOUR  14.917)
111.000   1433.4519   1212.89  .        Q.      V  .        .        .
(PEAK DAY 1, HOUR  15.000)
111.083   1442.0686   1251.15  .        Q.       V .        .        .
(PEAK DAY 1, HOUR  15.083)
111.167   1450.9772   1293.52  .        Q.       V .        .        .
(PEAK DAY 1, HOUR  15.167)
111.250   1460.2107   1340.71  .         Q       V .        .        .
(PEAK DAY 1, HOUR  15.250)
111.333   1469.8101   1393.83  .         Q       V .        .        .
(PEAK DAY 1, HOUR  15.333)
111.417   1479.8032   1451.00  .         Q       V .        .        .
(PEAK DAY 1, HOUR  15.417)
111.500   1490.1653   1504.57  .         .Q      V .        .        .
(PEAK DAY 1, HOUR  15.500)
111.583   1500.8424   1550.31  .         .Q      V .        .        .
(PEAK DAY 1, HOUR  15.583)
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 111.667   1511.8241   1594.54  .         . Q     V .         .         .
(PEAK DAY 1, HOUR  15.667)
 111.750   1523.2224   1655.03  .         . Q      V.         .         .
(PEAK DAY 1, HOUR  15.750)
 111.833   1535.2651   1748.60  .         .  Q     V.         .         .
(PEAK DAY 1, HOUR  15.833)
 111.917   1548.2864   1890.69  .         .   Q    V.         .         .
(PEAK DAY 1, HOUR  15.917)
 112.000   1562.8824   2119.35  .         .    Q   V.         .         .
(PEAK DAY 1, HOUR  16.000)
 112.083   1580.5690   2568.09  .         .        Q.         .         .
(PEAK DAY 1, HOUR  16.083)
 112.167   1604.0853   3414.57  .         .         V    Q    .         .
(PEAK DAY 1, HOUR  16.167)
 112.250   1634.5641   4425.51  .         .         V         .  Q      .
(PEAK DAY 1, HOUR  16.250)
 112.333   1670.0083   5146.50  .         .         V         .       Q .
(PEAK DAY 1, HOUR  16.333)
 112.417   1706.0327   5230.75  .         .         .V        .        Q.
(PEAK DAY 1, HOUR  16.417)
 112.500   1739.7933   4902.04  .         .         .V        .     Q   .
(PEAK DAY 1, HOUR  16.500)
 112.583   1770.6061   4474.01  .         .         . V       .  Q      .
(PEAK DAY 1, HOUR  16.583)
 112.667   1797.4611   3899.34  .         .         . V      Q.         .
(PEAK DAY 1, HOUR  16.667)
 112.750   1819.9971   3272.23  .         .         . V Q     .         .
(PEAK DAY 1, HOUR  16.750)
 112.833   1838.8982   2744.44  .         .         Q  V      .         .
(PEAK DAY 1, HOUR  16.833)
 112.917   1855.0728   2348.55  .         .      Q  .  V      .         .
(PEAK DAY 1, HOUR  16.917)
 113.000   1869.2981   2065.52  .         .    Q     .  V      .         .
(PEAK DAY 1, HOUR  17.000)
 113.083   1882.0952   1858.14  .         .   Q      .  V      .         .
(PEAK DAY 1, HOUR  17.083)
 113.167   1893.8380   1705.06  .         . Q        .  V      .         .
(PEAK DAY 1, HOUR  17.167)
 113.250   1904.7113   1578.81  .         .Q         .  V      .         .
(PEAK DAY 1, HOUR  17.250)
 113.333   1914.8801   1476.51  .         .Q         .   V     .         .
(PEAK DAY 1, HOUR  17.333)
 113.417   1924.4413   1388.28  .         Q          .   V     .         .
(PEAK DAY 1, HOUR  17.417)
 113.500   1933.5006   1315.41  .        Q.          .   V     .         .
(PEAK DAY 1, HOUR  17.500)
 113.583   1942.1592   1257.23  .        Q.          .   V     .         .
(PEAK DAY 1, HOUR  17.583)
 113.667   1950.4983   1210.84  .        Q.          .   V     .         .
(PEAK DAY 1, HOUR  17.667)
 113.750   1958.5782   1173.21  .       Q .          .   V     .         .
(PEAK DAY 1, HOUR  17.750)
 113.833   1966.4386   1141.32  .       Q .          .   V     .         .
(PEAK DAY 1, HOUR  17.833)
 113.917   1974.1063   1113.35  .       Q .          .   V     .         .
(PEAK DAY 1, HOUR  17.917)
 114.000   1981.6003   1088.14  .       Q .          .   V     .         .
(PEAK DAY 1, HOUR  18.000)
 114.083   1988.9241   1063.41  .       Q .          .   V     .         .
(PEAK DAY 1, HOUR  18.083)
 114.167   1996.0579   1035.82  .      Q  .          .    V    .         .
(PEAK DAY 1, HOUR  18.167)
 114.250   2002.9701   1003.65  .      Q  .          .    V    .         .
(PEAK DAY 1, HOUR  18.250)
 114.333   2009.6365    967.96  .      Q  .          .    V    .         .
(PEAK DAY 1, HOUR  18.333)
 114.417   2016.0707    934.25  .      Q  .          .    V    .         .
(PEAK DAY 1, HOUR  18.417)
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 114.500   2022.3115    906.17  .      Q  .          .    V    .         .
(PEAK DAY 1, HOUR  18.500)
 114.583   2028.3894    882.51  .      Q  .          .    V    .         .
(PEAK DAY 1, HOUR  18.583)
 114.667   2034.3256    861.93  .      Q  .          .    V    .         .
(PEAK DAY 1, HOUR  18.667)
 114.750   2040.1393    844.16  .      Q  .          .    V    .         .
(PEAK DAY 1, HOUR  18.750)
 114.833   2045.8517    829.44  .      Q  .          .    V    .         .
(PEAK DAY 1, HOUR  18.833)
 114.917   2051.4805    817.28  .      Q  .          .    V    .         .
(PEAK DAY 1, HOUR  18.917)
 115.000   2057.0354    806.58  .      Q  .          .    V    .         .
(PEAK DAY 1, HOUR  19.000)
 115.083   2062.5215    796.59  .      Q  .          .    V    .         .
(PEAK DAY 1, HOUR  19.083)
 115.167   2067.9456    787.56  .    Q    .          .    V    .         .
(PEAK DAY 1, HOUR  19.167)
 115.250   2073.3169    779.94  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  19.250)
 115.333   2078.6416    773.16  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  19.333)
 115.417   2083.9241    767.02  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  19.417)
 115.500   2089.1682    761.43  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  19.500)
 115.583   2094.3765    756.24  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  19.583)
 115.667   2099.5498    751.16  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  19.667)
 115.750   2104.6897    746.33  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  19.750)
 115.833   2109.7981    741.75  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  19.833)
 115.917   2114.8752    737.19  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  19.917)
 116.000   2119.9202    732.51  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  20.000)
 116.083   2124.9333    727.91  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  20.083)
 116.167   2129.9172    723.64  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  20.167)
 116.250   2134.8740    719.73  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  20.250)
 116.333   2139.8054    716.05  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  20.333)
 116.417   2144.7122    712.47  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  20.417)
 116.500   2149.5930    708.71  .    Q    .          .     V   .         .
(PEAK DAY 1, HOUR  20.500)
 116.583   2154.4475    704.88  .    Q    .          .      V  .         .
(PEAK DAY 1, HOUR  20.583)
 116.667   2159.2776    701.32  .    Q    .          .      V  .         .
(PEAK DAY 1, HOUR  20.667)
 116.750   2164.0854    698.11  .    Q    .          .      V  .         .
(PEAK DAY 1, HOUR  20.750)
 116.833   2168.8726    695.09  .    Q    .          .      V  .         .
(PEAK DAY 1, HOUR  20.833)
 116.917   2173.6406    692.31  .    Q    .          .      V  .         .
(PEAK DAY 1, HOUR  20.917)
 117.000   2178.3901    689.62  .    Q    .          .      V  .         .
(PEAK DAY 1, HOUR  21.000)
 117.083   2183.1213    686.99  .    Q    .          .      V  .         .
(PEAK DAY 1, HOUR  21.083)
 117.167   2187.8352    684.45  .    Q    .          .      V  .         .
(PEAK DAY 1, HOUR  21.167)
 117.250   2192.5325    682.04  .    Q    .          .      V  .         .
(PEAK DAY 1, HOUR  21.250)
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 117.333   2197.2139    679.74  .    Q    .         .         V  .         .
(PEAK DAY 1, HOUR  21.333)
 117.417   2201.8799    677.50  .    Q    .         .         V  .         .
(PEAK DAY 1, HOUR  21.417)
 117.500   2206.5308    675.32  .    Q    .         .         V  .         .
(PEAK DAY 1, HOUR  21.500)
 117.583   2211.1672    673.20  .    Q    .         .         V  .         .
(PEAK DAY 1, HOUR  21.583)
 117.667   2215.7893    671.14  .    Q    .         .         V  .         .
(PEAK DAY 1, HOUR  21.667)
 117.750   2220.3977    669.12  .    Q    .         .         V  .         .
(PEAK DAY 1, HOUR  21.750)
 117.833   2224.9924    667.16  .    Q    .         .         V  .         .
(PEAK DAY 1, HOUR  21.833)
 117.917   2229.5740    665.24  .    Q    .         .         V  .         .
(PEAK DAY 1, HOUR  21.917)
 118.000   2234.1426    663.36  .    Q    .         .          V .         .
(PEAK DAY 1, HOUR  22.000)
 118.083   2238.6985    661.53  .   Q     .         .          V .         .
(PEAK DAY 1, HOUR  22.083)
 118.167   2243.2422    659.74  .   Q     .         .          V .         .
(PEAK DAY 1, HOUR  22.167)
 118.250   2247.7737    657.99  .   Q     .         .          V .         .
(PEAK DAY 1, HOUR  22.250)
 118.333   2252.2935    656.27  .   Q     .         .          V .         .
(PEAK DAY 1, HOUR  22.333)
 118.417   2256.8015    654.58  .   Q     .         .          V .         .
(PEAK DAY 1, HOUR  22.417)
 118.500   2261.2983    652.94  .   Q     .         .          V .         .
(PEAK DAY 1, HOUR  22.500)
 118.583   2265.7839    651.32  .   Q     .         .          V .         .
(PEAK DAY 1, HOUR  22.583)
 118.667   2270.2588    649.74  .   Q     .         .          V .         .
(PEAK DAY 1, HOUR  22.667)
 118.750   2274.7229    648.19  .   Q     .         .          V .         .
(PEAK DAY 1, HOUR  22.750)
 118.833   2279.1765    646.66  .   Q     .         .          V .         .
(PEAK DAY 1, HOUR  22.833)
 118.917   2283.6199    645.17  .   Q     .         .          V .         .
(PEAK DAY 1, HOUR  22.917)
 119.000   2288.0530    643.70  .   Q     .         .          V .         .
(PEAK DAY 1, HOUR  23.000)
 119.083   2292.4761    642.25  .   Q     .         .          V .         .
(PEAK DAY 1, HOUR  23.083)
 119.167   2296.8894    640.83  .   Q     .         .          V .         .
(PEAK DAY 1, HOUR  23.167)
 119.250   2301.2932    639.43  .   Q     .         .          V .         .
(PEAK DAY 1, HOUR  23.250)
 119.333   2305.6875    638.05  .   Q     .         .          V .         .
(PEAK DAY 1, HOUR  23.333)
 119.417   2310.0725    636.70  .   Q     .         .          V .         .
(PEAK DAY 1, HOUR  23.417)
 119.500   2314.4482    635.37  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  23.500)
 119.583   2318.8149    634.05  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  23.583)
 119.667   2323.1729    632.76  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  23.667)
 119.750   2327.5220    631.48  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  23.750)
 119.833   2331.8623    630.23  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  23.833)
 119.917   2336.1941    628.99  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  23.917)
 120.000   2340.5176    627.77  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  24.000)
 120.083   2344.8259    625.56  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  24.083)
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 120.167   2349.0901    619.16  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  24.167)
 120.250   2353.2664    606.40  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  24.250)
 120.333   2357.3179    588.28  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  24.333)
 120.417   2361.2371    569.05  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  24.417)
 120.500   2365.0342    551.36  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  24.500)
 120.583   2368.7219    535.45  .   Q     .         .           V.         .
(PEAK DAY 1, HOUR  24.583)
 120.667   2372.3210    522.60  .  Q      .         .           V.         .
(PEAK DAY 1, HOUR  24.667)
 120.750   2375.8569    513.40  .  Q      .         .           V.         .
(PEAK DAY 1, HOUR  24.750)
 120.833   2379.3496    507.13  .  Q      .         .           V.         .
(PEAK DAY 1, HOUR  24.833)
 120.917   2382.8130    502.87  .  Q      .         .           V.         .
(PEAK DAY 1, HOUR  24.917)
 121.000   2386.2556    499.86  .  Q      .         .           V.         .
(PEAK DAY 1, HOUR  25.000)
 121.083   2389.6829    497.63  .  Q      .         .           V.         .
(PEAK DAY 1, HOUR  25.083)
 121.167   2393.0977    495.82  .  Q      .         .            V         .
(PEAK DAY 1, HOUR  25.167)
 121.250   2396.5020    494.31  .  Q      .         .            V         .
(PEAK DAY 1, HOUR  25.250)
 121.333   2399.8972    492.99  .  Q      .         .            V         .
(PEAK DAY 1, HOUR  25.333)
 121.417   2403.2844    491.83  .  Q      .         .            V         .
(PEAK DAY 1, HOUR  25.417)
 121.500   2406.6648    490.82  .  Q      .         .            V         .
(PEAK DAY 1, HOUR  25.500)
 121.583   2410.0388    489.92  .  Q      .         .            V         .
(PEAK DAY 1, HOUR  25.583)
 121.667   2413.4072    489.09  .  Q      .         .            V         .
(PEAK DAY 1, HOUR  25.667)
 121.750   2416.7703    488.31  .  Q      .         .            V         .
(PEAK DAY 1, HOUR  25.750)
 121.833   2420.1282    487.56  .  Q      .         .            V         .
(PEAK DAY 1, HOUR  25.833)
 121.917   2423.4810    486.83  .  Q      .         .            V         .
(PEAK DAY 1, HOUR  25.917)
 122.000   2426.8289    486.12  .  Q      .         .            V         .
(PEAK DAY 1, HOUR  26.000)
 122.083   2430.1721    485.43  .  Q      .         .            V         .
(PEAK DAY 1, HOUR  26.083)
 122.167   2433.5107    484.77  .  Q      .         .            V         .
(PEAK DAY 1, HOUR  26.167)
 122.250   2436.8450    484.12  .  Q      .         .            V         .
(PEAK DAY 1, HOUR  26.250)
 122.333   2440.1748    483.48  .  Q      .         .            V         .
(PEAK DAY 1, HOUR  26.333)
 122.417   2443.5005    482.88  .  Q      .         .            V         .
(PEAK DAY 1, HOUR  26.417)
 122.500   2446.8220    482.29  .  Q      .         .            V         .
(PEAK DAY 1, HOUR  26.500)
 122.583   2450.1396    481.71  .  Q      .         .            V         .
(PEAK DAY 1, HOUR  26.583)
 122.667   2453.4534    481.15  .  Q      .         .            V         .
(PEAK DAY 1, HOUR  26.667)
 122.750   2456.7634    480.61  .  Q      .         .            V         .
(PEAK DAY 1, HOUR  26.750)
 122.833   2460.0698    480.09  .  Q      .         .            V         .
(PEAK DAY 1, HOUR  26.833)
 122.917   2463.3728    479.58  .  Q      .         .            V         .
(PEAK DAY 1, HOUR  26.917)
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 123.000   2466.6724    479.08  .  Q      .         .         V         .
 (PEAK DAY 1, HOUR  27.000)
 123.083   2469.9685    478.60  .  Q      .         .         V         .
 (PEAK DAY 1, HOUR  27.083)
 123.167   2473.2615    478.13  .  Q      .         .         .V        .
 (PEAK DAY 1, HOUR  27.167)
 123.250   2476.5513    477.67  .  Q      .         .         .V        .
 (PEAK DAY 1, HOUR  27.250)
 123.333   2479.8379    477.21  .  Q      .         .         .V        .
 (PEAK DAY 1, HOUR  27.333)
 123.417   2483.1213    476.76  .  Q      .         .         .V        .
 (PEAK DAY 1, HOUR  27.417)
 123.500   2486.4016    476.31  .  Q      .         .         .V        .
 (PEAK DAY 1, HOUR  27.500)
 123.583   2489.6790    475.86  .  Q      .         .         .V        .
 (PEAK DAY 1, HOUR  27.583)
 123.667   2492.9531    475.41  .  Q      .         .         .V        .
 (PEAK DAY 1, HOUR  27.667)
 123.750   2496.2241    474.97  .  Q      .         .         .V        .
 (PEAK DAY 1, HOUR  27.750)
 123.833   2499.4922    474.52  .  Q      .         .         .V        .
 (PEAK DAY 1, HOUR  27.833)
 123.917   2502.7571    474.08  .  Q      .         .         .V        .
 (PEAK DAY 1, HOUR  27.917)
 124.000   2506.0190    473.63  .  Q      .         .         .V        .
 (PEAK DAY 1, HOUR  28.000)
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
================================================================================
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PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

HYDROLOGY ANALYSIS FOR CANADA GOBERNADORA PROPOSED CONDITION 100-YEAR EXPECTED VALUE STORM EVENT (BASIN-MULTI-DAY)

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**************************************************************************

             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
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                          Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: CP63CEO8.FLD
  TIME/DATE OF STUDY: 14:17 04/01/2004


**************************************************************************
  FLOW PROCESS FROM NODE    100.00 TO NODE    780.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

        WATERSHED AREA =    4741.300 ACRES
        BASEFLOW =   0.000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    0.520 HOURS
        VALLEY(DEVELOPED):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  1.000
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        VALLEY(UNDEVELOPED)/DESERT:
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:
        +------------------+--------+--------+--------+--------+--------+
        | RAINFALL DEPTHS & |        |        |        |        |        |
        |    LOSS RATES     |  DAY 1 |  DAY 2 |  DAY 3 |  DAY 4 |  DAY 5 |
        |==================+========+========+========+========+========|
        | 5-MINUTE (INCHES) |    0.45|    0.20|    0.09|    0.04|    0.03|
        |30-MINUTE (INCHES) |    0.97|    0.42|    0.19|    0.09|    0.07|
        |   1-HOUR (INCHES) |    1.28|    0.56|    0.25|    0.12|    0.10|
        |   3-HOUR (INCHES) |    2.16|    0.94|    0.42|    0.20|    0.16|
        |   6-HOUR (INCHES) |    3.02|    1.32|    0.58|    0.28|    0.23|
        |  24-HOUR (INCHES) |    5.01|    2.19|    0.97|    0.47|    0.38|
        |==================+========+========+========+========+========|
        | LOSS RATE(IN/HR)  |   0.190|   0.190|   0.190|   0.190|   0.190|
        | LOW LOSS FRACTION |   0.610|   0.810|   0.930|   0.990|   0.990|
        +------------------+--------+--------+--------+--------+--------+

        PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR = 0.793
         30-MINUTE FACTOR = 0.793
          1-HOUR FACTOR = 0.793
          3-HOUR FACTOR = 0.969
          6-HOUR FACTOR = 0.984
         24-HOUR FACTOR = 0.990

        UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
        UNIT INTERVAL PERCENTAGE OF LAG-TIME =  16.026


        RUNOFF HYDROGRAPH LISTING LIMITS:
          MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  96.00
          MODEL TIME(HOURS) FOR END OF RESULTS = 124.00


==========================================================================
                      UNIT HYDROGRAPH DETERMINATION

--------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------
          1                1.043               598.328
          2                3.671              1506.497
          3                7.588              2246.119
          4               12.584              2864.778
          5               20.278              4411.764
          6               33.729              7712.629
          7               52.531             10781.282
          8               61.624              5213.888
          9               67.455              3343.624
         10               72.172              2704.769
         11               76.244              2334.520
         12               79.328              1768.307
         13               82.255              1678.753
         14               84.650              1373.153
         15               86.832              1251.016
         16               88.638              1035.667
         17               90.211               902.195
         18               91.667               834.439
         19               92.924               720.986
         20               94.054               648.204
         21               94.947               511.963
         22               95.799               488.554
         23               96.406               347.671
         24               96.923               296.373
         25               97.440               296.517
         26               97.919               274.779
         27               98.076                90.079
         28               98.159                47.452
         29               98.242                47.518
         30               98.325                47.592
         31               98.407                47.518
         32               98.490                47.522
         33               98.573                47.518
         34               98.656                47.522
         35               98.739                47.522
         36               98.822                47.658
         37               98.905                47.382
         38               98.988                47.518
         39               99.070                47.522
         40               99.153                47.518
         41               99.236                47.518
         42               99.319                47.518
         43               99.402                47.518
         44               99.485                47.518
         45               99.568                47.518
         46               99.651                47.518
         47               99.733                47.518
         48               99.816                47.518
         49               99.899                47.518
         50               99.982                47.518
         51              100.000                10.294


--------------------------------------------------------------------------
    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =    2178.4390
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =    1350.7266
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5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	1500.0	3000.0	4500.0	6000.0
96.000	301.6200	32.46	Q	V	.	.	.
(PEAK DAY 2, HOUR 24.000)							
96.083	301.8500	33.40	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.083)							
96.167	302.0987	36.12	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.167)							
96.250	302.3764	40.31	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.250)							
96.333	302.6914	45.75	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.333)							
96.417	303.0650	54.25	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.417)							
96.500	303.5421	69.27	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.500)							
96.583	304.1645	90.38	Q	V.	.	.	.
(PEAK DAY 1, HOUR 0.583)							
96.667	304.8582	100.72	Q	V.	.	.	.
(PEAK DAY 1, HOUR 0.667)							
96.750	305.5984	107.48	Q	V.	.	.	.
(PEAK DAY 1, HOUR 0.750)							
96.833	306.3767	113.01	Q	V.	.	.	.
(PEAK DAY 1, HOUR 0.833)							
96.917	307.1886	117.88	Q	V.	.	.	.
(PEAK DAY 1, HOUR 0.917)							
97.000	308.0264	121.65	Q	V.	.	.	.
(PEAK DAY 1, HOUR 1.000)							
97.083	308.8892	125.29	Q	V.	.	.	.
(PEAK DAY 1, HOUR 1.083)							
97.167	309.7730	128.33	Q	V.	.	.	.
(PEAK DAY 1, HOUR 1.167)							
97.250	310.6765	131.18	Q	V.	.	.	.
(PEAK DAY 1, HOUR 1.250)							
97.333	311.5966	133.60	Q	V.	.	.	.
(PEAK DAY 1, HOUR 1.333)							
97.417	312.5318	135.80	Q	V.	.	.	.
(PEAK DAY 1, HOUR 1.417)							
97.500	313.4813	137.86	Q	V.	.	.	.
(PEAK DAY 1, HOUR 1.500)							
97.583	314.4436	139.73	Q	V.	.	.	.
(PEAK DAY 1, HOUR 1.583)							
97.667	315.4178	141.46	Q	V.	.	.	.
(PEAK DAY 1, HOUR 1.667)							
97.750	316.4023	142.95	Q	V.	.	.	.
(PEAK DAY 1, HOUR 1.750)							
97.833	317.3966	144.38	Q	V.	.	.	.
(PEAK DAY 1, HOUR 1.833)							
97.917	318.3992	145.57	Q	V.	.	.	.
(PEAK DAY 1, HOUR 1.917)							
98.000	319.4091	146.65	Q	V.	.	.	.
(PEAK DAY 1, HOUR 2.000)							
98.083	320.4267	147.75	Q	V.	.	.	.
(PEAK DAY 1, HOUR 2.083)							
98.167	321.4515	148.81	Q	V.	.	.	.
(PEAK DAY 1, HOUR 2.167)							
98.250	322.4813	149.52	Q	V.	.	.	.
(PEAK DAY 1, HOUR 2.250)							
98.333	323.5154	150.15	.Q	V.	.	.	.
(PEAK DAY 1, HOUR 2.333)							
98.417	324.5539	150.79	.Q	V.	.	.	.
(PEAK DAY 1, HOUR 2.417)							
98.500	325.5967	151.43	.Q	V.	.	.	.
(PEAK DAY 1, HOUR 2.500)							
98.583	326.6442	152.09	.Q	V.	.	.	.
(PEAK DAY 1, HOUR 2.583)							
98.667	327.6960	152.73	.Q	V.	.	.	.
(PEAK DAY 1, HOUR 2.667)							
98.750	328.7525	153.40	.Q	V.	.	.	.
(PEAK DAY 1, HOUR 2.750)							
98.833	329.8135	154.06	.Q	V.	.	.	.
(PEAK DAY 1, HOUR 2.833)							
98.917	330.8793	154.74	.Q	V.	.	.	.
(PEAK DAY 1, HOUR 2.917)							
99.000	331.9496	155.41	.Q	V.	.	.	.
(PEAK DAY 1, HOUR 3.000)							
99.083	333.0247	156.11	.Q	V.	.	.	.
(PEAK DAY 1, HOUR 3.083)							
99.167	334.1046	156.79	.Q	V.	.	.	.
(PEAK DAY 1, HOUR 3.167)							
99.250	335.1894	157.50	.Q	V.	.	.	.
(PEAK DAY 1, HOUR 3.250)							
99.333	336.2789	158.20	.Q	V.	.	.	.
(PEAK DAY 1, HOUR 3.333)							
99.417	337.3734	158.93	.Q	V.	.	.	.
(PEAK DAY 1, HOUR 3.417)							
99.500	338.4728	159.64	.Q	V	.	.	.
(PEAK DAY 1, HOUR 3.500)							
99.583	339.5773	160.37	.Q	V	.	.	.
(PEAK DAY 1, HOUR 3.583)							
99.667	340.6868	161.10	.Q	V	.	.	.
(PEAK DAY 1, HOUR 3.667)							
99.750	341.8015	161.85	.Q	V	.	.	.
(PEAK DAY 1, HOUR 3.750)							
99.833	342.9213	162.59	.Q	V	.	.	.
(PEAK DAY 1, HOUR 3.833)							
99.917	344.0464	163.36	.Q	V	.	.	.
(PEAK DAY 1, HOUR 3.917)							
100.000	345.1766	164.11	.Q	V	.	.	.
(PEAK DAY 1, HOUR 4.000)							
100.083	346.3123	164.90	.Q	V	.	.	.
(PEAK DAY 1, HOUR 4.083)							
100.167	347.4532	165.67	.Q	V	.	.	.
(PEAK DAY 1, HOUR 4.167)							
100.250	348.5992	166.39	.Q	V	.	.	.
(PEAK DAY 1, HOUR 4.250)							
100.333	349.7499	167.09	.Q	V	.	.	.
(PEAK DAY 1, HOUR 4.333)							
100.417	350.9056	167.81	.Q	V	.	.	.
(PEAK DAY 1, HOUR 4.417)							
100.500	352.0662	168.52	.Q	V	.	.	.
(PEAK DAY 1, HOUR 4.500)							
100.583	353.2319	169.26	.Q	V	.	.	.
(PEAK DAY 1, HOUR 4.583)							
100.667	354.4025	169.98	.Q	V	.	.	.
(PEAK DAY 1, HOUR 4.667)							
100.750	355.5784	170.74	.Q	V	.	.	.
(PEAK DAY 1, HOUR 4.750)							
100.833	356.7594	171.48	.Q	V	.	.	.
(PEAK DAY 1, HOUR 4.833)							
100.917	357.9456	172.25	.Q	V	.	.	.
(PEAK DAY 1, HOUR 4.917)							
101.000	359.1371	173.01	.Q	V	.	.	.
(PEAK DAY 1, HOUR 5.000)							
101.083	360.3341	173.80	.Q	V	.	.	.

(PEAK DAY 1, HOUR 5.083)
101.167 361.5364 174.57 .Q V . . .
(PEAK DAY 1, HOUR 5.167)
101.250 362.7443 175.38 .Q V . . .
(PEAK DAY 1, HOUR 5.250)
101.333 363.9576 176.18 .Q V . . .
(PEAK DAY 1, HOUR 5.333)
101.417 365.1767 177.01 .Q V . . .
(PEAK DAY 1, HOUR 5.417)
101.500 366.4013 177.82 .Q V . . .
(PEAK DAY 1, HOUR 5.500)
101.583 367.6318 178.67 .Q V . . .
(PEAK DAY 1, HOUR 5.583)
101.667 368.8681 179.50 .Q V . . .
(PEAK DAY 1, HOUR 5.667)
101.750 370.1103 180.37 .Q V . . .
(PEAK DAY 1, HOUR 5.750)
101.833 371.3584 181.23 .Q V . . .
(PEAK DAY 1, HOUR 5.833)
101.917 372.6127 182.12 .Q .V . . .
(PEAK DAY 1, HOUR 5.917)
102.000 373.8730 183.00 .Q .V . . .
(PEAK DAY 1, HOUR 6.000)
102.083 375.1396 183.91 .Q .V . . .
(PEAK DAY 1, HOUR 6.083)
102.167 376.4124 184.81 .Q .V . . .
(PEAK DAY 1, HOUR 6.167)
102.250 377.6917 185.75 .Q .V . . .
(PEAK DAY 1, HOUR 6.250)
102.333 378.9773 186.67 .Q .V . . .
(PEAK DAY 1, HOUR 6.333)
102.417 380.2695 187.63 .Q .V . . .
(PEAK DAY 1, HOUR 6.417)
102.500 381.5682 188.58 .Q .V . . .
(PEAK DAY 1, HOUR 6.500)
102.583 382.8738 189.57 .Q .V . . .
(PEAK DAY 1, HOUR 6.583)
102.667 384.1861 190.54 .Q .V . . .
(PEAK DAY 1, HOUR 6.667)
102.750 385.5054 191.56 .Q .V . . .
(PEAK DAY 1, HOUR 6.750)
102.833 386.8315 192.56 .Q .V . . .
(PEAK DAY 1, HOUR 6.833)
102.917 388.1649 193.60 .Q .V . . .
(PEAK DAY 1, HOUR 6.917)
103.000 389.5053 194.63 .Q .V . . .
(PEAK DAY 1, HOUR 7.000)
103.083 390.8531 195.71 .Q .V . . .
(PEAK DAY 1, HOUR 7.083)
103.167 392.2082 196.76 .Q .V . . .
(PEAK DAY 1, HOUR 7.167)
103.250 393.5710 197.87 .Q .V . . .
(PEAK DAY 1, HOUR 7.250)
103.333 394.9412 198.95 .Q .V . . .
(PEAK DAY 1, HOUR 7.333)
103.417 396.3192 200.09 .Q .V . . .
(PEAK DAY 1, HOUR 7.417)
103.500 397.7050 201.21 .Q .V . . .
(PEAK DAY 1, HOUR 7.500)
103.583 399.0988 202.38 .Q .V . . .
(PEAK DAY 1, HOUR 7.583)
103.667 400.5005 203.53 .Q .V . . .
(PEAK DAY 1, HOUR 7.667)
103.750 401.9106 204.74 .Q .V . . .
(PEAK DAY 1, HOUR 7.750)
103.833 403.3288 205.93 .Q .V . . .
(PEAK DAY 1, HOUR 7.833)
103.917 404.7556 207.17 .Q .V . . .
(PEAK DAY 1, HOUR 7.917)
104.000 406.1909 208.40 .Q . V . . .
(PEAK DAY 1, HOUR 8.000)
104.083 407.6349 209.68 .Q . V . . .
(PEAK DAY 1, HOUR 8.083)
104.167 409.0877 210.95 .Q . V . . .
(PEAK DAY 1, HOUR 8.167)
104.250 410.5497 212.27 .Q . V . . .
(PEAK DAY 1, HOUR 8.250)
104.333 412.0206 213.58 .Q . V . . .
(PEAK DAY 1, HOUR 8.333)
104.417 413.5009 214.95 .Q . V . . .
(PEAK DAY 1, HOUR 8.417)
104.500 414.9906 216.29 .Q . V . . .
(PEAK DAY 1, HOUR 8.500)
104.583 416.4900 217.71 .Q . V . . .
(PEAK DAY 1, HOUR 8.583)
104.667 417.9989 219.10 .Q . V . . .
(PEAK DAY 1, HOUR 8.667)
104.750 419.5180 220.57 .Q . V . . .
(PEAK DAY 1, HOUR 8.750)
104.833 421.0469 222.01 .Q . V . . .
(PEAK DAY 1, HOUR 8.833)
104.917 422.5864 223.52 .Q . V . . .
(PEAK DAY 1, HOUR 8.917)
105.000 424.1360 225.02 .Q . V . . .
(PEAK DAY 1, HOUR 9.000)
105.083 425.6966 226.59 .Q . V . . .
(PEAK DAY 1, HOUR 9.083)
105.167 427.2677 228.13 .Q . V . . .
(PEAK DAY 1, HOUR 9.167)
105.250 428.8501 229.76 .Q . V . . .
(PEAK DAY 1, HOUR 9.250)
105.333 430.4435 231.36 .Q . V . . .
(PEAK DAY 1, HOUR 9.333)
105.417 432.0485 233.05 .Q . V . . .
(PEAK DAY 1, HOUR 9.417)
105.500 433.6649 234.71 .Q . V . . .
(PEAK DAY 1, HOUR 9.500)
105.583 435.2935 236.47 .Q . V . . .
(PEAK DAY 1, HOUR 9.583)
105.667 436.9340 238.19 .Q . V . . .
(PEAK DAY 1, HOUR 9.667)
105.750 438.5870 240.02 .Q . V . . .
(PEAK DAY 1, HOUR 9.750)
105.833 440.2523 241.81 .Q . V . . .
(PEAK DAY 1, HOUR 9.833)
105.917 441.9308 243.71 .Q . V . . .
(PEAK DAY 1, HOUR 9.917)
106.000 443.6221 245.58 .Q . V . . .
(PEAK DAY 1, HOUR 10.000)
106.083 445.3270 247.55 .Q . V . . .
(PEAK DAY 1, HOUR 10.083)
106.167 447.0453 249.50 .Q . V . . .
(PEAK DAY 1, HOUR 10.167)
106.250 448.7778 251.56 .Q . V . . .
(PEAK DAY 1, HOUR 10.250)
106.333 450.5243 253.59 .Q . V . . .
(PEAK DAY 1, HOUR 10.333)
106.417 452.2855 255.73 .Q . V . . .
(PEAK DAY 1, HOUR 10.417)
106.500 454.0613 257.85 .Q . V . . .
(PEAK DAY 1, HOUR 10.500)
106.583 455.8526 260.09 .Q . V . . .
(PEAK DAY 1, HOUR 10.583)
106.667 457.6592 262.31 .Q . V . . .

(PEAK DAY 1, HOUR 10.667)
106.750 459.4819 264.66 .Q . V . . .
(PEAK DAY 1, HOUR 10.750)
106.833 461.3206 266.98 .Q . V . . .
(PEAK DAY 1, HOUR 10.833)
106.917 463.1761 269.43 .Q . V . . .
(PEAK DAY 1, HOUR 10.917)
107.000 465.0485 271.86 .Q . V . . .
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107.083 466.9386 274.44 .Q . V . . .
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107.167 468.8462 276.99 .Q . V . . .
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107.250 470.7725 279.69 .Q . V . . .
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107.333 472.7172 282.37 .Q . V . . .
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107.417 474.6815 285.22 .Q . V . . .
(PEAK DAY 1, HOUR 11.417)
107.500 476.6653 288.04 .Q . V . . .
(PEAK DAY 1, HOUR 11.500)
107.583 478.6697 291.04 .Q . V . . .
(PEAK DAY 1, HOUR 11.583)
107.667 480.6945 294.01 .Q . V . . .
(PEAK DAY 1, HOUR 11.667)
107.750 482.7412 297.18 .Q . V . . .
(PEAK DAY 1, HOUR 11.750)
107.833 484.8095 300.32 . Q . V . . .
(PEAK DAY 1, HOUR 11.833)
107.917 486.9009 303.66 . Q . V . . .
(PEAK DAY 1, HOUR 11.917)
108.000 489.0151 306.99 . Q . V . . .
(PEAK DAY 1, HOUR 12.000)
108.083 491.1629 311.85 . Q . V . . .
(PEAK DAY 1, HOUR 12.083)
108.167 493.3578 318.70 . Q . V . . .
(PEAK DAY 1, HOUR 12.167)
108.250 495.6128 327.43 . Q . V . . .
(PEAK DAY 1, HOUR 12.250)
108.333 497.9373 337.51 . Q . V . . .
(PEAK DAY 1, HOUR 12.333)
108.417 500.3565 351.28 . Q . V . . .
(PEAK DAY 1, HOUR 12.417)
108.500 502.9208 372.33 . Q . V . . .
(PEAK DAY 1, HOUR 12.500)
108.583 505.6788 400.46 . Q . V . . .
(PEAK DAY 1, HOUR 12.583)
108.667 508.5465 416.38 . Q . V . . .
(PEAK DAY 1, HOUR 12.667)
108.750 511.4977 428.52 . Q . V . . .
(PEAK DAY 1, HOUR 12.750)
108.833 514.5228 439.25 . Q . V . . .
(PEAK DAY 1, HOUR 12.833)
108.917 517.6188 449.53 . Q . V . . .
(PEAK DAY 1, HOUR 12.917)
109.000 520.7769 458.57 . Q . V . . .
(PEAK DAY 1, HOUR 13.000)
109.083 523.9986 467.78 . Q . V . . .
(PEAK DAY 1, HOUR 13.083)
109.167 527.2792 476.34 . Q . V . . .
(PEAK DAY 1, HOUR 13.167)
109.250 530.6198 485.05 . Q . V . . .
(PEAK DAY 1, HOUR 13.250)
109.333 534.0172 493.30 . Q . V . . .
(PEAK DAY 1, HOUR 13.333)
109.417 537.4725 501.71 . Q . V . . .
(PEAK DAY 1, HOUR 13.417)
109.500 540.9849 510.01 . Q . V . . .
(PEAK DAY 1, HOUR 13.500)
109.583 544.5577 518.76 . Q . V . . .
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109.667 548.1929 527.83 . Q . V . . .
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109.750 551.8967 537.80 . Q . V . . .
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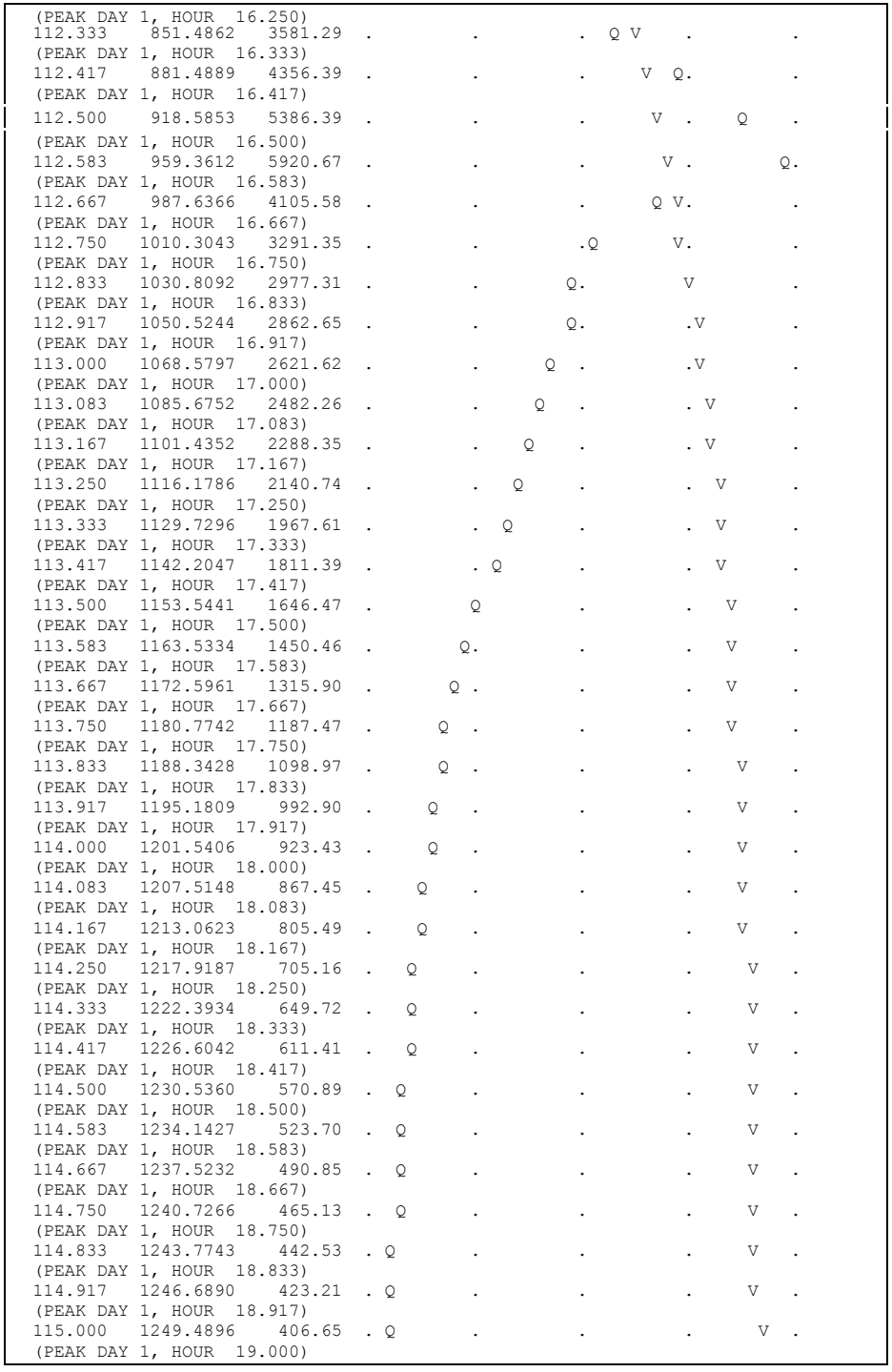
(PEAK DAY 1, HOUR 13.917)
110.000 563.5055 575.89 . Q . V . . .
(PEAK DAY 1, HOUR 14.000)
110.083 567.6367 599.85 . Q . V . . .
(PEAK DAY 1, HOUR 14.083)
110.167 571.9971 633.13 . Q . V . . .
(PEAK DAY 1, HOUR 14.167)
110.250 576.6469 675.16 . Q . V . . .
(PEAK DAY 1, HOUR 14.250)
110.333 581.6292 723.42 . Q . V . . .
(PEAK DAY 1, HOUR 14.333)
110.417 587.0558 787.96 . Q . V . . .
(PEAK DAY 1, HOUR 14.417)
110.500 593.1316 882.20 . Q . V . . .
(PEAK DAY 1, HOUR 14.500)
110.583 600.0605 1006.08 . Q . V . . .
(PEAK DAY 1, HOUR 14.583)
110.667 607.5073 1081.27 . Q . V . . .
(PEAK DAY 1, HOUR 14.667)
110.750 615.3788 1142.94 . Q . V . . .
(PEAK DAY 1, HOUR 14.750)
110.833 623.6427 1199.92 . Q . V . . .
(PEAK DAY 1, HOUR 14.833)
110.917 632.3015 1257.25 . Q . V . . .
(PEAK DAY 1, HOUR 14.917)
111.000 641.3297 1310.90 . Q . V . . .
(PEAK DAY 1, HOUR 15.000)
111.083 650.7525 1368.19 . Q. V. . .
(PEAK DAY 1, HOUR 15.083)
111.167 660.5641 1424.65 . Q. V. . .
(PEAK DAY 1, HOUR 15.167)
111.250 670.7954 1485.58 . Q. V. . .
(PEAK DAY 1, HOUR 15.250)
111.333 681.4521 1547.35 . Q V . .
(PEAK DAY 1, HOUR 15.333)
111.417 692.4865 1602.19 . Q V . .
(PEAK DAY 1, HOUR 15.417)
111.500 703.7880 1640.98 . Q V . .
(PEAK DAY 1, HOUR 15.500)
111.583 715.3125 1673.36 . .Q .V . .
(PEAK DAY 1, HOUR 15.583)
111.667 727.0179 1699.63 . .Q .V . .
(PEAK DAY 1, HOUR 15.667)
111.750 738.8018 1711.01 . .Q .V . .
(PEAK DAY 1, HOUR 15.750)
111.833 750.3088 1670.82 . .Q . V . .
(PEAK DAY 1, HOUR 15.833)
111.917 761.3641 1605.23 . Q . V . .
(PEAK DAY 1, HOUR 15.917)
112.000 773.2166 1720.98 . .Q . V . .
(PEAK DAY 1, HOUR 16.000)
112.083 787.6506 2095.83 . . Q . V . .
(PEAK DAY 1, HOUR 16.083)
112.167 805.5228 2595.04 . . Q . V . .
(PEAK DAY 1, HOUR 16.167)
112.250 826.8217 3092.60 . . Q V . .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112.333 851.4862 3581.29
(PEAK DAY 1, HOUR 16.333)
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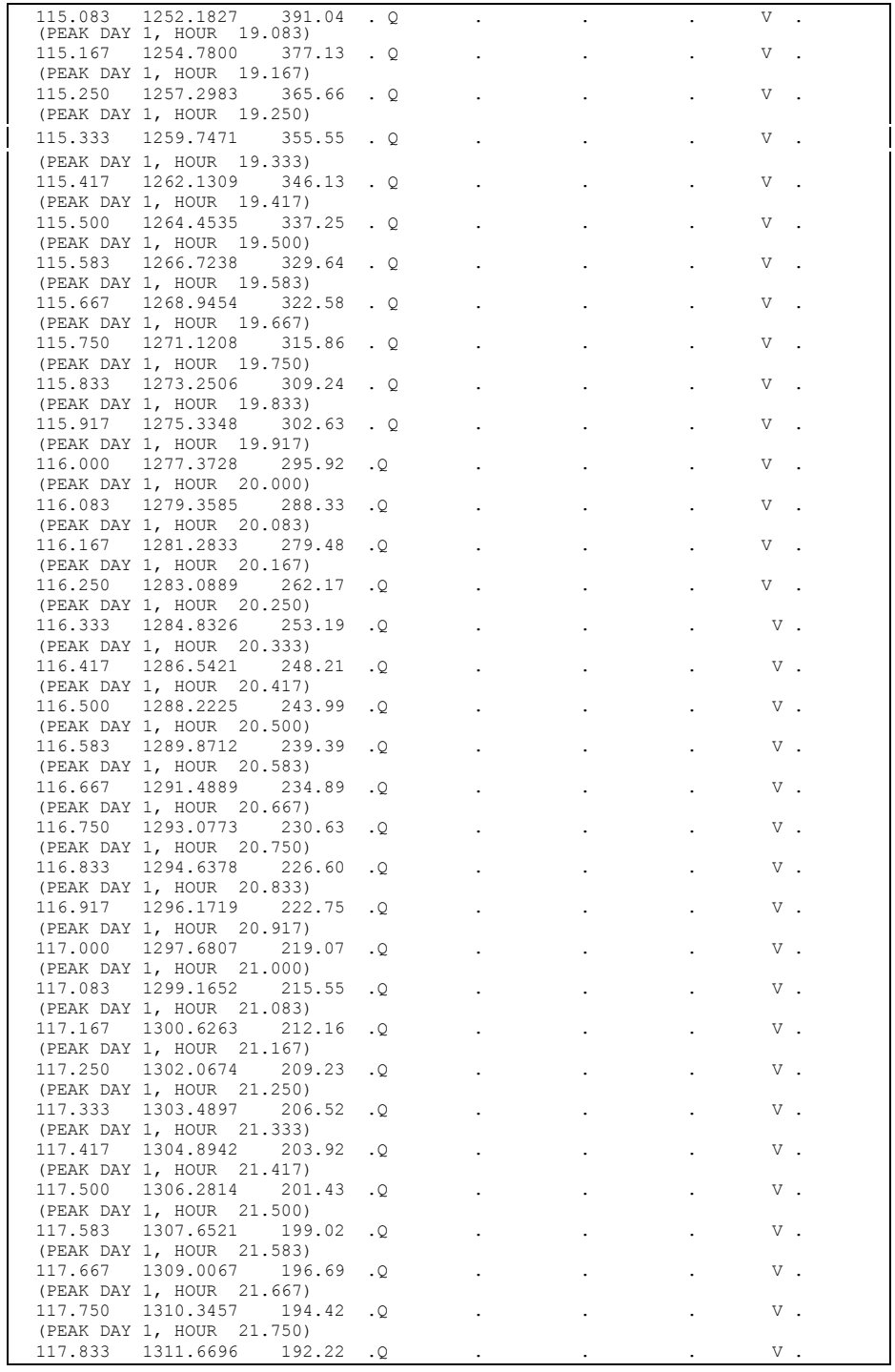
112.500 918.5853 5386.39
(PEAK DAY 1, HOUR 16.500)
112.583 959.3612 5920.67
(PEAK DAY 1, HOUR 16.583)
112.667 987.6366 4105.58
(PEAK DAY 1, HOUR 16.667)
112.750 1010.3043 3291.35
(PEAK DAY 1, HOUR 16.750)
112.833 1030.8092 2977.31
(PEAK DAY 1, HOUR 16.833)
112.917 1050.5244 2862.65
(PEAK DAY 1, HOUR 16.917)
113.000 1068.5797 2621.62
(PEAK DAY 1, HOUR 17.000)
113.083 1085.6752 2482.26
(PEAK DAY 1, HOUR 17.083)
113.167 1101.4352 2288.35
(PEAK DAY 1, HOUR 17.167)
113.250 1116.1786 2140.74
(PEAK DAY 1, HOUR 17.250)
113.333 1129.7296 1967.61
(PEAK DAY 1, HOUR 17.333)
113.417 1142.2047 1811.39
(PEAK DAY 1, HOUR 17.417)
113.500 1153.5441 1646.47
(PEAK DAY 1, HOUR 17.500)
113.583 1163.5334 1450.46
(PEAK DAY 1, HOUR 17.583)
113.667 1172.5961 1315.90
(PEAK DAY 1, HOUR 17.667)
113.750 1180.7742 1187.47
(PEAK DAY 1, HOUR 17.750)
113.833 1188.3428 1098.97
(PEAK DAY 1, HOUR 17.833)
113.917 1195.1809 992.90
(PEAK DAY 1, HOUR 17.917)
114.000 1201.5406 923.43
(PEAK DAY 1, HOUR 18.000)
114.083 1207.5148 867.45
(PEAK DAY 1, HOUR 18.083)
114.167 1213.0623 805.49
(PEAK DAY 1, HOUR 18.167)
114.250 1217.9187 705.16
(PEAK DAY 1, HOUR 18.250)
114.333 1222.3934 649.72
(PEAK DAY 1, HOUR 18.333)
114.417 1226.6042 611.41
(PEAK DAY 1, HOUR 18.417)
114.500 1230.5360 570.89
(PEAK DAY 1, HOUR 18.500)
114.583 1234.1427 523.70
(PEAK DAY 1, HOUR 18.583)
114.667 1237.5232 490.85
(PEAK DAY 1, HOUR 18.667)
114.750 1240.7266 465.13
(PEAK DAY 1, HOUR 18.750)
114.833 1243.7743 442.53
(PEAK DAY 1, HOUR 18.833)
114.917 1246.6890 423.21
(PEAK DAY 1, HOUR 18.917)
115.000 1249.4896 406.65
(PEAK DAY 1, HOUR 19.000)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(PEAK DAY 1, HOUR 19.083)
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(PEAK DAY 1, HOUR 19.250)
115.333 1259.7471 355.55
(PEAK DAY 1, HOUR 19.333)
115.417 1262.1309 346.13
(PEAK DAY 1, HOUR 19.417)
115.500 1264.4535 337.25
(PEAK DAY 1, HOUR 19.500)
115.583 1266.7238 329.64
(PEAK DAY 1, HOUR 19.583)
115.667 1268.9454 322.58
(PEAK DAY 1, HOUR 19.667)
115.750 1271.1208 315.86
(PEAK DAY 1, HOUR 19.750)
115.833 1273.2506 309.24
(PEAK DAY 1, HOUR 19.833)
115.917 1275.3348 302.63
(PEAK DAY 1, HOUR 19.917)
116.000 1277.3728 295.92
(PEAK DAY 1, HOUR 20.000)
116.083 1279.3585 288.33
(PEAK DAY 1, HOUR 20.083)
116.167 1281.2833 279.48
(PEAK DAY 1, HOUR 20.167)
116.250 1283.0889 262.17
(PEAK DAY 1, HOUR 20.250)
116.333 1284.8326 253.19
(PEAK DAY 1, HOUR 20.333)
116.417 1286.5421 248.21
(PEAK DAY 1, HOUR 20.417)
116.500 1288.2225 243.99
(PEAK DAY 1, HOUR 20.500)
116.583 1289.8712 239.39
(PEAK DAY 1, HOUR 20.583)
116.667 1291.4889 234.89
(PEAK DAY 1, HOUR 20.667)
116.750 1293.0773 230.63
(PEAK DAY 1, HOUR 20.750)
116.833 1294.6378 226.60
(PEAK DAY 1, HOUR 20.833)
116.917 1296.1719 222.75
(PEAK DAY 1, HOUR 20.917)
117.000 1297.6807 219.07
(PEAK DAY 1, HOUR 21.000)
117.083 1299.1652 215.55
(PEAK DAY 1, HOUR 21.083)
117.167 1300.6263 212.16
(PEAK DAY 1, HOUR 21.167)
117.250 1302.0674 209.23
(PEAK DAY 1, HOUR 21.250)
117.333 1303.4897 206.52
(PEAK DAY 1, HOUR 21.333)
117.417 1304.8942 203.92
(PEAK DAY 1, HOUR 21.417)
117.500 1306.2814 201.43
(PEAK DAY 1, HOUR 21.500)
117.583 1307.6521 199.02
(PEAK DAY 1, HOUR 21.583)
117.667 1309.0067 196.69
(PEAK DAY 1, HOUR 21.667)
117.750 1310.3457 194.42
(PEAK DAY 1, HOUR 21.750)
117.833 1311.6696 192.22

(PEAK DAY 1, HOUR 21.833)								
117.917	1312.9786	190.08	.Q	.	.	.	V	.
(PEAK DAY 1, HOUR 21.917)								
118.000	1314.2734	188.00	.Q	.	.	.	V	.
(PEAK DAY 1, HOUR 22.000)								
118.083	1315.5542	185.97	.Q	.	.	.	V	.
(PEAK DAY 1, HOUR 22.083)								
118.167	1316.8214	184.00	.Q	.	.	.	V	.
(PEAK DAY 1, HOUR 22.167)								
118.250	1318.0759	182.15	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.250)								
118.333	1319.3182	180.38	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.333)								
118.417	1320.5486	178.65	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.417)								
118.500	1321.7673	176.97	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.500)								
118.583	1322.9749	175.33	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.583)								
118.667	1324.1713	173.72	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.667)								
118.750	1325.3569	172.16	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.750)								
118.833	1326.5321	170.63	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.833)								
118.917	1327.6970	169.14	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.917)								
119.000	1328.8518	167.68	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.000)								
119.083	1329.9968	166.25	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.083)								
119.167	1331.1322	164.86	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.167)								
119.250	1332.2582	163.49	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.250)								
119.333	1333.3750	162.16	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.333)								
119.417	1334.4828	160.85	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.417)								
119.500	1335.5818	159.57	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.500)								
119.583	1336.6721	158.32	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.583)								
119.667	1337.7540	157.09	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.667)								
119.750	1338.8276	155.89	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.750)								
119.833	1339.8932	154.71	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.833)								
119.917	1340.9507	153.56	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.917)								
120.000	1342.0004	152.42	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.000)								
120.083	1343.0322	149.83	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.083)								
120.167	1344.0309	145.01	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.167)								
120.250	1344.9840	138.40	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.250)								
120.333	1345.8815	130.31	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.333)								
120.417	1346.6971	118.44	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.417)								
120.500	1347.3754	98.47	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.500)								
120.583	1347.8645	71.03	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.583)								
120.667	1348.2611	57.59	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.667)								
120.750	1348.5978	48.88	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.750)								
120.833	1348.8857	41.82	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.833)								
120.917	1349.1318	35.73	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.917)								
121.000	1349.3459	31.08	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.000)								
121.083	1349.5298	26.69	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.083)								
121.167	1349.6888	23.09	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.167)								
121.250	1349.8254	19.83	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.250)								
121.333	1349.9432	17.11	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.333)								
121.417	1350.0448	14.75	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.417)								
121.500	1350.1313	12.57	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.500)								
121.583	1350.2050	10.70	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.583)								
121.667	1350.2670	9.01	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.667)								
121.750	1350.3198	7.67	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.750)								
121.833	1350.3639	6.41	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.833)								
121.917	1350.4017	5.50	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.917)								
122.000	1350.4342	4.72	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.000)								
122.083	1350.4614	3.95	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.083)								
122.167	1350.4838	3.24	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.167)								
122.250	1350.5044	2.99	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.250)								
122.333	1350.5240	2.85	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.333)								
122.417	1350.5427	2.71	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.417)								
122.500	1350.5604	2.57	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.500)								
122.583	1350.5771	2.44	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.583)								
122.667	1350.5930	2.30	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.667)								
122.750	1350.6079	2.17	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.750)								
122.833	1350.6219	2.03	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.833)								
122.917	1350.6350	1.90	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.917)								
123.000	1350.6472	1.77	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.000)								
123.083	1350.6584	1.64	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.083)								
123.167	1350.6688	1.51	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.167)								
123.250	1350.6783	1.38	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.250)								
123.333	1350.6870	1.25	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.333)								
123.417	1350.6947	1.13	Q	.	.	.	V.	

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(PEAK DAY 1, HOUR  27.417)
123.500   1350.7015      1.00  Q         .         .         .        V.
(PEAK DAY 1, HOUR  27.500)
123.583   1350.7075      0.88  Q         .         .         .        V.
(PEAK DAY 1, HOUR  27.583)
123.667   1350.7126      0.75  Q         .         .         .        V.
(PEAK DAY 1, HOUR  27.667)
123.750   1350.7169      0.63  Q         .         .         .        V.
(PEAK DAY 1, HOUR  27.750)
123.833   1350.7205      0.51  Q         .         .         .        V.
(PEAK DAY 1, HOUR  27.833)
123.917   1350.7231      0.38  Q         .         .         .        V.
(PEAK DAY 1, HOUR  27.917)
124.000   1350.7250      0.26  Q         .         .         .        V.
(PEAK DAY 1, HOUR  28.000)


**************************************************************************
 FLOW PROCESS FROM NODE    780.00 TO NODE    780.00 IS CODE = 3.1
--------------------------------------------------------------------------
 >>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #1<<<<<
==========================================================================

                  INFLOW
                 (STREAM 1)
                     |
                     |
                     V                __effective depth
                 -----------          |   (and volume)
                |           |    |    |
                |           |    |....V........
                | detention |<-->|           outflow
                |   basin   |    |.........._______
                 -----------     |    ^     |  \
                     |           |  dead    |   basin outlet
                     V           | storage  |
                  OUTFLOW         ---------
                 (STREAM 1)



       ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 1
       THROUGH A FLOW-THROUGH DETENTION BASIN
       SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
         DEAD STORAGE(AF) =      0.000
         SPECIFIED DEAD STORAGE(AF) FILLED =      0.000
         SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET =      0.000
         DETENTION BASIN CONSTANT LOSS RATE(CFS) =    0.00


       BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

        INTERVAL    DEPTH      OUTFLOW     STORAGE
         NUMBER      (FT)       (CFS)       (AF)
            1         0.00         0.00       0.000
            2         4.00       280.30       0.500
            3         5.00       318.80       1.600
            4         6.00       352.80       3.900
            5         7.00       384.60       8.000
            6         9.00       442.50      22.400
            7        11.00       494.10      42.300
            8        13.00       541.30      63.700
            9        15.00       585.20     102.200
           10        17.00       625.80     147.100
           11        19.00       664.60     193.400
           12        21.00       701.20     241.000
           13        23.00       737.10     290.200
           14        25.00       755.70     340.700
           15        27.00       776.60     393.000
           16        29.00       800.00     446.700
           17        31.00       824.90     501.900


==========================================================================
 MODIFIED-PULS BASIN ROUTING MODEL RESULTS(5-MINUTE COMPUTATION INTERVALS):
 (Note: Computed EFFECTIVE DEPTH and VOLUME are estimated at the clock time;
        MEAN OUTFLOW is the average value during the unit interval.)

                    CLOCK                                              MEAN
PEAK TIME    TIME   DEAD-STORAGE    INFLOW    LOSS  EFFECTIVE OUTFLOW  EFFECTIVE
DAY  (HRS)   (HRS)  FILLED(AF)      (CFS)     (CFS)  DEPTH(FT)  (CFS)   VOLUME(AF)
--------------------------------------------------------------------------------
 1   0.001  96.001        0.000     32.46      0.00       0.46     32.5       0.058
 1   0.084  96.084        0.000     33.40      0.00       0.48     33.1       0.060
 1   0.167  96.167        0.000     36.12      0.00       0.53     35.3       0.066
 1   0.251  96.251        0.000     40.31      0.00       0.59     39.1       0.074
 1   0.334  96.334        0.000     45.75      0.00       0.67     44.3       0.084
 1   0.417  96.417        0.000     54.25      0.00       0.81     51.8       0.101
 1   0.501  96.501        0.000     69.27      0.00       1.05     64.9       0.131
 1   0.584  96.584        0.000     90.38      0.00       1.37     84.6       0.171
 1   0.667  96.667        0.000    100.72      0.00       1.46     99.0       0.182
 1   0.751  96.751        0.000    107.48      0.00       1.56    105.7       0.195
 1   0.834  96.834        0.000    113.01      0.00       1.63    111.7       0.204
 1   0.917  96.917        0.000    117.88      0.00       1.70    116.6       0.212
 1   1.001  97.001        0.000    121.65      0.00       1.75    120.8       0.218
 1   1.084  97.084        0.000    125.29      0.00       1.80    124.3       0.225
 1   1.167  97.167        0.000    128.33      0.00       1.84    127.6       0.230
 1   1.251  97.251        0.000    131.18      0.00       1.88    130.4       0.235
 1   1.334  97.334        0.000    133.60      0.00       1.91    133.0       0.239
 1   1.417  97.417        0.000    135.80      0.00       1.95    135.2       0.243
 1   1.501  97.501        0.000    137.86      0.00       1.97    137.3       0.247
 1   1.584  97.584        0.000    139.73      0.00       2.00    139.3       0.250
 1   1.667  97.667        0.000    141.46      0.00       2.02    141.0       0.253
 1   1.751  97.751        0.000    142.95      0.00       2.04    142.6       0.256
 1   1.834  97.834        0.000    144.38      0.00       2.07    144.0       0.258
 1   1.917  97.917        0.000    145.57      0.00       2.08    145.3       0.260
 1   2.001  98.001        0.000    146.65      0.00       2.10    146.4       0.262
 1   2.084  98.084        0.000    147.75      0.00       2.11    147.5       0.264
 1   2.167  98.167        0.000    148.81      0.00       2.13    148.5       0.266
 1   2.251  98.251        0.000    149.52      0.00       2.14    149.4       0.267
 1   2.334  98.334        0.000    150.15      0.00       2.14    150.0       0.268
 1   2.417  98.417        0.000    150.79      0.00       2.15    150.6       0.269
 1   2.501  98.501        0.000    151.43      0.00       2.16    151.3       0.270
 1   2.584  98.584        0.000    152.09      0.00       2.17    151.9       0.272
 1   2.667  98.667        0.000    152.73      0.00       2.18    152.6       0.273
 1   2.751  98.751        0.000    153.40      0.00       2.19    153.2       0.274
 1   2.834  98.834        0.000    154.06      0.00       2.20    153.9       0.275
 1   2.917  98.917        0.000    154.74      0.00       2.21    154.6       0.276
 1   3.001  99.001        0.000    155.41      0.00       2.22    155.2       0.278
 1   3.084  99.084        0.000    156.11      0.00       2.23    155.9       0.279
 1   3.167  99.167        0.000    156.79      0.00       2.24    156.6       0.280
 1   3.251  99.251        0.000    157.50      0.00       2.25    157.3       0.281
 1   3.334  99.334        0.000    158.20      0.00       2.26    158.0       0.282
 1   3.417  99.417        0.000    158.93      0.00       2.27    158.7       0.284
 1   3.501  99.501        0.000    159.64      0.00       2.28    159.5       0.285
 1   3.584  99.584        0.000    160.37      0.00       2.29    160.2       0.286
 1   3.667  99.667        0.000    161.10      0.00       2.30    160.9       0.288
 1   3.751  99.751        0.000    161.85      0.00       2.31    161.7       0.289
 1   3.834  99.834        0.000    162.59      0.00       2.32    162.4       0.290
 1   3.917  99.917        0.000    163.36      0.00       2.33    163.2       0.292
 1   4.001 100.001        0.000    164.11      0.00       2.34    163.9       0.293
 1   4.084 100.084        0.000    164.90      0.00       2.36    164.7       0.294
 1   4.167 100.167        0.000    165.67      0.00       2.37    165.5       0.296
 1   4.251 100.251        0.000    166.39      0.00       2.38    166.2       0.297
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1	4.334	100.334	0.000	167.09	0.00	2.39	166.9	0.298
1	4.417	100.417	0.000	167.81	0.00	2.40	167.6	0.300
1	4.501	100.501	0.000	168.52	0.00	2.41	168.3	0.301
1	4.584	100.584	0.000	169.26	0.00	2.42	169.1	0.302
1	4.667	100.667	0.000	169.98	0.00	2.43	169.8	0.304
1	4.751	100.751	0.000	170.74	0.00	2.44	170.5	0.305
1	4.834	100.834	0.000	171.48	0.00	2.45	171.3	0.306
1	4.917	100.917	0.000	172.25	0.00	2.46	172.0	0.308
1	5.001	101.001	0.000	173.01	0.00	2.47	172.8	0.309
1	5.084	101.084	0.000	173.80	0.00	2.48	173.6	0.310
1	5.167	101.167	0.000	174.57	0.00	2.49	174.4	0.312
1	5.251	101.251	0.000	175.38	0.00	2.51	175.2	0.313
1	5.334	101.334	0.000	176.18	0.00	2.52	176.0	0.315
1	5.417	101.417	0.000	177.01	0.00	2.53	176.8	0.316
1	5.501	101.501	0.000	177.82	0.00	2.54	177.6	0.318
1	5.584	101.584	0.000	178.67	0.00	2.55	178.4	0.319
1	5.667	101.667	0.000	179.50	0.00	2.56	179.3	0.321
1	5.751	101.751	0.000	180.37	0.00	2.58	180.1	0.322
1	5.834	101.834	0.000	181.23	0.00	2.59	181.0	0.324
1	5.917	101.917	0.000	182.12	0.00	2.60	181.9	0.325
1	6.001	102.001	0.000	183.00	0.00	2.61	182.8	0.327
1	6.084	102.084	0.000	183.91	0.00	2.63	183.7	0.328
1	6.167	102.167	0.000	184.81	0.00	2.64	184.6	0.330
1	6.251	102.251	0.000	185.75	0.00	2.65	185.5	0.332
1	6.334	102.334	0.000	186.67	0.00	2.67	186.4	0.333
1	6.417	102.417	0.000	187.63	0.00	2.68	187.4	0.335
1	6.501	102.501	0.000	188.58	0.00	2.69	188.3	0.337
1	6.584	102.584	0.000	189.57	0.00	2.71	189.3	0.339
1	6.667	102.667	0.000	190.54	0.00	2.72	190.3	0.340
1	6.751	102.751	0.000	191.56	0.00	2.74	191.3	0.342
1	6.834	102.834	0.000	192.56	0.00	2.75	192.3	0.344
1	6.917	102.917	0.000	193.60	0.00	2.77	193.3	0.346
1	7.001	103.001	0.000	194.63	0.00	2.78	194.4	0.348
1	7.084	103.084	0.000	195.71	0.00	2.80	195.4	0.350
1	7.167	103.167	0.000	196.76	0.00	2.81	196.5	0.351
1	7.251	103.251	0.000	197.87	0.00	2.83	197.6	0.353
1	7.334	103.334	0.000	198.95	0.00	2.84	198.7	0.355
1	7.417	103.417	0.000	200.09	0.00	2.86	199.8	0.357
1	7.501	103.501	0.000	201.21	0.00	2.88	200.9	0.359
1	7.584	103.584	0.000	202.38	0.00	2.89	202.1	0.362
1	7.667	103.667	0.000	203.53	0.00	2.91	203.2	0.364
1	7.751	103.751	0.000	204.74	0.00	2.93	204.4	0.366
1	7.834	103.834	0.000	205.93	0.00	2.94	205.6	0.368
1	7.917	103.917	0.000	207.17	0.00	2.96	206.8	0.370
1	8.001	104.001	0.000	208.40	0.00	2.98	208.1	0.372
1	8.084	104.084	0.000	209.68	0.00	3.00	209.3	0.375
1	8.167	104.167	0.000	210.95	0.00	3.01	210.6	0.377
1	8.251	104.251	0.000	212.27	0.00	3.03	211.9	0.379
1	8.334	104.334	0.000	213.58	0.00	3.05	213.2	0.382
1	8.418	104.418	0.000	214.95	0.00	3.07	214.6	0.384
1	8.501	104.501	0.000	216.29	0.00	3.09	215.9	0.386
1	8.584	104.584	0.000	217.71	0.00	3.11	217.3	0.389
1	8.668	104.668	0.000	219.10	0.00	3.13	218.7	0.391
1	8.751	104.751	0.000	220.57	0.00	3.15	220.2	0.394
1	8.834	104.834	0.000	222.01	0.00	3.17	221.6	0.397
1	8.918	104.918	0.000	223.52	0.00	3.20	223.1	0.399
1	9.001	105.001	0.000	225.02	0.00	3.22	224.6	0.402
1	9.084	105.084	0.000	226.59	0.00	3.24	226.2	0.405
1	9.168	105.168	0.000	228.13	0.00	3.26	227.7	0.408
1	9.251	105.251	0.000	229.76	0.00	3.28	229.3	0.411
1	9.334	105.334	0.000	231.36	0.00	3.31	231.0	0.413
1	9.418	105.418	0.000	233.05	0.00	3.33	232.6	0.416
1	9.501	105.501	0.000	234.71	0.00	3.36	234.3	0.419
1	9.584	105.584	0.000	236.47	0.00	3.38	236.0	0.423
1	9.668	105.668	0.000	238.19	0.00	3.41	237.8	0.426
1	9.751	105.751	0.000	240.02	0.00	3.43	239.5	0.429
1	9.834	105.834	0.000	241.81	0.00	3.46	241.4	0.432
1	9.918	105.918	0.000	243.71	0.00	3.48	243.2	0.436
1	10.001	106.001	0.000	245.58	0.00	3.51	245.1	0.439
1	10.084	106.084	0.000	247.55	0.00	3.54	247.0	0.442
1	10.168	106.168	0.000	249.50	0.00	3.57	249.0	0.446
1	10.251	106.251	0.000	251.56	0.00	3.60	251.0	0.450
1	10.334	106.334	0.000	253.59	0.00	3.63	253.1	0.453
1	10.418	106.418	0.000	255.73	0.00	3.66	255.2	0.457
1	10.501	106.501	0.000	257.85	0.00	3.69	257.3	0.461
1	10.584	106.584	0.000	260.09	0.00	3.72	259.5	0.465
1	10.668	106.668	0.000	262.31	0.00	3.75	261.7	0.469
1	10.751	106.751	0.000	264.66	0.00	3.78	264.0	0.473
1	10.834	106.834	0.000	266.98	0.00	3.82	266.4	0.477
1	10.918	106.918	0.000	269.43	0.00	3.85	268.8	0.482
1	11.001	107.001	0.000	271.86	0.00	3.89	271.2	0.486
1	11.084	107.084	0.000	274.44	0.00	3.93	273.8	0.491
1	11.168	107.168	0.000	276.99	0.00	3.96	276.3	0.495
1	11.251	107.251	0.000	279.69	0.00	4.00	279.0	0.500
1	11.334	107.334	0.000	282.37	0.00	4.01	280.5	0.513
1	11.418	107.418	0.000	285.22	0.00	4.04	281.2	0.540
1	11.501	107.501	0.000	288.04	0.00	4.07	282.4	0.579
1	11.584	107.584	0.000	291.04	0.00	4.12	283.9	0.628
1	11.668	107.668	0.000	294.01	0.00	4.17	285.8	0.685
1	11.751	107.751	0.000	297.18	0.00	4.23	287.9	0.749
1	11.834	107.834	0.000	300.32	0.00	4.29	290.2	0.818
1	11.918	107.918	0.000	303.66	0.00	4.36	292.8	0.893
1	12.001	108.001	0.000	306.99	0.00	4.43	295.5	0.973
1	12.084	108.084	0.000	311.85	0.00	4.51	298.5	1.065
1	12.168	108.168	0.000	318.70	0.00	4.62	302.1	1.180
1	12.251	108.251	0.000	327.43	0.00	4.75	306.6	1.323
1	12.334	108.334	0.000	337.51	0.00	4.91	312.2	1.498
1	12.418	108.418	0.000	351.28	0.00	5.06	317.9	1.727
1	12.501	108.501	0.000	372.33	0.00	5.20	323.2	2.066
1	12.584	108.584	0.000	400.46	0.00	5.42	329.3	2.556
1	12.668	108.668	0.000	416.38	0.00	5.65	337.0	3.103
1	12.751	108.751	0.000	428.52	0.00	5.90	345.3	3.676
1	12.834	108.834	0.000	439.25	0.00	6.09	352.6	4.273
1	12.918	108.918	0.000	449.53	0.00	6.24	358.1	4.902
1	13.001	109.001	0.000	458.57	0.00	6.40	363.1	5.560
1	13.084	109.084	0.000	467.78	0.00	6.57	368.3	6.245
1	13.168	109.168	0.000	476.34	0.00	6.74	373.7	6.951
1	13.251	109.251	0.000	485.05	0.00	6.92	379.3	7.680
1	13.334	109.334	0.000	493.30	0.00	7.06	384.2	8.431
1	13.418	109.418	0.000	501.71	0.00	7.17	387.9	9.215
1	13.501	109.501	0.000	510.01	0.00	7.28	391.1	10.033
1	13.584	109.584	0.000	518.76	0.00	7.40	394.5	10.889
1	13.668	109.668	0.000	527.83	0.00	7.53	398.0	11.783
1	13.751	109.751	0.000	537.80	0.00	7.66	401.7	12.721
1	13.834	109.834	0.000	548.61	0.00	7.79	405.6	13.706
1	13.918	109.918	0.000	561.10	0.00	7.94	409.6	14.749
1	14.001	110.001	0.000	575.89	0.00	8.09	414.0	15.864
1	14.084	110.084	0.000	599.85	0.00	8.27	418.7	17.111
1	14.168	110.168	0.000	633.13	0.00	8.47	424.1	18.551
1	14.251	110.251	0.000	675.16	0.00	8.70	430.4	20.236
1	14.334	110.334	0.000	723.42	0.00	8.97	437.8	22.204
1	14.418	110.418	0.000	787.96	0.00	9.22	444.9	24.566
1	14.501	110.501	0.000	882.20	0.00	9.52	452.0	27.529
1	14.584	110.584	0.000	1006.08	0.00	9.89	460.7	31.286
1	14.668	110.668	0.000	1081.27	0.00	10.32	471.0	35.489
1	14.751	110.751	0.000	1142.94	0.00	10.77	482.3	40.038
1	14.834	110.834	0.000	1199.92	0.00	11.24	494.0	44.900
1	14.918	110.918	0.000	1257.25	0.00	11.73	505.5	50.077
1	15.001	111.001	0.000	1310.90	0.00	12.24	517.3	55.543
1	15.084	111.084	0.000	1368.19	0.00	12.78	529.7	61.317
1	15.168	111.168	0.000	1424.65	0.00	13.19	540.8	67.405
1	15.251	111.251	0.000	1485.58	0.00	13.53	549.2	73.854
1	15.334	111.334	0.000	1547.35	0.00	13.88	556.8	80.676
1	15.418	111.418	0.000	1602.19	0.00	14.25	564.7	87.821

1	15.501	111.501	0.000	1640.98	0.00	14.64	573.0	95.176
1	15.584	111.584	0.000	1673.36	0.00	15.02	581.4	102.696
1	15.668	111.668	0.000	1699.63	0.00	15.36	589.1	110.345
1	15.751	111.751	0.000	1711.01	0.00	15.70	596.0	118.023
1	15.834	111.834	0.000	1670.82	0.00	16.03	602.8	125.379
1	15.918	111.918	0.000	1605.23	0.00	16.34	609.3	132.238
1	16.001	112.001	0.000	1720.98	0.00	16.68	615.8	139.850
1	16.084	112.084	0.000	2095.83	0.00	17.12	623.7	149.988
1	16.168	112.168	0.000	2595.04	0.00	17.71	633.9	163.494
1	16.251	112.251	0.000	3092.60	0.00	18.44	646.6	180.340
1	16.334	112.334	0.000	3581.29	0.00	19.30	661.8	200.447
1	16.418	112.418	0.000	4356.39	0.00	20.36	679.8	225.768
1	16.501	112.501	0.000	5386.39	0.00	21.69	701.6	258.033
1	16.584	112.584	0.000	5920.67	0.00	23.14	726.0	293.808
1	16.668	112.668	0.000	4105.58	0.00	24.06	742.7	316.969
1	16.751	112.751	0.000	3291.35	0.00	24.75	750.2	334.470
1	16.834	112.834	0.000	2977.31	0.00	25.35	756.4	349.766
1	16.918	112.918	0.000	2862.65	0.00	25.90	762.2	364.232
1	17.001	113.001	0.000	2621.62	0.00	26.39	767.7	377.000
1	17.084	113.084	0.000	2482.26	0.00	26.84	772.6	388.775
1	17.168	113.168	0.000	2288.35	0.00	27.23	777.1	399.183
1	17.251	113.251	0.000	2140.74	0.00	27.58	781.3	408.545
1	17.334	113.334	0.000	1967.61	0.00	27.88	785.1	416.689
1	17.418	113.418	0.000	1811.39	0.00	28.14	788.5	423.734
1	17.501	113.501	0.000	1646.47	0.00	28.36	791.3	429.623
1	17.584	113.584	0.000	1450.46	0.00	28.53	793.5	434.148
1	17.668	113.668	0.000	1315.90	0.00	28.67	795.3	437.733
1	17.751	113.751	0.000	1187.47	0.00	28.77	796.7	440.424
1	17.834	113.834	0.000	1098.97	0.00	28.84	797.7	442.499
1	17.918	113.918	0.000	992.90	0.00	28.89	798.5	443.838
1	18.001	114.001	0.000	923.43	0.00	28.93	798.9	444.695
1	18.084	114.084	0.000	867.45	0.00	28.94	799.2	445.165
1	18.168	114.168	0.000	805.49	0.00	28.94	799.3	445.208
1	18.251	114.251	0.000	705.16	0.00	28.92	799.2	444.560
1	18.334	114.334	0.000	649.72	0.00	28.88	798.8	443.533
1	18.418	114.418	0.000	611.41	0.00	28.83	798.3	442.245
1	18.501	114.501	0.000	570.89	0.00	28.78	797.7	440.683
1	18.584	114.584	0.000	523.70	0.00	28.71	797.0	438.801
1	18.668	114.668	0.000	490.85	0.00	28.63	796.1	436.699
1	18.751	114.751	0.000	465.13	0.00	28.54	795.1	434.426
1	18.834	114.834	0.000	442.53	0.00	28.45	794.1	432.005
1	18.918	114.918	0.000	423.21	0.00	28.36	793.0	429.458
1	19.001	115.001	0.000	406.65	0.00	28.26	791.9	426.804
1	19.084	115.084	0.000	391.04	0.00	28.16	790.7	424.052
1	19.168	115.168	0.000	377.13	0.00	28.05	789.5	421.212
1	19.251	115.251	0.000	365.66	0.00	27.94	788.3	418.301
1	19.335	115.335	0.000	355.55	0.00	27.83	787.0	415.330
1	19.418	115.418	0.000	346.13	0.00	27.72	785.7	412.303
1	19.501	115.501	0.000	337.25	0.00	27.60	784.3	409.223
1	19.585	115.585	0.000	329.64	0.00	27.49	783.0	406.101
1	19.668	115.668	0.000	322.58	0.00	27.37	781.6	402.940
1	19.751	115.751	0.000	315.86	0.00	27.25	780.2	399.742
1	19.835	115.835	0.000	309.24	0.00	27.13	778.8	396.507
1	19.918	115.918	0.000	302.63	0.00	27.01	777.4	393.238
1	20.001	116.001	0.000	295.92	0.00	26.88	776.0	389.931
1	20.085	116.085	0.000	288.33	0.00	26.75	774.7	386.581
1	20.168	116.168	0.000	279.48	0.00	26.62	773.4	383.180
1	20.251	116.251	0.000	262.17	0.00	26.49	772.0	379.669
1	20.335	116.335	0.000	253.19	0.00	26.35	770.6	376.106
1	20.418	116.418	0.000	248.21	0.00	26.22	769.1	372.518
1	20.501	116.501	0.000	243.99	0.00	26.08	767.7	368.911
1	20.585	116.585	0.000	239.39	0.00	25.94	766.2	365.283
1	20.668	116.668	0.000	234.89	0.00	25.80	764.8	361.633
1	20.751	116.751	0.000	230.63	0.00	25.66	763.3	357.965
1	20.835	116.835	0.000	226.60	0.00	25.52	761.9	354.278
1	20.918	116.918	0.000	222.75	0.00	25.38	760.4	350.576
1	21.001	117.001	0.000	219.07	0.00	25.24	758.9	346.858
1	21.085	117.085	0.000	215.55	0.00	25.09	757.4	343.126
1	21.168	117.168	0.000	212.16	0.00	24.95	755.9	339.381
1	21.251	117.251	0.000	209.23	0.00	24.80	754.5	335.625
1	21.335	117.335	0.000	206.52	0.00	24.65	753.1	331.861
1	21.418	117.418	0.000	203.92	0.00	24.50	751.7	328.088
1	21.501	117.501	0.000	201.43	0.00	24.35	750.4	324.307
1	21.585	117.585	0.000	199.02	0.00	24.20	749.0	320.520
1	21.668	117.668	0.000	196.69	0.00	24.05	747.6	316.726
1	21.751	117.751	0.000	194.42	0.00	23.90	746.2	312.926
1	21.835	117.835	0.000	192.22	0.00	23.75	744.8	309.121
1	21.918	117.918	0.000	190.08	0.00	23.60	743.4	305.310
1	22.001	118.001	0.000	188.00	0.00	23.45	742.0	301.495
1	22.085	118.085	0.000	185.97	0.00	23.30	740.6	297.676
1	22.168	118.168	0.000	184.00	0.00	23.14	739.1	293.852
1	22.251	118.251	0.000	182.15	0.00	22.99	737.7	290.026
1	22.335	118.335	0.000	180.38	0.00	22.84	735.6	286.202
1	22.418	118.418	0.000	178.65	0.00	22.68	732.8	282.386
1	22.501	118.501	0.000	176.97	0.00	22.53	730.0	278.577
1	22.585	118.585	0.000	175.33	0.00	22.37	727.2	274.776
1	22.668	118.668	0.000	173.72	0.00	22.22	724.5	270.983
1	22.751	118.751	0.000	172.16	0.00	22.06	721.7	267.199
1	22.835	118.835	0.000	170.63	0.00	21.91	718.9	263.422
1	22.918	118.918	0.000	169.14	0.00	21.76	716.2	259.655
1	23.001	119.001	0.000	167.68	0.00	21.61	713.4	255.896
1	23.085	119.085	0.000	166.25	0.00	21.45	710.7	252.147
1	23.168	119.168	0.000	164.86	0.00	21.30	708.0	248.406
1	23.251	119.251	0.000	163.49	0.00	21.15	705.2	244.675
1	23.335	119.335	0.000	162.16	0.00	21.00	702.5	240.954
1	23.418	119.418	0.000	160.85	0.00	20.84	699.7	237.242
1	23.501	119.501	0.000	159.57	0.00	20.69	696.9	233.542
1	23.585	119.585	0.000	158.32	0.00	20.53	694.0	229.852
1	23.668	119.668	0.000	157.09	0.00	20.38	691.2	226.174
1	23.751	119.751	0.000	155.89	0.00	20.22	688.4	222.506
1	23.835	119.835	0.000	154.71	0.00	20.07	685.6	218.850
1	23.918	119.918	0.000	153.56	0.00	19.92	682.8	215.205
1	24.001	120.001	0.000	152.42	0.00	19.76	680.0	211.572
1	24.085	120.085	0.000	149.83	0.00	19.61	677.2	207.940
1	24.168	120.168	0.000	145.01	0.00	19.46	674.4	204.295
1	24.251	120.251	0.000	138.40	0.00	19.30	671.6	200.623
1	24.335	120.335	0.000	130.31	0.00	19.15	668.7	196.914
1	24.418	120.418	0.000	118.44	0.00	18.99	665.8	193.144
1	24.501	120.501	0.000	98.47	0.00	18.82	662.8	189.258
1	24.585	120.585	0.000	71.03	0.00	18.65	659.4	185.206
1	24.668	120.668	0.000	57.59	0.00	18.47	656.0	181.084
1	24.751	120.751	0.000	48.88	0.00	18.29	652.5	176.927
1	24.835	120.835	0.000	41.82	0.00	18.11	649.0	172.745
1	24.918	120.918	0.000	35.73	0.00	17.93	645.5	168.545
1	25.001	121.001	0.000	31.08	0.00	17.74	642.0	164.338
1	25.085	121.085	0.000	26.69	0.00	17.56	638.5	160.124
1	25.168	121.168	0.000	23.09	0.00	17.38	634.9	155.911
1	25.251	121.251	0.000	19.83	0.00	17.20	631.4	151.698
1	25.335	121.335	0.000	17.11	0.00	17.02	627.9	147.492
1	25.418	121.418	0.000	14.75	0.00	16.83	624.2	143.294
1	25.501	121.501	0.000	12.57	0.00	16.64	620.5	139.108
1	25.585	121.585	0.000	10.70	0.00	16.46	616.7	134.934
1	25.668	121.668	0.000	9.01	0.00	16.27	612.9	130.775
1	25.751	121.751	0.000	7.67	0.00	16.09	609.2	126.633
1	25.835	121.835	0.000	6.41	0.00	15.90	605.4	122.507
1	25.918	121.918	0.000	5.50	0.00	15.72	601.7	118.401
1	26.001	122.001	0.000	4.72	0.00	15.54	598.0	114.315
1	26.085	122.085	0.000	3.95	0.00	15.36	594.3	110.249
1	26.168	122.168	0.000	3.24	0.00	15.18	590.6	106.204
1	26.251	122.251	0.000	2.99	0.00	15.00	587.0	102.182
1	26.335	122.335	0.000	2.85	0.00	14.79	582.9	98.187
1	26.418	122.418	0.000	2.71	0.00	14.59	578.4	94.222
1	26.501	122.501	0.000	2.57	0.00	14.38	573.9	90.288
1	26.585	122.585	0.000	2.44	0.00	14.18	569.4	86.383

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  1  26.668 122.668        0.000     2.30     0.00     13.98    565.0     82.508
  1  26.751 122.751        0.000     2.17     0.00     13.78    560.6     78.662
  1  26.835 122.835        0.000     2.03     0.00     13.58    556.2     74.846
  1  26.918 122.918        0.000     1.90     0.00     13.38    551.8     71.058
  1  27.001 123.001        0.000     1.77     0.00     13.19    547.5     67.300
  1  27.085 123.085        0.000     1.64     0.00     12.99    543.2     63.570
  1  27.168 123.168        0.000     1.51     0.00     12.64    536.9     59.882
  1  27.251 123.251        0.000     1.38     0.00     12.30    528.9     56.249
  1  27.335 123.335        0.000     1.25     0.00     11.97    520.9     52.670
  1  27.418 123.418        0.000     1.13     0.00     11.64    513.1     49.144
  1  27.501 123.501        0.000     1.00     0.00     11.32    505.4     45.671
  1  27.585 123.585        0.000     0.88     0.00     10.99    497.8     42.249
  1  27.668 123.668        0.000     0.75     0.00     10.66    489.6     38.882
  1  27.751 123.751        0.000     0.63     0.00     10.32    480.9     35.574
  1  27.835 123.835        0.000     0.51     0.00     10.00    472.4     32.324
  1  27.918 123.918        0.000     0.38     0.00      9.68    464.1     29.130

  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
--------------------------------------------------------------------------------
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   1350.726 AF
    BASIN  STORAGE =      0.000 AF (WITH      0.000 AF INITIALLY FILLED)
    OUTFLOW VOLUME =   1350.798 AF
    LOSS    VOLUME =      0.000 AF


********************************************************************************
  FLOW PROCESS FROM NODE    780.00 TO NODE    780.00 IS CODE =  11
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  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================

           STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
        (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      200.0     400.0     600.0     800.0
--------------------------------------------------------------------------------
  96.000    301.5623     32.52  .Q      V .         .         .         .
 (PEAK DAY 2, HOUR  24.000)
  96.083    301.7899     33.06  .Q      V .         .         .         .
 (PEAK DAY 1, HOUR   0.083)
  96.167    302.0330     35.30  .Q      V .         .         .         .
 (PEAK DAY 1, HOUR   0.167)
  96.250    302.3026     39.14  .Q      V .         .         .         .
 (PEAK DAY 1, HOUR   0.250)
  96.333    302.6074     44.26  . Q     V .         .         .         .
 (PEAK DAY 1, HOUR   0.333)
  96.417    302.9643     51.82  . Q     V .         .         .         .
 (PEAK DAY 1, HOUR   0.417)
  96.500    303.4113     64.91  .  Q    V .         .         .         .
 (PEAK DAY 1, HOUR   0.500)
  96.583    303.9937     84.56  .   Q    V.         .         .         .
 (PEAK DAY 1, HOUR   0.583)
  96.667    304.6758     99.04  .   Q    V.         .         .         .
 (PEAK DAY 1, HOUR   0.667)
  96.750    305.4038    105.70  .    Q   V.         .         .         .
 (PEAK DAY 1, HOUR   0.750)
  96.833    306.1730    111.69  .    Q   V.         .         .         .
 (PEAK DAY 1, HOUR   0.833)
  96.917    306.9763    116.64  .    Q   V.         .         .         .
 (PEAK DAY 1, HOUR   0.917)
  97.000    307.8080    120.75  .     Q  V.         .         .         .
 (PEAK DAY 1, HOUR   1.000)
  97.083    308.6642    124.33  .     Q  V.         .         .         .
 (PEAK DAY 1, HOUR   1.083)
  97.167    309.5430    127.60  .     Q  V.         .         .         .
 (PEAK DAY 1, HOUR   1.167)
  97.250    310.4413    130.44  .     Q  V.         .         .         .
 (PEAK DAY 1, HOUR   1.250)
  97.333    311.3573    133.01  .     Q  V.         .         .         .
 (PEAK DAY 1, HOUR   1.333)
  97.417    312.2887    135.24  .     Q  V.         .         .         .
 (PEAK DAY 1, HOUR   1.417)
  97.500    313.2346    137.34  .     Q  V.         .         .         .
 (PEAK DAY 1, HOUR   1.500)
  97.583    314.1937    139.26  .     Q  V.         .         .         .
 (PEAK DAY 1, HOUR   1.583)
  97.667    315.1649    141.02  .      Q V.         .         .         .
 (PEAK DAY 1, HOUR   1.667)
  97.750    316.1468    142.58  .      Q V.         .         .         .
 (PEAK DAY 1, HOUR   1.750)
  97.833    317.1386    144.01  .      Q V.         .         .         .
 (PEAK DAY 1, HOUR   1.833)
  97.917    318.1391    145.28  .      Q V.         .         .         .
 (PEAK DAY 1, HOUR   1.917)
  98.000    319.1472    146.37  .      Q V.         .         .         .
 (PEAK DAY 1, HOUR   2.000)
  98.083    320.1628    147.46  .      Q V.         .         .         .
 (PEAK DAY 1, HOUR   2.083)
  98.167    321.1857    148.54  .      Q V.         .         .         .
 (PEAK DAY 1, HOUR   2.167)
  98.250    322.2144    149.36  .      Q V.         .         .         .
 (PEAK DAY 1, HOUR   2.250)
  98.333    323.2473    149.98  .      Q V.         .         .         .
 (PEAK DAY 1, HOUR   2.333)
  98.417    324.2847    150.62  .      Q V.         .         .         .
 (PEAK DAY 1, HOUR   2.417)
  98.500    325.3264    151.26  .      Q V.         .         .         .
 (PEAK DAY 1, HOUR   2.500)
  98.583    326.3727    151.91  .      Q V.         .         .         .
 (PEAK DAY 1, HOUR   2.583)
  98.667    327.4234    152.57  .      Q V.         .         .         .
 (PEAK DAY 1, HOUR   2.667)
  98.750    328.4787    153.23  .      Q V.         .         .         .
 (PEAK DAY 1, HOUR   2.750)
  98.833    329.5385    153.89  .      Q V.         .         .         .
 (PEAK DAY 1, HOUR   2.833)
  98.917    330.6030    154.56  .      Q V.         .         .         .
 (PEAK DAY 1, HOUR   2.917)
  99.000    331.6721    155.24  .      Q V.         .         .         .
 (PEAK DAY 1, HOUR   3.000)
  99.083    332.7460    155.93  .      Q V.         .         .         .
 (PEAK DAY 1, HOUR   3.083)
  99.167    333.8247    156.62  .      Q V.         .         .         .
 (PEAK DAY 1, HOUR   3.167)
  99.250    334.9081    157.32  .      Q V.         .         .         .
 (PEAK DAY 1, HOUR   3.250)
  99.333    335.9965    158.02  .      Q V.         .         .         .
 (PEAK DAY 1, HOUR   3.333)
  99.417    337.0897    158.73  .      Q V.         .         .         .
 (PEAK DAY 1, HOUR   3.417)
  99.500    338.1878    159.45  .      Q  V         .         .         .
 (PEAK DAY 1, HOUR   3.500)
  99.583    339.2910    160.18  .       Q V         .         .         .
 (PEAK DAY 1, HOUR   3.583)
  99.667    340.3992    160.91  .       Q V         .         .         .
 (PEAK DAY 1, HOUR   3.667)
  99.750    341.5125    161.65  .       Q V         .         .         .
 (PEAK DAY 1, HOUR   3.750)
  99.833    342.6310    162.40  .       Q V         .         .         .
 (PEAK DAY 1, HOUR   3.833)
  99.917    343.7546    163.16  .       Q V         .         .         .
 (PEAK DAY 1, HOUR   3.917)
 100.000    344.8836    163.92  .       Q V         .         .         .
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(PEAK DAY 1, HOUR 4.000)
100.083 346.0178 164.69 . Q V . . .
(PEAK DAY 1, HOUR 4.083)
100.167 347.1574 165.47 . Q V . . .
(PEAK DAY 1, HOUR 4.167)
100.250 348.3021 166.21 . Q V . . .
(PEAK DAY 1, HOUR 4.250)
100.333 349.4516 166.91 . Q V . . .
(PEAK DAY 1, HOUR 4.333)
100.417 350.6060 167.62 . Q V . . .
(PEAK DAY 1, HOUR 4.417)
100.500 351.7653 168.34 . Q V . . .
(PEAK DAY 1, HOUR 4.500)
100.583 352.9297 169.06 . Q V . . .
(PEAK DAY 1, HOUR 4.583)
100.667 354.0990 169.79 . Q V . . .
(PEAK DAY 1, HOUR 4.667)
100.750 355.2735 170.54 . Q V . . .
(PEAK DAY 1, HOUR 4.750)
100.833 356.4532 171.29 . Q V . . .
(PEAK DAY 1, HOUR 4.833)
100.917 357.6381 172.05 . Q V . . .
(PEAK DAY 1, HOUR 4.917)
101.000 358.8282 172.81 . Q V . . .
(PEAK DAY 1, HOUR 5.000)
101.083 360.0237 173.59 . Q V . . .
(PEAK DAY 1, HOUR 5.083)
101.167 361.2247 174.37 . Q V . . .
(PEAK DAY 1, HOUR 5.167)
101.250 362.4311 175.17 . Q V . . .
(PEAK DAY 1, HOUR 5.250)
101.333 363.6430 175.97 . Q V . . .
(PEAK DAY 1, HOUR 5.333)
101.417 364.8606 176.79 . Q V . . .
(PEAK DAY 1, HOUR 5.417)
101.500 366.0838 177.61 . Q V . . .
(PEAK DAY 1, HOUR 5.500)
101.583 367.3127 178.44 . Q V . . .
(PEAK DAY 1, HOUR 5.583)
101.667 368.5475 179.29 . Q V . . .
(PEAK DAY 1, HOUR 5.667)
101.750 369.7881 180.14 . QV . . .
(PEAK DAY 1, HOUR 5.750)
101.833 371.0348 181.01 . QV . . .
(PEAK DAY 1, HOUR 5.833)
101.917 372.2874 181.88 . Q.V . . .
(PEAK DAY 1, HOUR 5.917)
102.000 373.5462 182.77 . Q.V . . .
(PEAK DAY 1, HOUR 6.000)
102.083 374.8111 183.67 . Q.V . . .
(PEAK DAY 1, HOUR 6.083)
102.167 376.0823 184.58 . Q.V . . .
(PEAK DAY 1, HOUR 6.167)
102.250 377.3599 185.50 . Q.V . . .
(PEAK DAY 1, HOUR 6.250)
102.333 378.6439 186.43 . Q.V . . .
(PEAK DAY 1, HOUR 6.333)
102.417 379.9344 187.38 . Q.V . . .
(PEAK DAY 1, HOUR 6.417)
102.500 381.2315 188.34 . Q.V . . .
(PEAK DAY 1, HOUR 6.500)
102.583 382.5352 189.31 . Q.V . . .
(PEAK DAY 1, HOUR 6.583)
102.667 383.8458 190.29 . Q.V . . .
(PEAK DAY 1, HOUR 6.667)
102.750 385.1632 191.29 . Q.V . . .
(PEAK DAY 1, HOUR 6.750)
102.833 386.4876 192.30 . Q.V . . .
(PEAK DAY 1, HOUR 6.833)
102.917 387.8191 193.33 . Q.V . . .
(PEAK DAY 1, HOUR 6.917)
103.000 389.1577 194.37 . Q.V . . .
(PEAK DAY 1, HOUR 7.000)
103.083 390.5036 195.42 . Q.V . . .
(PEAK DAY 1, HOUR 7.083)
103.167 391.8568 196.49 . Q.V . . .
(PEAK DAY 1, HOUR 7.167)
103.250 393.2176 197.57 . Q.V . . .
(PEAK DAY 1, HOUR 7.250)
103.333 394.5858 198.67 . Q.V . . .
(PEAK DAY 1, HOUR 7.333)
103.417 395.9618 199.79 . Q.V . . .
(PEAK DAY 1, HOUR 7.417)
103.500 397.3456 200.92 . QV . . .
(PEAK DAY 1, HOUR 7.500)
103.583 398.7372 202.07 . QV . . .
(PEAK DAY 1, HOUR 7.583)
103.667 400.1369 203.24 . QV . . .
(PEAK DAY 1, HOUR 7.667)
103.750 401.5448 204.42 . QV . . .
(PEAK DAY 1, HOUR 7.750)
103.833 402.9609 205.62 . QV . . .
(PEAK DAY 1, HOUR 7.833)
103.917 404.3855 206.84 . QV . . .
(PEAK DAY 1, HOUR 7.917)
104.000 405.8186 208.08 . Q V . . .
(PEAK DAY 1, HOUR 8.000)
104.083 407.2603 209.34 . Q V . . .
(PEAK DAY 1, HOUR 8.083)
104.167 408.7109 210.62 . Q V . . .
(PEAK DAY 1, HOUR 8.167)
104.250 410.1704 211.92 . Q V . . .
(PEAK DAY 1, HOUR 8.250)
104.333 411.6390 213.24 . Q V . . .
(PEAK DAY 1, HOUR 8.333)
104.417 413.1169 214.58 . Q V . . .
(PEAK DAY 1, HOUR 8.417)
104.500 414.6041 215.95 . Q V . . .
(PEAK DAY 1, HOUR 8.500)
104.583 416.1009 217.34 . Q V . . .
(PEAK DAY 1, HOUR 8.583)
104.667 417.6074 218.75 . Q V . . .
(PEAK DAY 1, HOUR 8.667)
104.750 419.1238 220.18 . .QV . . .
(PEAK DAY 1, HOUR 8.750)
104.833 420.6502 221.64 . .QV . . .
(PEAK DAY 1, HOUR 8.833)
104.917 422.1869 223.12 . .QV . . .
(PEAK DAY 1, HOUR 8.917)
105.000 423.7339 224.63 . .QV . . .
(PEAK DAY 1, HOUR 9.000)
105.083 425.2916 226.17 . .QV . . .
(PEAK DAY 1, HOUR 9.083)
105.167 426.8600 227.74 . .QV . . .
(PEAK DAY 1, HOUR 9.167)
105.250 428.4394 229.33 . .QV . . .
(PEAK DAY 1, HOUR 9.250)
105.333 430.0300 230.95 . .QV . . .
(PEAK DAY 1, HOUR 9.333)
105.417 431.6320 232.60 . .QV . . .
(PEAK DAY 1, HOUR 9.417)
105.500 433.2455 234.29 . .QV . . .
(PEAK DAY 1, HOUR 9.500)
105.583 434.8709 236.00 . .QV . . .

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 (PEAK DAY 1, HOUR   9.583)
105.667    436.5083    237.75  .         .QV       .         .         .
 (PEAK DAY 1, HOUR   9.667)
105.750    438.1580    239.53  .         .QV       .         .         .
 (PEAK DAY 1, HOUR   9.750)
105.833    439.8202    241.35  .         . QV      .         .         .
 (PEAK DAY 1, HOUR   9.833)
105.917    441.4951    243.21  .         . QV      .         .         .
 (PEAK DAY 1, HOUR   9.917)
106.000    443.1832    245.10  .         . QV      .         .         .
 (PEAK DAY 1, HOUR  10.000)
106.083    444.8845    247.03  .         . QV      .         .         .
 (PEAK DAY 1, HOUR  10.083)
106.167    446.5993    249.00  .         . QV      .         .         .
 (PEAK DAY 1, HOUR  10.167)
106.250    448.3281    251.01  .         . QV      .         .         .
 (PEAK DAY 1, HOUR  10.250)
106.333    450.0710    253.07  .         . QV      .         .         .
 (PEAK DAY 1, HOUR  10.333)
106.417    451.8283    255.17  .         . QV      .         .         .
 (PEAK DAY 1, HOUR  10.417)
106.500    453.6004    257.31  .         . QV      .         .         .
 (PEAK DAY 1, HOUR  10.500)
106.583    455.3876    259.50  .         . QV      .         .         .
 (PEAK DAY 1, HOUR  10.583)
106.667    457.1902    261.74  .         .  Q      .         .         .
 (PEAK DAY 1, HOUR  10.667)
106.750    459.0087    264.04  .         .  Q      .         .         .
 (PEAK DAY 1, HOUR  10.750)
106.833    460.8433    266.38  .         .  Q      .         .         .
 (PEAK DAY 1, HOUR  10.833)
106.917    462.6944    268.78  .         .  Q      .         .         .
 (PEAK DAY 1, HOUR  10.917)
107.000    464.5624    271.24  .         .  Q      .         .         .
 (PEAK DAY 1, HOUR  11.000)
107.083    466.4478    273.76  .         .  Q      .         .         .
 (PEAK DAY 1, HOUR  11.083)
107.167    468.3510    276.33  .         .  Q      .         .         .
 (PEAK DAY 1, HOUR  11.167)
107.250    470.2721    278.95  .         .  Q      .         .         .
 (PEAK DAY 1, HOUR  11.250)
107.333    472.2042    280.53  .         .  VQ     .         .         .
 (PEAK DAY 1, HOUR  11.333)
107.417    474.1410    281.23  .         .   Q     .         .         .
 (PEAK DAY 1, HOUR  11.417)
107.500    476.0859    282.39  .         .   Q     .         .         .
 (PEAK DAY 1, HOUR  11.500)
107.583    478.0413    283.93  .         .   Q     .         .         .
 (PEAK DAY 1, HOUR  11.583)
107.667    480.0095    285.78  .         .   Q     .         .         .
 (PEAK DAY 1, HOUR  11.667)
107.750    481.9922    287.89  .         .   Q     .         .         .
 (PEAK DAY 1, HOUR  11.750)
107.833    483.9910    290.23  .         .   Q     .         .         .
 (PEAK DAY 1, HOUR  11.833)
107.917    486.0073    292.76  .         .   Q     .         .         .
 (PEAK DAY 1, HOUR  11.917)
108.000    488.0421    295.46  .         .   Q     .         .         .
 (PEAK DAY 1, HOUR  12.000)
108.083    490.0977    298.46  .         .   Q     .         .         .
 (PEAK DAY 1, HOUR  12.083)
108.167    492.1781    302.08  .         .   VQ    .         .         .
 (PEAK DAY 1, HOUR  12.167)
108.250    494.2896    306.60  .         .   VQ    .         .         .
 (PEAK DAY 1, HOUR  12.250)
108.333    496.4395    312.16  .         .   VQ    .         .         .
 (PEAK DAY 1, HOUR  12.333)
108.417    498.6292    317.95  .         .   VQ    .         .         .
 (PEAK DAY 1, HOUR  12.417)
108.500    500.8550    323.18  .         .   V Q   .         .         .
 (PEAK DAY 1, HOUR  12.500)
108.583    503.1230    329.31  .         .   V Q   .         .         .
 (PEAK DAY 1, HOUR  12.583)
108.667    505.4437    336.97  .         .   V Q   .         .         .
 (PEAK DAY 1, HOUR  12.667)
108.750    507.8215    345.25  .         .    V Q  .         .         .
 (PEAK DAY 1, HOUR  12.750)
108.833    510.2498    352.59  .         .    V Q  .         .         .
 (PEAK DAY 1, HOUR  12.833)
108.917    512.7162    358.13  .         .    V Q  .         .         .
 (PEAK DAY 1, HOUR  12.917)
109.000    515.2171    363.12  .         .    V  Q .         .         .
 (PEAK DAY 1, HOUR  13.000)
109.083    517.7538    368.33  .         .    V  Q .         .         .
 (PEAK DAY 1, HOUR  13.083)
109.167    520.3276    373.73  .         .    V  Q .         .         .
 (PEAK DAY 1, HOUR  13.167)
109.250    522.9398    379.29  .         .    V  Q .         .         .
 (PEAK DAY 1, HOUR  13.250)
109.333    525.5860    384.22  .         .    V   Q.         .         .
 (PEAK DAY 1, HOUR  13.333)
109.417    528.2576    387.91  .         .    V   Q.         .         .
 (PEAK DAY 1, HOUR  13.417)
109.500    530.9513    391.13  .         .    V   Q.         .         .
 (PEAK DAY 1, HOUR  13.500)
109.583    533.6682    394.50  .         .    V   Q.         .         .
 (PEAK DAY 1, HOUR  13.583)
109.667    536.4094    398.01  .         .    V   Q.         .         .
 (PEAK DAY 1, HOUR  13.667)
109.750    539.1758    401.70  .         .    V    Q         .         .
 (PEAK DAY 1, HOUR  13.750)
109.833    541.9690    405.56  .         .     V   Q         .         .
 (PEAK DAY 1, HOUR  13.833)
109.917    544.7902    409.64  .         .     V   Q         .         .
 (PEAK DAY 1, HOUR  13.917)
110.000    547.6413    413.98  .         .     V   Q         .         .
 (PEAK DAY 1, HOUR  14.000)
110.083    550.5251    418.73  .         .     V   Q         .         .
 (PEAK DAY 1, HOUR  14.083)
110.167    553.4461    424.13  .         .     V   .Q        .         .
 (PEAK DAY 1, HOUR  14.167)
110.250    556.4104    430.41  .         .     V   .Q        .         .
 (PEAK DAY 1, HOUR  14.250)
110.333    559.4252    437.76  .         .     V   .Q        .         .
 (PEAK DAY 1, HOUR  14.333)
110.417    562.4894    444.91  .         .     V   . Q       .         .
 (PEAK DAY 1, HOUR  14.417)
110.500    565.6021    451.96  .         .     V   . Q       .         .
 (PEAK DAY 1, HOUR  14.500)
110.583    568.7747    460.67  .         .     V   .  Q      .         .
 (PEAK DAY 1, HOUR  14.583)
110.667    572.0184    470.99  .         .     V   .  Q      .         .
 (PEAK DAY 1, HOUR  14.667)
110.750    575.3403    482.34  .         .      V  .   Q     .         .
 (PEAK DAY 1, HOUR  14.750)
110.833    578.7428    494.03  .         .      V  .   Q     .         .
 (PEAK DAY 1, HOUR  14.833)
110.917    582.2245    505.54  .         .      V  .    Q    .         .
 (PEAK DAY 1, HOUR  14.917)
111.000    585.7870    517.28  .         .      V  .    Q    .         .
 (PEAK DAY 1, HOUR  15.000)
111.083    589.4349    529.68  .         .      V  .     Q   .         .
 (PEAK DAY 1, HOUR  15.083)
111.167    593.1594    540.78  .         .      V  .      Q  .         .
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(PEAK DAY 1, HOUR  15.167)
111.250    596.9417    549.20  .         .      V  .      Q  .         .
(PEAK DAY 1, HOUR  15.250)
111.333    600.7762    556.77  .         .      V  .      Q  .         .
(PEAK DAY 1, HOUR  15.333)
111.417    604.6655    564.73  .         .      V  .       Q .         .
(PEAK DAY 1, HOUR  15.417)
111.500    608.6118    573.00  .         .       V .       Q .         .
(PEAK DAY 1, HOUR  15.500)
111.583    612.6161    581.42  .         .       V .        Q.         .
(PEAK DAY 1, HOUR  15.583)
111.667    616.6733    589.11  .         .       V .        Q.         .
(PEAK DAY 1, HOUR  15.667)
111.750    620.7782    596.04  .         .       V .        Q.         .
(PEAK DAY 1, HOUR  15.750)
111.833    624.9299    602.83  .         .       V .         Q         .
(PEAK DAY 1, HOUR  15.833)
111.917    629.1259    609.26  .         .       V .         Q         .
(PEAK DAY 1, HOUR  15.917)
112.000    633.3670    615.80  .         .       V .         Q         .
(PEAK DAY 1, HOUR  16.000)
112.083    637.6627    623.73  .         .       V .         .Q        .
(PEAK DAY 1, HOUR  16.083)
112.167    642.0282    633.88  .         .        V.         .Q        .
(PEAK DAY 1, HOUR  16.167)
112.250    646.4813    646.60  .         .        V.         . Q       .
(PEAK DAY 1, HOUR  16.250)
112.333    651.0394    661.84  .         .        V.         .  Q      .
(PEAK DAY 1, HOUR  16.333)
112.417    655.7209    679.75  .         .        V.         .  Q      .
(PEAK DAY 1, HOUR  16.417)
112.500    660.5526    701.56  .         .        V.         .    Q    .
(PEAK DAY 1, HOUR  16.500)
112.583    665.5528    726.03  .         .        V.         .     Q   .
(PEAK DAY 1, HOUR  16.583)
112.667    670.6678    742.69  .         .        V.         .      Q  .
(PEAK DAY 1, HOUR  16.667)
112.750    675.8344    750.18  .         .         V         .      Q  .
(PEAK DAY 1, HOUR  16.750)
112.833    681.0435    756.36  .         .         V         .      Q  .
(PEAK DAY 1, HOUR  16.833)
112.917    686.2928    762.21  .         .         V         .       Q .
(PEAK DAY 1, HOUR  16.917)
113.000    691.5797    767.65  .         .         V         .       Q .
(PEAK DAY 1, HOUR  17.000)
113.083    696.9004    772.56  .         .         V         .       Q .
(PEAK DAY 1, HOUR  17.083)
113.167    702.2523    777.10  .         .         V         .       Q .
(PEAK DAY 1, HOUR  17.167)
113.250    707.6334    781.33  .         .         V         .        Q.
(PEAK DAY 1, HOUR  17.250)
113.333    713.0408    785.15  .         .         .V        .        Q.
(PEAK DAY 1, HOUR  17.333)
113.417    718.4709    788.46  .         .         .V        .        Q.
(PEAK DAY 1, HOUR  17.417)
113.500    723.9205    791.28  .         .         .V        .        Q.
(PEAK DAY 1, HOUR  17.500)
113.583    729.3857    793.54  .         .         .V        .        Q.
(PEAK DAY 1, HOUR  17.583)
113.667    734.8631    795.31  .         .         .V        .        Q.
(PEAK DAY 1, HOUR  17.667)
113.750    740.3499    796.68  .         .         .V        .        Q.
(PEAK DAY 1, HOUR  17.750)
113.833    745.8438    797.72  .         .         . V       .        Q.
(PEAK DAY 1, HOUR  17.833)
113.917    751.3428    798.46  .         .         . V       .        Q.
(PEAK DAY 1, HOUR  17.917)
114.000    756.8451    798.94  .         .         . V       .        Q.
(PEAK DAY 1, HOUR  18.000)
114.083    762.3494    799.23  .         .         . V       .        Q.
(PEAK DAY 1, HOUR  18.083)
114.167    767.8546    799.34  .         .         . V       .        Q.
(PEAK DAY 1, HOUR  18.167)
114.250    773.3588    799.21  .         .         . V       .        Q.
(PEAK DAY 1, HOUR  18.250)
114.333    778.8604    798.84  .         .         .  V      .        Q.
(PEAK DAY 1, HOUR  18.333)
114.417    784.3586    798.34  .         .         .  V      .        Q.
(PEAK DAY 1, HOUR  18.417)
114.500    789.8526    797.72  .         .         .  V      .        Q.
(PEAK DAY 1, HOUR  18.500)
114.583    795.3414    796.97  .         .         .  V      .        Q.
(PEAK DAY 1, HOUR  18.583)
114.667    800.8242    796.10  .         .         .  V      .        Q.
(PEAK DAY 1, HOUR  18.667)
114.750    806.3004    795.15  .         .         .  V      .        Q.
(PEAK DAY 1, HOUR  18.750)
114.833    811.7695    794.12  .         .         .   V     .        Q.
(PEAK DAY 1, HOUR  18.833)
114.917    817.2313    793.04  .         .         .   V     .        Q.
(PEAK DAY 1, HOUR  18.917)
115.000    822.6852    791.91  .         .         .   V     .        Q.
(PEAK DAY 1, HOUR  19.000)
115.083    828.1310    790.73  .         .         .   V     .        Q.
(PEAK DAY 1, HOUR  19.083)
115.167    833.5684    789.51  .         .         .   V     .        Q.
(PEAK DAY 1, HOUR  19.167)
115.250    838.9972    788.26  .         .         .   V     .        Q.
(PEAK DAY 1, HOUR  19.250)
115.333    844.4172    786.98  .         .         .    V    .        Q.
(PEAK DAY 1, HOUR  19.333)
115.417    849.8281    785.67  .         .         .    V    .        Q.
(PEAK DAY 1, HOUR  19.417)
115.500    855.2299    784.34  .         .         .    V    .        Q.
(PEAK DAY 1, HOUR  19.500)
115.583    860.6224    782.99  .         .         .    V    .        Q.
(PEAK DAY 1, HOUR  19.583)
115.667    866.0055    781.62  .         .         .    V    .        Q.
(PEAK DAY 1, HOUR  19.667)
115.750    871.3790    780.23  .         .         .    V    .        Q.
(PEAK DAY 1, HOUR  19.750)
115.833    876.7429    778.83  .         .         .    V    .       Q .
(PEAK DAY 1, HOUR  19.833)
115.917    882.0970    777.42  .         .         .     V   .       Q .
(PEAK DAY 1, HOUR  19.917)
116.000    887.4417    776.04  .         .         .     V   .       Q .
(PEAK DAY 1, HOUR  20.000)
116.083    892.7771    774.70  .         .         .     V   .       Q .
(PEAK DAY 1, HOUR  20.083)
116.167    898.1032    773.36  .         .         .     V   .       Q .
(PEAK DAY 1, HOUR  20.167)
116.250    903.4199    771.97  .         .         .     V   .       Q .
(PEAK DAY 1, HOUR  20.250)
116.333    908.7267    770.56  .         .         .     V   .       Q .
(PEAK DAY 1, HOUR  20.333)
116.417    914.0238    769.13  .         .         .      V  .       Q .
(PEAK DAY 1, HOUR  20.417)
116.500    919.3110    767.69  .         .         .      V  .       Q .
(PEAK DAY 1, HOUR  20.500)
116.583    924.5882    766.25  .         .         .      V  .       Q .
(PEAK DAY 1, HOUR  20.583)
116.667    929.8553    764.79  .         .         .      V  .       Q .
(PEAK DAY 1, HOUR  20.667)
116.750    935.1124    763.33  .         .         .      V  .       Q .
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 (PEAK DAY 1, HOUR  20.750)
116.833    940.3594    761.86  .         .         .      V  .       Q  .
 (PEAK DAY 1, HOUR  20.833)
116.917    945.5963    760.39  .         .         .       V .       Q  .
 (PEAK DAY 1, HOUR  20.917)
117.000    950.8229    758.90  .         .         .       V .      Q   .
 (PEAK DAY 1, HOUR  21.000)
117.083    956.0392    757.42  .         .         .       V .      Q   .
 (PEAK DAY 1, HOUR  21.083)
117.167    961.2455    755.94  .         .         .       V .      Q   .
 (PEAK DAY 1, HOUR  21.167)
117.250    966.4419    754.52  .         .         .       V .      Q   .
 (PEAK DAY 1, HOUR  21.250)
117.333    971.6288    753.14  .         .         .       V .      Q   .
 (PEAK DAY 1, HOUR  21.333)
117.417    976.8062    751.75  .         .         .       V .      Q   .
 (PEAK DAY 1, HOUR  21.417)
117.500    981.9739    750.36  .         .         .        V.      Q   .
 (PEAK DAY 1, HOUR  21.500)
117.583    987.1321    748.96  .         .         .        V.      Q   .
 (PEAK DAY 1, HOUR  21.583)
117.667    992.2806    747.57  .         .         .        V.      Q   .
 (PEAK DAY 1, HOUR  21.667)
117.750    997.4196    746.17  .         .         .        V.      Q   .
 (PEAK DAY 1, HOUR  21.750)
117.833   1002.5488    744.77  .         .         .        V.      Q   .
 (PEAK DAY 1, HOUR  21.833)
117.917   1007.6685    743.37  .         .         .        V.      Q   .
 (PEAK DAY 1, HOUR  21.917)
118.000   1012.7784    741.96  .         .         .        V.      Q   .
 (PEAK DAY 1, HOUR  22.000)
118.083   1017.8787    740.56  .         .         .         V      Q   .
 (PEAK DAY 1, HOUR  22.083)
118.167   1022.9692    739.15  .         .         .         V     Q    .
 (PEAK DAY 1, HOUR  22.167)
118.250   1028.0499    737.71  .         .         .         V     Q    .
 (PEAK DAY 1, HOUR  22.250)
118.333   1033.1158    735.58  .         .         .         V     Q    .
 (PEAK DAY 1, HOUR  22.333)
118.417   1038.1626    732.79  .         .         .         V     Q    .
 (PEAK DAY 1, HOUR  22.417)
118.500   1043.1902    730.01  .         .         .         V     Q    .
 (PEAK DAY 1, HOUR  22.500)
118.583   1048.1987    727.23  .         .         .         .V    Q    .
 (PEAK DAY 1, HOUR  22.583)
118.667   1053.1881    724.46  .         .         .         .V    Q    .
 (PEAK DAY 1, HOUR  22.667)
118.750   1058.1584    721.70  .         .         .         .V    Q    .
 (PEAK DAY 1, HOUR  22.750)
118.833   1063.1099    718.94  .         .         .         .V   Q     .
 (PEAK DAY 1, HOUR  22.833)
118.917   1068.0422    716.19  .         .         .         .V   Q     .
 (PEAK DAY 1, HOUR  22.917)
119.000   1072.9557    713.44  .         .         .         .V   Q     .
 (PEAK DAY 1, HOUR  23.000)
119.083   1077.8503    710.70  .         .         .         .V   Q     .
 (PEAK DAY 1, HOUR  23.083)
119.167   1082.7262    707.97  .         .         .         . V  Q     .
 (PEAK DAY 1, HOUR  23.167)
119.250   1087.5833    705.24  .         .         .         . V  Q     .
 (PEAK DAY 1, HOUR  23.250)
119.333   1092.4215    702.52  .         .         .         . V  Q     .
 (PEAK DAY 1, HOUR  23.333)
119.417   1097.2406    699.74  .         .         .         . V Q      .
 (PEAK DAY 1, HOUR  23.417)
119.500   1102.0402    696.89  .         .         .         . V Q      .
 (PEAK DAY 1, HOUR  23.500)
119.583   1106.8201    694.05  .         .         .         . V Q      .
 (PEAK DAY 1, HOUR  23.583)
119.667   1111.5804    691.21  .         .         .         . V Q      .
 (PEAK DAY 1, HOUR  23.667)
119.750   1116.3214    688.39  .         .         .         .  VQ      .
 (PEAK DAY 1, HOUR  23.750)
119.833   1121.0430    685.57  .         .         .         .  VQ      .
 (PEAK DAY 1, HOUR  23.833)
119.917   1125.7452    682.77  .         .         .         .  VQ      .
 (PEAK DAY 1, HOUR  23.917)
120.000   1130.4282    679.97  .         .         .         .  Q       .
 (PEAK DAY 1, HOUR  24.000)
120.083   1135.0919    677.18  .         .         .         .  Q       .
 (PEAK DAY 1, HOUR  24.083)
120.167   1139.7365    674.38  .         .         .         .  Q       .
 (PEAK DAY 1, HOUR  24.167)
120.250   1144.3616    671.57  .         .         .         .  Q       .
 (PEAK DAY 1, HOUR  24.250)
120.333   1148.9672    668.73  .         .         .         .  QV      .
 (PEAK DAY 1, HOUR  24.333)
120.417   1153.5529    665.84  .         .         .         .  QV      .
 (PEAK DAY 1, HOUR  24.417)
120.500   1158.1173    662.76  .         .         .         .  QV      .
 (PEAK DAY 1, HOUR  24.500)
120.583   1162.6588    659.43  .         .         .         .  Q V     .
 (PEAK DAY 1, HOUR  24.583)
120.667   1167.1768    656.01  .         .         .         .  Q V     .
 (PEAK DAY 1, HOUR  24.667)
120.750   1171.6708    652.54  .         .         .         .  Q V     .
 (PEAK DAY 1, HOUR  24.750)
120.833   1176.1407    649.04  .         .         .         .  Q V     .
 (PEAK DAY 1, HOUR  24.833)
120.917   1180.5865    645.53  .         .         .         .  Q V     .
 (PEAK DAY 1, HOUR  24.917)
121.000   1185.0081    642.01  .         .         .         .  Q  V    .
 (PEAK DAY 1, HOUR  25.000)
121.083   1189.4053    638.48  .         .         .         .Q   V     .
 (PEAK DAY 1, HOUR  25.083)
121.167   1193.7782    634.95  .         .         .         .Q   V     .
 (PEAK DAY 1, HOUR  25.167)
121.250   1198.1268    631.42  .         .         .         .Q   V     .
 (PEAK DAY 1, HOUR  25.250)
121.333   1202.4512    627.89  .         .         .         .Q   V     .
 (PEAK DAY 1, HOUR  25.333)
121.417   1206.7504    624.24  .         .         .         .Q   V     .
 (PEAK DAY 1, HOUR  25.417)
121.500   1211.0236    620.47  .         .         .         .Q   V     .
 (PEAK DAY 1, HOUR  25.500)
121.583   1215.2708    616.69  .         .         .         Q    V     .
 (PEAK DAY 1, HOUR  25.583)
121.667   1219.4919    612.92  .         .         .         Q     V    .
 (PEAK DAY 1, HOUR  25.667)
121.750   1223.6873    609.17  .         .         .         Q     V    .
 (PEAK DAY 1, HOUR  25.750)
121.833   1227.8568    605.43  .         .         .         Q     V    .
 (PEAK DAY 1, HOUR  25.833)
121.917   1232.0007    601.71  .         .         .         Q     V    .
 (PEAK DAY 1, HOUR  25.917)
122.000   1236.1193    598.00  .         .         .        Q.     V    .
 (PEAK DAY 1, HOUR  26.000)
122.083   1240.2124    594.32  .         .         .        Q.     V    .
 (PEAK DAY 1, HOUR  26.083)
122.167   1244.2803    590.65  .         .         .        Q.     V    .
 (PEAK DAY 1, HOUR  26.167)
122.250   1248.3230    587.00  .         .         .        Q.     V    .
 (PEAK DAY 1, HOUR  26.250)
122.333   1252.3375    582.90  .         .         .        Q.      V   .
```

```
 (PEAK DAY 1, HOUR  26.333)
122.417   1256.3208    578.36  .         .         .       Q .      V  .
 (PEAK DAY 1, HOUR  26.417)
122.500   1260.2729    573.86  .         .         .       Q .      V  .
 (PEAK DAY 1, HOUR  26.500)
122.583   1264.1943    569.39  .         .         .       Q .      V  .
 (PEAK DAY 1, HOUR  26.583)
122.667   1268.0852    564.96  .         .         .       Q .      V  .
 (PEAK DAY 1, HOUR  26.667)
122.750   1271.9458    560.55  .         .         .       Q .      V  .
 (PEAK DAY 1, HOUR  26.750)
122.833   1275.7762    556.19  .         .         .      Q  .      V  .
 (PEAK DAY 1, HOUR  26.833)
122.917   1279.5769    551.85  .         .         .      Q  .      V  .
 (PEAK DAY 1, HOUR  26.917)
123.000   1283.3479    547.55  .         .         .      Q  .       V .
 (PEAK DAY 1, HOUR  27.000)
123.083   1287.0890    543.21  .         .         .      Q  .       V .
 (PEAK DAY 1, HOUR  27.083)
123.167   1290.7870    536.95  .         .         .     Q   .       V .
 (PEAK DAY 1, HOUR  27.167)
123.250   1294.4293    528.87  .         .         .     Q   .       V .
 (PEAK DAY 1, HOUR  27.250)
123.333   1298.0170    520.92  .         .         .     Q   .       V .
 (PEAK DAY 1, HOUR  27.333)
123.417   1301.5507    513.08  .         .         .    Q    .       V .
 (PEAK DAY 1, HOUR  27.417)
123.500   1305.0311    505.37  .         .         .    Q    .       V .
 (PEAK DAY 1, HOUR  27.500)
123.583   1308.4591    497.75  .         .         .   Q     .       V .
 (PEAK DAY 1, HOUR  27.583)
123.667   1311.8311    489.60  .         .         .   Q     .       V .
 (PEAK DAY 1, HOUR  27.667)
123.750   1315.1434    480.95  .         .         .   Q     .       V .
 (PEAK DAY 1, HOUR  27.750)
123.833   1318.3972    472.45  .         .         .  Q      .        V.
 (PEAK DAY 1, HOUR  27.833)
123.917   1321.5934    464.09  .         .         .  Q      .        V.
 (PEAK DAY 1, HOUR  27.917)
124.000   1324.7330    455.88  .         .         . Q       .        V.
 (PEAK DAY 1, HOUR  28.000)
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
================================================================================
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             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
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                          Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

--------------------------------------------------------------------------
  FILE NAME: CP63CEO5.FLD
  TIME/DATE OF STUDY: 14:11 04/01/2004


**************************************************************************
  FLOW PROCESS FROM NODE    100.00 TO NODE    780.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

        WATERSHED AREA =    4741.300 ACRES
        BASEFLOW =   0.000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    0.520 HOURS
        VALLEY(DEVELOPED):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  1.000
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        VALLEY(UNDEVELOPED)/DESERT:
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        DESERT(UNDEVELOPED) "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =  0.000
        BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:
        +------------------+--------+--------+--------+--------+--------+
        | RAINFALL DEPTHS & |        |        |        |        |        |
        |    LOSS RATES     |  DAY 1 |  DAY 2 |  DAY 3 |  DAY 4 |  DAY 5 |
        |==================+========+========+========+========+========|
        | 5-MINUTE (INCHES) |    0.45|    0.20|    0.09|    0.04|    0.03|
        |30-MINUTE (INCHES) |    0.97|    0.42|    0.19|    0.09|    0.07|
        |   1-HOUR (INCHES) |    1.28|    0.56|    0.25|    0.12|    0.10|
        |   3-HOUR (INCHES) |    2.16|    0.94|    0.42|    0.20|    0.16|
        |   6-HOUR (INCHES) |    3.02|    1.32|    0.58|    0.28|    0.23|
        |  24-HOUR (INCHES) |    5.01|    2.19|    0.97|    0.47|    0.38|
        |==================+========+========+========+========+========|
        | LOSS RATE(IN/HR)  |   0.190|   0.190|   0.190|   0.190|   0.190|
        | LOW LOSS FRACTION |   0.610|   0.810|   0.930|   0.990|   0.990|
        +------------------+--------+--------+--------+--------+--------+

        PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR = 0.793
         30-MINUTE FACTOR = 0.793
          1-HOUR FACTOR = 0.793
          3-HOUR FACTOR = 0.969
          6-HOUR FACTOR = 0.984
         24-HOUR FACTOR = 0.990

        UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
        UNIT INTERVAL PERCENTAGE OF LAG-TIME =  16.026


        RUNOFF HYDROGRAPH LISTING LIMITS:
          MODEL TIME(HOURS) FOR BEGINNING OF RESULTS =  96.00
          MODEL TIME(HOURS) FOR END OF RESULTS = 124.00


==========================================================================
                      UNIT HYDROGRAPH DETERMINATION

--------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------
          1                1.043               598.328
          2                3.671              1506.497
          3                7.588              2246.119
          4               12.584              2864.778
          5               20.278              4411.764
          6               33.729              7712.629
          7               52.531             10781.282
          8               61.624              5213.888
          9               67.455              3343.624
         10               72.172              2704.769
         11               76.244              2334.520
         12               79.328              1768.307
         13               82.255              1678.753
         14               84.650              1373.153
         15               86.832              1251.016
         16               88.638              1035.667
         17               90.211               902.195
         18               91.667               834.439
         19               92.924               720.986
         20               94.054               648.204
         21               94.947               511.963
         22               95.799               488.554
         23               96.406               347.671
         24               96.923               296.373
         25               97.440               296.517
         26               97.919               274.779
         27               98.076                90.079
         28               98.159                47.452
         29               98.242                47.518
         30               98.325                47.592
         31               98.407                47.518
         32               98.490                47.522
         33               98.573                47.518
         34               98.656                47.522
         35               98.739                47.522
         36               98.822                47.658
         37               98.905                47.382
         38               98.988                47.518
         39               99.070                47.522
         40               99.153                47.518
         41               99.236                47.518
         42               99.319                47.518
         43               99.402                47.518
         44               99.485                47.518
         45               99.568                47.518
         46               99.651                47.518
         47               99.733                47.518
         48               99.816                47.518
         49               99.899                47.518
         50               99.982                47.518
         51              100.000                10.294


--------------------------------------------------------------------------
    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =    2178.4390
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =    1350.7266
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5 - D A Y D E S I G N S T O R M
R U N O F F H Y D R O G R A P H
(see HYDROLOGY MANUAL for Definition of "PEAK DAY")

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	1500.0	3000.0	4500.0	6000.0
96.000	301.6200	32.46	Q	V	.	.	.
(PEAK DAY 2, HOUR 24.000)							
96.083	301.8500	33.40	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.083)							
96.167	302.0987	36.12	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.167)							
96.250	302.3764	40.31	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.250)							
96.333	302.6914	45.75	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.333)							
96.417	303.0650	54.25	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.417)							
96.500	303.5421	69.27	Q	V	.	.	.
(PEAK DAY 1, HOUR 0.500)							
96.583	304.1645	90.38	Q	V.	.	.	.
(PEAK DAY 1, HOUR 0.583)							
96.667	304.8582	100.72	Q	V.	.	.	.
(PEAK DAY 1, HOUR 0.667)							
96.750	305.5984	107.48	Q	V.	.	.	.
(PEAK DAY 1, HOUR 0.750)							
96.833	306.3767	113.01	Q	V.	.	.	.
(PEAK DAY 1, HOUR 0.833)							
96.917	307.1886	117.88	Q	V.	.	.	.
(PEAK DAY 1, HOUR 0.917)							
97.000	308.0264	121.65	Q	V.	.	.	.
(PEAK DAY 1, HOUR 1.000)							
97.083	308.8892	125.29	Q	V.	.	.	.
(PEAK DAY 1, HOUR 1.083)							
97.167	309.7730	128.33	Q	V.	.	.	.
(PEAK DAY 1, HOUR 1.167)							
97.250	310.6765	131.18	Q	V.	.	.	.
(PEAK DAY 1, HOUR 1.250)							
97.333	311.5966	133.60	Q	V.	.	.	.
(PEAK DAY 1, HOUR 1.333)							
97.417	312.5318	135.80	Q	V.	.	.	.
(PEAK DAY 1, HOUR 1.417)							
97.500	313.4813	137.86	Q	V.	.	.	.
(PEAK DAY 1, HOUR 1.500)							
97.583	314.4436	139.73	Q	V.	.	.	.
(PEAK DAY 1, HOUR 1.583)							
97.667	315.4178	141.46	Q	V.	.	.	.
(PEAK DAY 1, HOUR 1.667)							
97.750	316.4023	142.95	Q	V.	.	.	.
(PEAK DAY 1, HOUR 1.750)							
97.833	317.3966	144.38	Q	V.	.	.	.
(PEAK DAY 1, HOUR 1.833)							
97.917	318.3992	145.57	Q	V.	.	.	.
(PEAK DAY 1, HOUR 1.917)							
98.000	319.4091	146.65	Q	V.	.	.	.
(PEAK DAY 1, HOUR 2.000)							
98.083	320.4267	147.75	Q	V.	.	.	.
(PEAK DAY 1, HOUR 2.083)							
98.167	321.4515	148.81	Q	V.	.	.	.
(PEAK DAY 1, HOUR 2.167)							
98.250	322.4813	149.52	Q	V.	.	.	.
(PEAK DAY 1, HOUR 2.250)							
98.333	323.5154	150.15	.Q	V.	.	.	.
(PEAK DAY 1, HOUR 2.333)							
98.417	324.5539	150.79	.Q	V.	.	.	.
(PEAK DAY 1, HOUR 2.417)							
98.500	325.5967	151.43	.Q	V.	.	.	.
(PEAK DAY 1, HOUR 2.500)							
98.583	326.6442	152.09	.Q	V.	.	.	.
(PEAK DAY 1, HOUR 2.583)							
98.667	327.6960	152.73	.Q	V.	.	.	.
(PEAK DAY 1, HOUR 2.667)							
98.750	328.7525	153.40	.Q	V.	.	.	.
(PEAK DAY 1, HOUR 2.750)							
98.833	329.8135	154.06	.Q	V.	.	.	.
(PEAK DAY 1, HOUR 2.833)							
98.917	330.8793	154.74	.Q	V.	.	.	.
(PEAK DAY 1, HOUR 2.917)							
99.000	331.9496	155.41	.Q	V.	.	.	.
(PEAK DAY 1, HOUR 3.000)							
99.083	333.0247	156.11	.Q	V.	.	.	.
(PEAK DAY 1, HOUR 3.083)							
99.167	334.1046	156.79	.Q	V.	.	.	.
(PEAK DAY 1, HOUR 3.167)							
99.250	335.1894	157.50	.Q	V.	.	.	.
(PEAK DAY 1, HOUR 3.250)							
99.333	336.2789	158.20	.Q	V.	.	.	.
(PEAK DAY 1, HOUR 3.333)							
99.417	337.3734	158.93	.Q	V.	.	.	.
(PEAK DAY 1, HOUR 3.417)							
99.500	338.4728	159.64	.Q	V	.	.	.
(PEAK DAY 1, HOUR 3.500)							
99.583	339.5773	160.37	.Q	V	.	.	.
(PEAK DAY 1, HOUR 3.583)							
99.667	340.6868	161.10	.Q	V	.	.	.
(PEAK DAY 1, HOUR 3.667)							
99.750	341.8015	161.85	.Q	V	.	.	.
(PEAK DAY 1, HOUR 3.750)							
99.833	342.9213	162.59	.Q	V	.	.	.
(PEAK DAY 1, HOUR 3.833)							
99.917	344.0464	163.36	.Q	V	.	.	.
(PEAK DAY 1, HOUR 3.917)							
100.000	345.1766	164.11	.Q	V	.	.	.
(PEAK DAY 1, HOUR 4.000)							
100.083	346.3123	164.90	.Q	V	.	.	.
(PEAK DAY 1, HOUR 4.083)							
100.167	347.4532	165.67	.Q	V	.	.	.
(PEAK DAY 1, HOUR 4.167)							
100.250	348.5992	166.39	.Q	V	.	.	.
(PEAK DAY 1, HOUR 4.250)							
100.333	349.7499	167.09	.Q	V	.	.	.
(PEAK DAY 1, HOUR 4.333)							
100.417	350.9056	167.81	.Q	V	.	.	.
(PEAK DAY 1, HOUR 4.417)							
100.500	352.0662	168.52	.Q	V	.	.	.
(PEAK DAY 1, HOUR 4.500)							
100.583	353.2319	169.26	.Q	V	.	.	.
(PEAK DAY 1, HOUR 4.583)							
100.667	354.4025	169.98	.Q	V	.	.	.
(PEAK DAY 1, HOUR 4.667)							
100.750	355.5784	170.74	.Q	V	.	.	.
(PEAK DAY 1, HOUR 4.750)							
100.833	356.7594	171.48	.Q	V	.	.	.
(PEAK DAY 1, HOUR 4.833)							
100.917	357.9456	172.25	.Q	V	.	.	.
(PEAK DAY 1, HOUR 4.917)							
101.000	359.1371	173.01	.Q	V	.	.	.
(PEAK DAY 1, HOUR 5.000)							
101.083	360.3341	173.80	.Q	V	.	.	.

(PEAK DAY 1, HOUR 5.083)
101.167 361.5364 174.57 .Q V . . .
(PEAK DAY 1, HOUR 5.167)
101.250 362.7443 175.38 .Q V . . .
(PEAK DAY 1, HOUR 5.250)
101.333 363.9576 176.18 .Q V . . .
(PEAK DAY 1, HOUR 5.333)
101.417 365.1767 177.01 .Q V . . .
(PEAK DAY 1, HOUR 5.417)
101.500 366.4013 177.82 .Q V . . .
(PEAK DAY 1, HOUR 5.500)
101.583 367.6318 178.67 .Q V . . .
(PEAK DAY 1, HOUR 5.583)
101.667 368.8681 179.50 .Q V . . .
(PEAK DAY 1, HOUR 5.667)
101.750 370.1103 180.37 .Q V . . .
(PEAK DAY 1, HOUR 5.750)
101.833 371.3584 181.23 .Q V . . .
(PEAK DAY 1, HOUR 5.833)
101.917 372.6127 182.12 .Q .V . . .
(PEAK DAY 1, HOUR 5.917)
102.000 373.8730 183.00 .Q .V . . .
(PEAK DAY 1, HOUR 6.000)
102.083 375.1396 183.91 .Q .V . . .
(PEAK DAY 1, HOUR 6.083)
102.167 376.4124 184.81 .Q .V . . .
(PEAK DAY 1, HOUR 6.167)
102.250 377.6917 185.75 .Q .V . . .
(PEAK DAY 1, HOUR 6.250)
102.333 378.9773 186.67 .Q .V . . .
(PEAK DAY 1, HOUR 6.333)
102.417 380.2695 187.63 .Q .V . . .
(PEAK DAY 1, HOUR 6.417)
102.500 381.5682 188.58 .Q .V . . .
(PEAK DAY 1, HOUR 6.500)
102.583 382.8738 189.57 .Q .V . . .
(PEAK DAY 1, HOUR 6.583)
102.667 384.1861 190.54 .Q .V . . .
(PEAK DAY 1, HOUR 6.667)
102.750 385.5054 191.56 .Q .V . . .
(PEAK DAY 1, HOUR 6.750)
102.833 386.8315 192.56 .Q .V . . .
(PEAK DAY 1, HOUR 6.833)
102.917 388.1649 193.60 .Q .V . . .
(PEAK DAY 1, HOUR 6.917)
103.000 389.5053 194.63 .Q .V . . .
(PEAK DAY 1, HOUR 7.000)
103.083 390.8531 195.71 .Q .V . . .
(PEAK DAY 1, HOUR 7.083)
103.167 392.2082 196.76 .Q .V . . .
(PEAK DAY 1, HOUR 7.167)
103.250 393.5710 197.87 .Q .V . . .
(PEAK DAY 1, HOUR 7.250)
103.333 394.9412 198.95 .Q .V . . .
(PEAK DAY 1, HOUR 7.333)
103.417 396.3192 200.09 .Q .V . . .
(PEAK DAY 1, HOUR 7.417)
103.500 397.7050 201.21 .Q .V . . .
(PEAK DAY 1, HOUR 7.500)
103.583 399.0988 202.38 .Q .V . . .
(PEAK DAY 1, HOUR 7.583)
103.667 400.5005 203.53 .Q .V . . .
(PEAK DAY 1, HOUR 7.667)
103.750 401.9106 204.74 .Q .V . . .
(PEAK DAY 1, HOUR 7.750)
103.833 403.3288 205.93 .Q .V . . .
(PEAK DAY 1, HOUR 7.833)
103.917 404.7556 207.17 .Q .V . . .
(PEAK DAY 1, HOUR 7.917)
104.000 406.1909 208.40 .Q . V . . .
(PEAK DAY 1, HOUR 8.000)
104.083 407.6349 209.68 .Q . V . . .
(PEAK DAY 1, HOUR 8.083)
104.167 409.0877 210.95 .Q . V . . .
(PEAK DAY 1, HOUR 8.167)
104.250 410.5497 212.27 .Q . V . . .
(PEAK DAY 1, HOUR 8.250)
104.333 412.0206 213.58 .Q . V . . .
(PEAK DAY 1, HOUR 8.333)
104.417 413.5009 214.95 .Q . V . . .
(PEAK DAY 1, HOUR 8.417)
104.500 414.9906 216.29 .Q . V . . .
(PEAK DAY 1, HOUR 8.500)
104.583 416.4900 217.71 .Q . V . . .
(PEAK DAY 1, HOUR 8.583)
104.667 417.9989 219.10 .Q . V . . .
(PEAK DAY 1, HOUR 8.667)
104.750 419.5180 220.57 .Q . V . . .
(PEAK DAY 1, HOUR 8.750)
104.833 421.0469 222.01 .Q . V . . .
(PEAK DAY 1, HOUR 8.833)
104.917 422.5864 223.52 .Q . V . . .
(PEAK DAY 1, HOUR 8.917)
105.000 424.1360 225.02 .Q . V . . .
(PEAK DAY 1, HOUR 9.000)
105.083 425.6966 226.59 .Q . V . . .
(PEAK DAY 1, HOUR 9.083)
105.167 427.2677 228.13 .Q . V . . .
(PEAK DAY 1, HOUR 9.167)
105.250 428.8501 229.76 .Q . V . . .
(PEAK DAY 1, HOUR 9.250)
105.333 430.4435 231.36 .Q . V . . .
(PEAK DAY 1, HOUR 9.333)
105.417 432.0485 233.05 .Q . V . . .
(PEAK DAY 1, HOUR 9.417)
105.500 433.6649 234.71 .Q . V . . .
(PEAK DAY 1, HOUR 9.500)
105.583 435.2935 236.47 .Q . V . . .
(PEAK DAY 1, HOUR 9.583)
105.667 436.9340 238.19 .Q . V . . .
(PEAK DAY 1, HOUR 9.667)
105.750 438.5870 240.02 .Q . V . . .
(PEAK DAY 1, HOUR 9.750)
105.833 440.2523 241.81 .Q . V . . .
(PEAK DAY 1, HOUR 9.833)
105.917 441.9308 243.71 .Q . V . . .
(PEAK DAY 1, HOUR 9.917)
106.000 443.6221 245.58 .Q . V . . .
(PEAK DAY 1, HOUR 10.000)
106.083 445.3270 247.55 .Q . V . . .
(PEAK DAY 1, HOUR 10.083)
106.167 447.0453 249.50 .Q . V . . .
(PEAK DAY 1, HOUR 10.167)
106.250 448.7778 251.56 .Q . V . . .
(PEAK DAY 1, HOUR 10.250)
106.333 450.5243 253.59 .Q . V . . .
(PEAK DAY 1, HOUR 10.333)
106.417 452.2855 255.73 .Q . V . . .
(PEAK DAY 1, HOUR 10.417)
106.500 454.0613 257.85 .Q . V . . .
(PEAK DAY 1, HOUR 10.500)
106.583 455.8526 260.09 .Q . V . . .
(PEAK DAY 1, HOUR 10.583)
106.667 457.6592 262.31 .Q . V . . .

(PEAK DAY 1, HOUR 10.667)
106.750 459.4819 264.66 .Q . V . . .
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107.000 465.0485 271.86 .Q . V . . .
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107.417 474.6815 285.22 .Q . V . . .
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107.500 476.6653 288.04 .Q . V . . .
(PEAK DAY 1, HOUR 11.500)
107.583 478.6697 291.04 .Q . V . . .
(PEAK DAY 1, HOUR 11.583)
107.667 480.6945 294.01 .Q . V . . .
(PEAK DAY 1, HOUR 11.667)
107.750 482.7412 297.18 .Q . V . . .
(PEAK DAY 1, HOUR 11.750)
107.833 484.8095 300.32 . Q . V . . .
(PEAK DAY 1, HOUR 11.833)
107.917 486.9009 303.66 . Q . V . . .
(PEAK DAY 1, HOUR 11.917)
108.000 489.0151 306.99 . Q . V . . .
(PEAK DAY 1, HOUR 12.000)
108.083 491.1629 311.85 . Q . V . . .
(PEAK DAY 1, HOUR 12.083)
108.167 493.3578 318.70 . Q . V . . .
(PEAK DAY 1, HOUR 12.167)
108.250 495.6128 327.43 . Q . V . . .
(PEAK DAY 1, HOUR 12.250)
108.333 497.9373 337.51 . Q . V . . .
(PEAK DAY 1, HOUR 12.333)
108.417 500.3565 351.28 . Q . V . . .
(PEAK DAY 1, HOUR 12.417)
108.500 502.9208 372.33 . Q . V . . .
(PEAK DAY 1, HOUR 12.500)
108.583 505.6788 400.46 . Q . V . . .
(PEAK DAY 1, HOUR 12.583)
108.667 508.5465 416.38 . Q . V . . .
(PEAK DAY 1, HOUR 12.667)
108.750 511.4977 428.52 . Q . V . . .
(PEAK DAY 1, HOUR 12.750)
108.833 514.5228 439.25 . Q . V . . .
(PEAK DAY 1, HOUR 12.833)
108.917 517.6188 449.53 . Q . V . . .
(PEAK DAY 1, HOUR 12.917)
109.000 520.7769 458.57 . Q . V . . .
(PEAK DAY 1, HOUR 13.000)
109.083 523.9986 467.78 . Q . V . . .
(PEAK DAY 1, HOUR 13.083)
109.167 527.2792 476.34 . Q . V . . .
(PEAK DAY 1, HOUR 13.167)
109.250 530.6198 485.05 . Q . V . . .
(PEAK DAY 1, HOUR 13.250)
109.333 534.0172 493.30 . Q . V . . .
(PEAK DAY 1, HOUR 13.333)
109.417 537.4725 501.71 . Q . V . . .
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109.500 540.9849 510.01 . Q . V . . .
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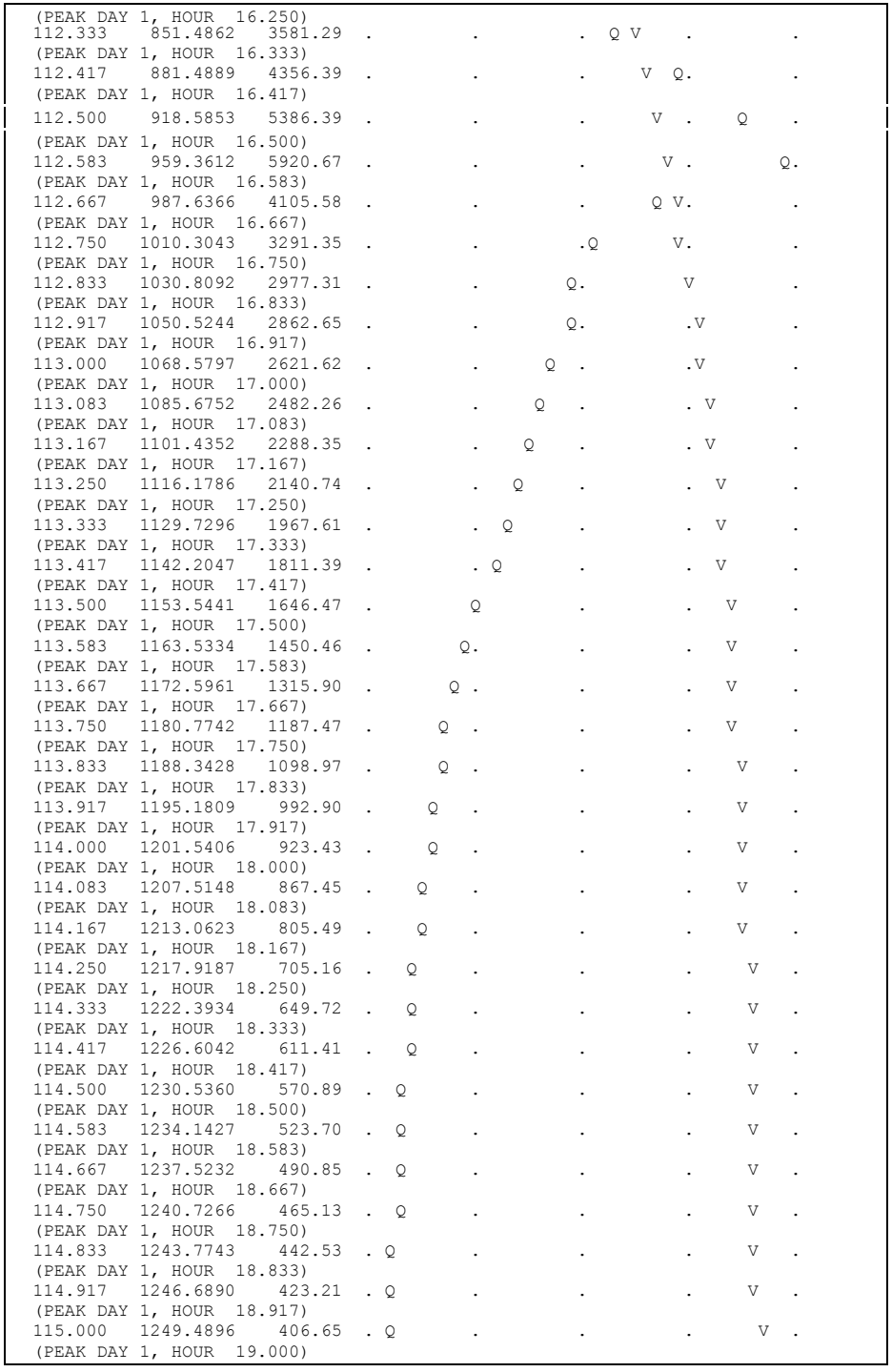
(PEAK DAY 1, HOUR 14.000)
110.083 567.6367 599.85 . Q . V . . .
(PEAK DAY 1, HOUR 14.083)
110.167 571.9971 633.13 . Q . V . . .
(PEAK DAY 1, HOUR 14.167)
110.250 576.6469 675.16 . Q . V . . .
(PEAK DAY 1, HOUR 14.250)
110.333 581.6292 723.42 . Q . V . . .
(PEAK DAY 1, HOUR 14.333)
110.417 587.0558 787.96 . Q . V . . .
(PEAK DAY 1, HOUR 14.417)
110.500 593.1316 882.20 . Q . V . . .
(PEAK DAY 1, HOUR 14.500)
110.583 600.0605 1006.08 . Q . V . . .
(PEAK DAY 1, HOUR 14.583)
110.667 607.5073 1081.27 . Q . V . . .
(PEAK DAY 1, HOUR 14.667)
110.750 615.3788 1142.94 . Q . V . . .
(PEAK DAY 1, HOUR 14.750)
110.833 623.6427 1199.92 . Q . V . . .
(PEAK DAY 1, HOUR 14.833)
110.917 632.3015 1257.25 . Q . V . . .
(PEAK DAY 1, HOUR 14.917)
111.000 641.3297 1310.90 . Q . V . . .
(PEAK DAY 1, HOUR 15.000)
111.083 650.7525 1368.19 . Q. V. . .
(PEAK DAY 1, HOUR 15.083)
111.167 660.5641 1424.65 . Q. V. . .
(PEAK DAY 1, HOUR 15.167)
111.250 670.7954 1485.58 . Q. V. . .
(PEAK DAY 1, HOUR 15.250)
111.333 681.4521 1547.35 . Q V . .
(PEAK DAY 1, HOUR 15.333)
111.417 692.4865 1602.19 . Q V . .
(PEAK DAY 1, HOUR 15.417)
111.500 703.7880 1640.98 . Q V . .
(PEAK DAY 1, HOUR 15.500)
111.583 715.3125 1673.36 . .Q .V . .
(PEAK DAY 1, HOUR 15.583)
111.667 727.0179 1699.63 . .Q .V . .
(PEAK DAY 1, HOUR 15.667)
111.750 738.8018 1711.01 . .Q .V . .
(PEAK DAY 1, HOUR 15.750)
111.833 750.3088 1670.82 . .Q . V . .
(PEAK DAY 1, HOUR 15.833)
111.917 761.3641 1605.23 . Q . V . .
(PEAK DAY 1, HOUR 15.917)
112.000 773.2166 1720.98 . .Q . V . .
(PEAK DAY 1, HOUR 16.000)
112.083 787.6506 2095.83 . . Q . V . .
(PEAK DAY 1, HOUR 16.083)
112.167 805.5228 2595.04 . . Q . V . .
(PEAK DAY 1, HOUR 16.167)
112.250 826.8217 3092.60 . . Q V . .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112.833 1030.8092 2977.31
(PEAK DAY 1, HOUR 16.833)
112.917 1050.5244 2862.65
(PEAK DAY 1, HOUR 16.917)
113.000 1068.5797 2621.62
(PEAK DAY 1, HOUR 17.000)
113.083 1085.6752 2482.26
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113.167 1101.4352 2288.35
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113.250 1116.1786 2140.74
(PEAK DAY 1, HOUR 17.250)
113.333 1129.7296 1967.61
(PEAK DAY 1, HOUR 17.333)
113.417 1142.2047 1811.39
(PEAK DAY 1, HOUR 17.417)
113.500 1153.5441 1646.47
(PEAK DAY 1, HOUR 17.500)
113.583 1163.5334 1450.46
(PEAK DAY 1, HOUR 17.583)
113.667 1172.5961 1315.90
(PEAK DAY 1, HOUR 17.667)
113.750 1180.7742 1187.47
(PEAK DAY 1, HOUR 17.750)
113.833 1188.3428 1098.97
(PEAK DAY 1, HOUR 17.833)
113.917 1195.1809 992.90
(PEAK DAY 1, HOUR 17.917)
114.000 1201.5406 923.43
(PEAK DAY 1, HOUR 18.000)
114.083 1207.5148 867.45
(PEAK DAY 1, HOUR 18.083)
114.167 1213.0623 805.49
(PEAK DAY 1, HOUR 18.167)
114.250 1217.9187 705.16
(PEAK DAY 1, HOUR 18.250)
114.333 1222.3934 649.72
(PEAK DAY 1, HOUR 18.333)
114.417 1226.6042 611.41
(PEAK DAY 1, HOUR 18.417)
114.500 1230.5360 570.89
(PEAK DAY 1, HOUR 18.500)
114.583 1234.1427 523.70
(PEAK DAY 1, HOUR 18.583)
114.667 1237.5232 490.85
(PEAK DAY 1, HOUR 18.667)
114.750 1240.7266 465.13
(PEAK DAY 1, HOUR 18.750)
114.833 1243.7743 442.53
(PEAK DAY 1, HOUR 18.833)
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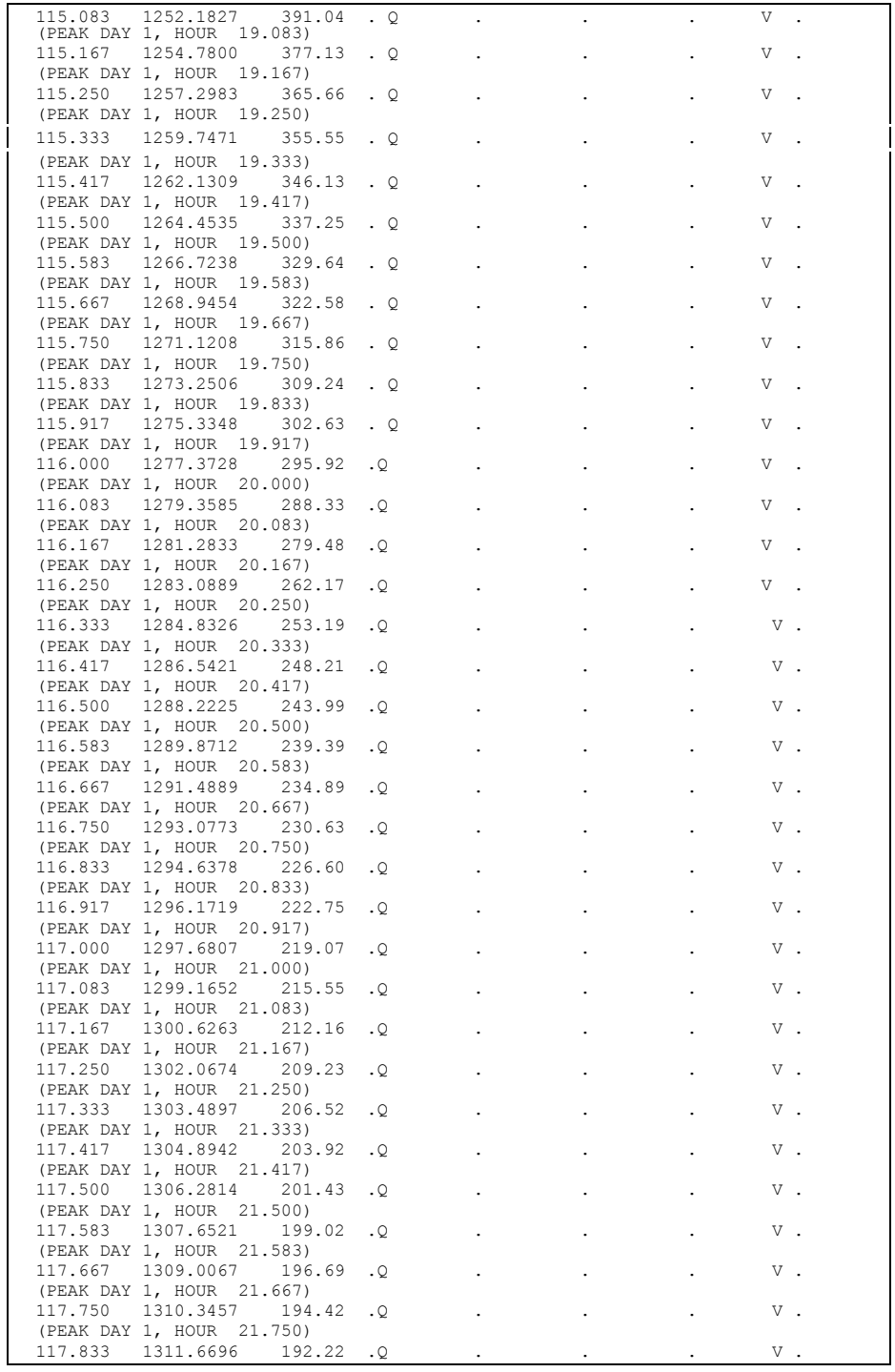
115.000 1249.4896 406.65
(PEAK DAY 1, HOUR 19.000)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(PEAK DAY 1, HOUR 19.083)
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(PEAK DAY 1, HOUR 19.250)
115.333 1259.7471 355.55
(PEAK DAY 1, HOUR 19.333)
115.417 1262.1309 346.13
(PEAK DAY 1, HOUR 19.417)
115.500 1264.4535 337.25
(PEAK DAY 1, HOUR 19.500)
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(PEAK DAY 1, HOUR 19.583)
115.667 1268.9454 322.58
(PEAK DAY 1, HOUR 19.667)
115.750 1271.1208 315.86
(PEAK DAY 1, HOUR 19.750)
115.833 1273.2506 309.24
(PEAK DAY 1, HOUR 19.833)
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(PEAK DAY 1, HOUR 19.917)
116.000 1277.3728 295.92
(PEAK DAY 1, HOUR 20.000)
116.083 1279.3585 288.33
(PEAK DAY 1, HOUR 20.083)
116.167 1281.2833 279.48
(PEAK DAY 1, HOUR 20.167)
116.250 1283.0889 262.17
(PEAK DAY 1, HOUR 20.250)
116.333 1284.8326 253.19
(PEAK DAY 1, HOUR 20.333)
116.417 1286.5421 248.21
(PEAK DAY 1, HOUR 20.417)
116.500 1288.2225 243.99
(PEAK DAY 1, HOUR 20.500)
116.583 1289.8712 239.39
(PEAK DAY 1, HOUR 20.583)
116.667 1291.4889 234.89
(PEAK DAY 1, HOUR 20.667)
116.750 1293.0773 230.63
(PEAK DAY 1, HOUR 20.750)
116.833 1294.6378 226.60
(PEAK DAY 1, HOUR 20.833)
116.917 1296.1719 222.75
(PEAK DAY 1, HOUR 20.917)
117.000 1297.6807 219.07
(PEAK DAY 1, HOUR 21.000)
117.083 1299.1652 215.55
(PEAK DAY 1, HOUR 21.083)
117.167 1300.6263 212.16
(PEAK DAY 1, HOUR 21.167)
117.250 1302.0674 209.23
(PEAK DAY 1, HOUR 21.250)
117.333 1303.4897 206.52
(PEAK DAY 1, HOUR 21.333)
117.417 1304.8942 203.92
(PEAK DAY 1, HOUR 21.417)
117.500 1306.2814 201.43
(PEAK DAY 1, HOUR 21.500)
117.583 1307.6521 199.02
(PEAK DAY 1, HOUR 21.583)
117.667 1309.0067 196.69
(PEAK DAY 1, HOUR 21.667)
117.750 1310.3457 194.42
(PEAK DAY 1, HOUR 21.750)
117.833 1311.6696 192.22

(PEAK DAY 1, HOUR 21.833)								
117.917	1312.9786	190.08	.Q	.	.	.	V	.
(PEAK DAY 1, HOUR 21.917)								
118.000	1314.2734	188.00	.Q	.	.	.	V	.
(PEAK DAY 1, HOUR 22.000)								
118.083	1315.5542	185.97	.Q	.	.	.	V	.
(PEAK DAY 1, HOUR 22.083)								
118.167	1316.8214	184.00	.Q	.	.	.	V	.
(PEAK DAY 1, HOUR 22.167)								
118.250	1318.0759	182.15	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.250)								
118.333	1319.3182	180.38	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.333)								
118.417	1320.5486	178.65	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.417)								
118.500	1321.7673	176.97	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.500)								
118.583	1322.9749	175.33	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.583)								
118.667	1324.1713	173.72	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.667)								
118.750	1325.3569	172.16	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.750)								
118.833	1326.5321	170.63	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.833)								
118.917	1327.6970	169.14	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 22.917)								
119.000	1328.8518	167.68	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.000)								
119.083	1329.9968	166.25	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.083)								
119.167	1331.1322	164.86	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.167)								
119.250	1332.2582	163.49	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.250)								
119.333	1333.3750	162.16	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.333)								
119.417	1334.4828	160.85	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.417)								
119.500	1335.5818	159.57	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.500)								
119.583	1336.6721	158.32	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.583)								
119.667	1337.7540	157.09	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.667)								
119.750	1338.8276	155.89	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.750)								
119.833	1339.8932	154.71	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.833)								
119.917	1340.9507	153.56	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 23.917)								
120.000	1342.0004	152.42	.Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.000)								
120.083	1343.0322	149.83	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.083)								
120.167	1344.0309	145.01	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.167)								
120.250	1344.9840	138.40	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.250)								
120.333	1345.8815	130.31	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.333)								
120.417	1346.6971	118.44	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.417)								
120.500	1347.3754	98.47	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.500)								
120.583	1347.8645	71.03	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.583)								
120.667	1348.2611	57.59	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.667)								
120.750	1348.5978	48.88	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.750)								
120.833	1348.8857	41.82	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.833)								
120.917	1349.1318	35.73	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 24.917)								
121.000	1349.3459	31.08	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.000)								
121.083	1349.5298	26.69	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.083)								
121.167	1349.6888	23.09	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.167)								
121.250	1349.8254	19.83	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.250)								
121.333	1349.9432	17.11	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.333)								
121.417	1350.0448	14.75	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.417)								
121.500	1350.1313	12.57	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.500)								
121.583	1350.2050	10.70	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.583)								
121.667	1350.2670	9.01	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.667)								
121.750	1350.3198	7.67	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.750)								
121.833	1350.3639	6.41	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.833)								
121.917	1350.4017	5.50	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 25.917)								
122.000	1350.4342	4.72	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.000)								
122.083	1350.4614	3.95	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.083)								
122.167	1350.4838	3.24	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.167)								
122.250	1350.5044	2.99	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.250)								
122.333	1350.5240	2.85	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.333)								
122.417	1350.5427	2.71	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.417)								
122.500	1350.5604	2.57	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.500)								
122.583	1350.5771	2.44	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.583)								
122.667	1350.5930	2.30	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.667)								
122.750	1350.6079	2.17	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.750)								
122.833	1350.6219	2.03	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.833)								
122.917	1350.6350	1.90	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 26.917)								
123.000	1350.6472	1.77	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.000)								
123.083	1350.6584	1.64	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.083)								
123.167	1350.6688	1.51	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.167)								
123.250	1350.6783	1.38	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.250)								
123.333	1350.6870	1.25	Q	.	.	.	V.	
(PEAK DAY 1, HOUR 27.333)								
123.417	1350.6947	1.13	Q	.	.	.	V.	

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(PEAK DAY 1, HOUR  27.417)
123.500   1350.7015      1.00  Q         .         .         .        V.
(PEAK DAY 1, HOUR  27.500)
123.583   1350.7075      0.88  Q         .         .         .        V.
(PEAK DAY 1, HOUR  27.583)
123.667   1350.7126      0.75  Q         .         .         .        V.
(PEAK DAY 1, HOUR  27.667)
123.750   1350.7169      0.63  Q         .         .         .        V.
(PEAK DAY 1, HOUR  27.750)
123.833   1350.7205      0.51  Q         .         .         .        V.
(PEAK DAY 1, HOUR  27.833)
123.917   1350.7231      0.38  Q         .         .         .        V.
(PEAK DAY 1, HOUR  27.917)
124.000   1350.7250      0.26  Q         .         .         .        V.
(PEAK DAY 1, HOUR  28.000)


**************************************************************************
 FLOW PROCESS FROM NODE    780.00 TO NODE    780.00 IS CODE = 3.1
--------------------------------------------------------------------------
 >>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #1<<<<<
==========================================================================

                  INFLOW
                 (STREAM 1)
                     |
                     |
                     V                __effective depth
                 -----------          |   (and volume)
                |           |    |    |
                |           |    |....V........
                | detention |<-->|           outflow
                |   basin   |    |.........._______
                 -----------     |    ^     |  \
                     |           |  dead    |   basin outlet
                     V           | storage  |
                  OUTFLOW         ---------
                 (STREAM 1)



       ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 1
       THROUGH A FLOW-THROUGH DETENTION BASIN
       SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
         DEAD STORAGE(AF) =      0.000
         SPECIFIED DEAD STORAGE(AF) FILLED =      0.000
         SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET =      0.000
         DETENTION BASIN CONSTANT LOSS RATE(CFS) =    0.00


       BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

        INTERVAL    DEPTH      OUTFLOW     STORAGE
         NUMBER      (FT)       (CFS)       (AF)
            1         0.00         0.00       0.000
            2         4.00       175.20       0.700
            3         5.00       199.20       2.000
            4         6.00       220.50       4.900
            5         7.00       240.40       9.900
            6         9.00       276.50      27.900
            7        11.00       308.80      52.600
            8        13.00       338.30      79.200
            9        15.00       365.70     127.100
           10        17.00       391.10     183.000
           11        19.00       415.40     240.600
           12        21.00       438.20     299.900
           13        23.00       460.70     361.000
           14        25.00       472.30     424.000
           15        27.00       485.40     489.000
           16        29.00       500.00     555.800
           17        31.00       515.60     624.500


==========================================================================
 MODIFIED-PULS BASIN ROUTING MODEL RESULTS(5-MINUTE COMPUTATION INTERVALS):
 (Note: Computed EFFECTIVE DEPTH and VOLUME are estimated at the clock time;
        MEAN OUTFLOW is the average value during the unit interval.)

                    CLOCK                                          MEAN
PEAK TIME    TIME   DEAD-STORAGE    INFLOW    LOSS  EFFECTIVE OUTFLOW  EFFECTIVE
DAY  (HRS)   (HRS)  FILLED(AF)      (CFS)     (CFS)  DEPTH(FT) (CFS)   VOLUME(AF)
--------------------------------------------------------------------------------
 1   0.001  96.001        0.000     32.46      0.00       0.74    32.6       0.130
 1   0.084  96.084        0.000     33.40      0.00       0.76    32.9       0.133
 1   0.167  96.167        0.000     36.12      0.00       0.82    34.6       0.143
 1   0.251  96.251        0.000     40.31      0.00       0.91    37.9       0.160
 1   0.334  96.334        0.000     45.75      0.00       1.03    42.7       0.181
 1   0.417  96.417        0.000     54.25      0.00       1.22    49.5       0.214
 1   0.501  96.501        0.000     69.27      0.00       1.55    60.8       0.272
 1   0.584  96.584        0.000     90.38      0.00       2.03    78.4       0.355
 1   0.667  96.667        0.000    100.72      0.00       2.28    94.3       0.399
 1   0.751  96.751        0.000    107.48      0.00       2.44   103.4       0.427
 1   0.834  96.834        0.000    113.01      0.00       2.57   109.7       0.450
 1   0.917  96.917        0.000    117.88      0.00       2.68   115.0       0.469
 1   1.001  97.001        0.000    121.65      0.00       2.77   119.4       0.485
 1   1.084  97.084        0.000    125.29      0.00       2.85   123.2       0.499
 1   1.167  97.167        0.000    128.33      0.00       2.92   126.5       0.512
 1   1.251  97.251        0.000    131.18      0.00       2.99   129.5       0.523
 1   1.334  97.334        0.000    133.60      0.00       3.05   132.2       0.533
 1   1.417  97.417        0.000    135.80      0.00       3.10   134.5       0.542
 1   1.501  97.501        0.000    137.86      0.00       3.14   136.7       0.550
 1   1.584  97.584        0.000    139.73      0.00       3.19   138.6       0.558
 1   1.667  97.667        0.000    141.46      0.00       3.23   140.4       0.565
 1   1.751  97.751        0.000    142.95      0.00       3.26   142.1       0.571
 1   1.834  97.834        0.000    144.38      0.00       3.29   143.5       0.576
 1   1.917  97.917        0.000    145.57      0.00       3.32   144.9       0.581
 1   2.001  98.001        0.000    146.65      0.00       3.35   146.0       0.586
 1   2.084  98.084        0.000    147.75      0.00       3.37   147.1       0.590
 1   2.167  98.167        0.000    148.81      0.00       3.40   148.2       0.594
 1   2.251  98.251        0.000    149.52      0.00       3.41   149.1       0.597
 1   2.334  98.334        0.000    150.15      0.00       3.43   149.8       0.600
 1   2.417  98.417        0.000    150.79      0.00       3.44   150.4       0.602
 1   2.501  98.501        0.000    151.43      0.00       3.46   151.1       0.605
 1   2.584  98.584        0.000    152.09      0.00       3.47   151.7       0.607
 1   2.667  98.667        0.000    152.73      0.00       3.49   152.4       0.610
 1   2.751  98.751        0.000    153.40      0.00       3.50   153.0       0.613
 1   2.834  98.834        0.000    154.06      0.00       3.52   153.7       0.615
 1   2.917  98.917        0.000    154.74      0.00       3.53   154.3       0.618
 1   3.001  99.001        0.000    155.41      0.00       3.55   155.0       0.621
 1   3.084  99.084        0.000    156.11      0.00       3.56   155.7       0.624
 1   3.167  99.167        0.000    156.79      0.00       3.58   156.4       0.626
 1   3.251  99.251        0.000    157.50      0.00       3.59   157.1       0.629
 1   3.334  99.334        0.000    158.20      0.00       3.61   157.8       0.632
 1   3.417  99.417        0.000    158.93      0.00       3.63   158.5       0.635
 1   3.501  99.501        0.000    159.64      0.00       3.64   159.2       0.638
 1   3.584  99.584        0.000    160.37      0.00       3.66   159.9       0.641
 1   3.667  99.667        0.000    161.10      0.00       3.68   160.7       0.643
 1   3.751  99.751        0.000    161.85      0.00       3.69   161.4       0.646
 1   3.834  99.834        0.000    162.59      0.00       3.71   162.2       0.649
 1   3.917  99.917        0.000    163.36      0.00       3.73   162.9       0.652
 1   4.001 100.001        0.000    164.11      0.00       3.75   163.7       0.655
 1   4.084 100.084        0.000    164.90      0.00       3.76   164.4       0.659
 1   4.167 100.167        0.000    165.67      0.00       3.78   165.2       0.662
 1   4.251 100.251        0.000    166.39      0.00       3.80   166.0       0.665
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1	4.334	100.334	0.000	167.09	0.00	3.81	166.7	0.667
1	4.417	100.417	0.000	167.81	0.00	3.83	167.4	0.670
1	4.501	100.501	0.000	168.52	0.00	3.85	168.1	0.673
1	4.584	100.584	0.000	169.26	0.00	3.86	168.8	0.676
1	4.667	100.667	0.000	169.98	0.00	3.88	169.6	0.679
1	4.751	100.751	0.000	170.74	0.00	3.90	170.3	0.682
1	4.834	100.834	0.000	171.48	0.00	3.91	171.0	0.685
1	4.917	100.917	0.000	172.25	0.00	3.93	171.8	0.688
1	5.001	101.001	0.000	173.01	0.00	3.95	172.6	0.691
1	5.084	101.084	0.000	173.80	0.00	3.97	173.3	0.694
1	5.167	101.167	0.000	174.57	0.00	3.98	174.1	0.697
1	5.251	101.251	0.000	175.38	0.00	4.00	174.9	0.701
1	5.334	101.334	0.000	176.18	0.00	4.01	175.3	0.707
1	5.417	101.417	0.000	177.01	0.00	4.01	175.4	0.718
1	5.501	101.501	0.000	177.82	0.00	4.03	175.7	0.733
1	5.584	101.584	0.000	178.67	0.00	4.04	176.0	0.751
1	5.667	101.667	0.000	179.50	0.00	4.06	176.3	0.773
1	5.751	101.751	0.000	180.37	0.00	4.08	176.8	0.798
1	5.834	101.834	0.000	181.23	0.00	4.10	177.3	0.825
1	5.917	101.917	0.000	182.12	0.00	4.12	177.8	0.855
1	6.001	102.001	0.000	183.00	0.00	4.14	178.4	0.887
1	6.084	102.084	0.000	183.91	0.00	4.17	179.0	0.921
1	6.167	102.167	0.000	184.81	0.00	4.20	179.6	0.957
1	6.251	102.251	0.000	185.75	0.00	4.23	180.3	0.994
1	6.334	102.334	0.000	186.67	0.00	4.26	181.0	1.033
1	6.417	102.417	0.000	187.63	0.00	4.29	181.7	1.074
1	6.501	102.501	0.000	188.58	0.00	4.32	182.5	1.116
1	6.584	102.584	0.000	189.57	0.00	4.35	183.3	1.159
1	6.667	102.667	0.000	190.54	0.00	4.39	184.1	1.204
1	6.751	102.751	0.000	191.56	0.00	4.42	184.9	1.249
1	6.834	102.834	0.000	192.56	0.00	4.46	185.8	1.296
1	6.917	102.917	0.000	193.60	0.00	4.50	186.6	1.344
1	7.001	103.001	0.000	194.63	0.00	4.53	187.5	1.393
1	7.084	103.084	0.000	195.71	0.00	4.57	188.5	1.443
1	7.167	103.167	0.000	196.76	0.00	4.61	189.4	1.494
1	7.251	103.251	0.000	197.87	0.00	4.65	190.3	1.546
1	7.334	103.334	0.000	198.95	0.00	4.69	191.3	1.598
1	7.417	103.417	0.000	200.09	0.00	4.73	192.3	1.652
1	7.501	103.501	0.000	201.21	0.00	4.77	193.3	1.707
1	7.584	103.584	0.000	202.38	0.00	4.82	194.3	1.762
1	7.667	103.667	0.000	203.53	0.00	4.86	195.3	1.819
1	7.751	103.751	0.000	204.74	0.00	4.90	196.4	1.876
1	7.834	103.834	0.000	205.93	0.00	4.95	197.5	1.935
1	7.917	103.917	0.000	207.17	0.00	5.00	198.5	1.994
1	8.001	104.001	0.000	208.40	0.00	5.02	199.4	2.056
1	8.084	104.084	0.000	209.68	0.00	5.04	199.9	2.124
1	8.167	104.167	0.000	210.95	0.00	5.07	200.4	2.197
1	8.251	104.251	0.000	212.27	0.00	5.09	200.9	2.275
1	8.334	104.334	0.000	213.58	0.00	5.12	201.5	2.358
1	8.418	104.418	0.000	214.95	0.00	5.15	202.2	2.446
1	8.501	104.501	0.000	216.29	0.00	5.19	202.8	2.539
1	8.584	104.584	0.000	217.71	0.00	5.22	203.5	2.637
1	8.668	104.668	0.000	219.10	0.00	5.25	204.3	2.739
1	8.751	104.751	0.000	220.57	0.00	5.29	205.0	2.846
1	8.834	104.834	0.000	222.01	0.00	5.33	205.8	2.957
1	8.918	104.918	0.000	223.52	0.00	5.37	206.7	3.074
1	9.001	105.001	0.000	225.02	0.00	5.41	207.5	3.194
1	9.084	105.084	0.000	226.59	0.00	5.45	208.4	3.319
1	9.168	105.168	0.000	228.13	0.00	5.50	209.4	3.448
1	9.251	105.251	0.000	229.76	0.00	5.55	210.3	3.582
1	9.334	105.334	0.000	231.36	0.00	5.59	211.3	3.720
1	9.418	105.418	0.000	233.05	0.00	5.64	212.4	3.863
1	9.501	105.501	0.000	234.71	0.00	5.69	213.4	4.009
1	9.584	105.584	0.000	236.47	0.00	5.74	214.5	4.160
1	9.668	105.668	0.000	238.19	0.00	5.80	215.6	4.316
1	9.751	105.751	0.000	240.02	0.00	5.85	216.8	4.476
1	9.834	105.834	0.000	241.81	0.00	5.91	218.0	4.640
1	9.918	105.918	0.000	243.71	0.00	5.97	219.2	4.809
1	10.001	106.001	0.000	245.58	0.00	6.02	220.3	4.982
1	10.084	106.084	0.000	247.55	0.00	6.05	221.2	5.164
1	10.168	106.168	0.000	249.50	0.00	6.09	221.9	5.354
1	10.251	106.251	0.000	251.56	0.00	6.13	222.7	5.553
1	10.334	106.334	0.000	253.59	0.00	6.17	223.5	5.760
1	10.418	106.418	0.000	255.73	0.00	6.22	224.4	5.976
1	10.501	106.501	0.000	257.85	0.00	6.26	225.2	6.201
1	10.584	106.584	0.000	260.09	0.00	6.31	226.1	6.434
1	10.668	106.668	0.000	262.31	0.00	6.36	227.1	6.677
1	10.751	106.751	0.000	264.66	0.00	6.41	228.1	6.929
1	10.834	106.834	0.000	266.98	0.00	6.46	229.1	7.190
1	10.918	106.918	0.000	269.43	0.00	6.51	230.2	7.460
1	11.001	107.001	0.000	271.86	0.00	6.57	231.2	7.740
1	11.084	107.084	0.000	274.44	0.00	6.63	232.4	8.030
1	11.168	107.168	0.000	276.99	0.00	6.69	233.6	8.329
1	11.251	107.251	0.000	279.69	0.00	6.75	234.8	8.638
1	11.334	107.334	0.000	282.37	0.00	6.81	236.0	8.958
1	11.418	107.418	0.000	285.22	0.00	6.88	237.3	9.288
1	11.501	107.501	0.000	288.04	0.00	6.95	238.6	9.628
1	11.584	107.584	0.000	291.04	0.00	7.01	239.9	9.980
1	11.668	107.668	0.000	294.01	0.00	7.05	240.9	10.345
1	11.751	107.751	0.000	297.18	0.00	7.09	241.7	10.728
1	11.834	107.834	0.000	300.32	0.00	7.14	242.5	11.126
1	11.918	107.918	0.000	303.66	0.00	7.18	243.3	11.542
1	12.001	108.001	0.000	306.99	0.00	7.23	244.1	11.975
1	12.084	108.084	0.000	311.85	0.00	7.28	245.0	12.435
1	12.168	108.168	0.000	318.70	0.00	7.34	246.0	12.936
1	12.251	108.251	0.000	327.43	0.00	7.40	247.0	13.490
1	12.334	108.334	0.000	337.51	0.00	7.47	248.2	14.105
1	12.418	108.418	0.000	351.28	0.00	7.55	249.5	14.805
1	12.501	108.501	0.000	372.33	0.00	7.64	251.1	15.640
1	12.584	108.584	0.000	400.46	0.00	7.75	252.9	16.656
1	12.668	108.668	0.000	416.38	0.00	7.87	255.1	17.767
1	12.751	108.751	0.000	428.52	0.00	8.01	257.4	18.946
1	12.834	108.834	0.000	439.25	0.00	8.14	259.8	20.182
1	12.918	108.918	0.000	449.53	0.00	8.29	262.3	21.472
1	13.001	109.001	0.000	458.57	0.00	8.43	264.9	22.805
1	13.084	109.084	0.000	467.78	0.00	8.59	267.7	24.183
1	13.168	109.168	0.000	476.34	0.00	8.74	270.5	25.601
1	13.251	109.251	0.000	485.05	0.00	8.91	273.4	27.059
1	13.334	109.334	0.000	493.30	0.00	9.05	276.1	28.555
1	13.418	109.418	0.000	501.71	0.00	9.18	278.4	30.093
1	13.501	109.501	0.000	510.01	0.00	9.31	280.4	31.675
1	13.584	109.584	0.000	518.76	0.00	9.44	282.5	33.302
1	13.668	109.668	0.000	527.83	0.00	9.57	284.7	34.976
1	13.751	109.751	0.000	537.80	0.00	9.71	286.9	36.705
1	13.834	109.834	0.000	548.61	0.00	9.86	289.2	38.491
1	13.918	109.918	0.000	561.10	0.00	10.01	291.6	40.348
1	14.001	110.001	0.000	575.89	0.00	10.17	294.0	42.289
1	14.084	110.084	0.000	599.85	0.00	10.33	296.7	44.377
1	14.168	110.168	0.000	633.13	0.00	10.52	299.5	46.674
1	14.251	110.251	0.000	675.16	0.00	10.73	302.7	49.239
1	14.334	110.334	0.000	723.42	0.00	10.96	306.3	52.112
1	14.418	110.418	0.000	787.96	0.00	11.21	310.0	55.403
1	14.501	110.501	0.000	882.20	0.00	11.50	314.1	59.316
1	14.584	110.584	0.000	1006.08	0.00	11.86	318.9	64.049
1	14.668	110.668	0.000	1081.27	0.00	12.25	324.4	69.261
1	14.751	110.751	0.000	1142.94	0.00	12.67	330.4	74.858
1	14.834	110.834	0.000	1199.92	0.00	13.07	336.4	80.805
1	14.918	110.918	0.000	1257.25	0.00	13.33	341.0	87.115
1	15.001	111.001	0.000	1310.90	0.00	13.61	344.7	93.769
1	15.084	111.084	0.000	1368.19	0.00	13.90	348.6	100.791
1	15.168	111.168	0.000	1424.65	0.00	14.21	352.8	108.173
1	15.251	111.251	0.000	1485.58	0.00	14.53	357.1	115.945
1	15.334	111.334	0.000	1547.35	0.00	14.88	361.7	124.111
1	15.418	111.418	0.000	1602.19	0.00	15.20	366.1	132.624

1	15.501	111.501	0.000	1640.98	0.00	15.51	370.2	141.376
1	15.584	111.584	0.000	1673.36	0.00	15.83	374.2	150.323
1	15.668	111.668	0.000	1699.63	0.00	16.16	378.3	159.423
1	15.751	111.751	0.000	1711.01	0.00	16.48	382.5	168.573
1	15.834	111.834	0.000	1670.82	0.00	16.80	386.6	177.418
1	15.918	111.918	0.000	1605.23	0.00	17.10	390.4	185.784
1	16.001	112.001	0.000	1720.98	0.00	17.41	394.2	194.922
1	16.084	112.084	0.000	2095.83	0.00	17.82	398.6	206.611
1	16.168	112.168	0.000	2595.04	0.00	18.34	404.2	221.699
1	16.251	112.251	0.000	3092.60	0.00	18.98	411.3	240.165
1	16.334	112.334	0.000	3581.29	0.00	19.72	419.4	261.941
1	16.418	112.418	0.000	4356.39	0.00	20.63	428.8	288.990
1	16.501	112.501	0.000	5386.39	0.00	21.76	440.4	323.054
1	16.584	112.584	0.000	5920.67	0.00	22.99	453.7	360.706
1	16.668	112.668	0.000	4105.58	0.00	23.79	462.9	385.793
1	16.751	112.751	0.000	3291.35	0.00	24.40	467.1	405.244
1	16.834	112.834	0.000	2977.31	0.00	24.95	470.4	422.509
1	16.918	112.918	0.000	2862.65	0.00	25.46	473.7	438.962
1	17.001	113.001	0.000	2621.62	0.00	25.91	476.8	453.733
1	17.084	113.084	0.000	2482.26	0.00	26.34	479.7	467.525
1	17.168	113.168	0.000	2288.35	0.00	26.72	482.3	479.963
1	17.251	113.251	0.000	2140.74	0.00	27.07	484.7	491.368
1	17.334	113.334	0.000	1967.61	0.00	27.38	487.0	501.565
1	17.418	113.418	0.000	1811.39	0.00	27.65	489.1	510.671
1	17.501	113.501	0.000	1646.47	0.00	27.89	491.0	518.629
1	17.584	113.584	0.000	1450.46	0.00	28.08	492.6	525.226
1	17.668	113.668	0.000	1315.90	0.00	28.25	493.9	530.887
1	17.751	113.751	0.000	1187.47	0.00	28.40	495.1	535.656
1	17.834	113.834	0.000	1098.97	0.00	28.52	496.1	539.808
1	17.918	113.918	0.000	992.90	0.00	28.62	496.9	543.224
1	18.001	114.001	0.000	923.43	0.00	28.71	497.6	546.157
1	18.084	114.084	0.000	867.45	0.00	28.79	498.2	548.700
1	18.168	114.168	0.000	805.49	0.00	28.85	498.7	550.813
1	18.251	114.251	0.000	705.16	0.00	28.89	499.1	552.233
1	18.334	114.334	0.000	649.72	0.00	28.92	499.3	553.268
1	18.418	114.418	0.000	611.41	0.00	28.95	499.5	554.039
1	18.501	114.501	0.000	570.89	0.00	28.96	499.7	554.530
1	18.584	114.584	0.000	523.70	0.00	28.97	499.7	554.695
1	18.668	114.668	0.000	490.85	0.00	28.97	499.8	554.633
1	18.751	114.751	0.000	465.13	0.00	28.96	499.7	554.395
1	18.834	114.834	0.000	442.53	0.00	28.95	499.6	554.002
1	18.918	114.918	0.000	423.21	0.00	28.93	499.5	553.476
1	19.001	115.001	0.000	406.65	0.00	28.91	499.4	552.837
1	19.084	115.084	0.000	391.04	0.00	28.89	499.3	552.092
1	19.168	115.168	0.000	377.13	0.00	28.86	499.1	551.252
1	19.251	115.251	0.000	365.66	0.00	28.84	498.9	550.334
1	19.335	115.335	0.000	355.55	0.00	28.81	498.7	549.348
1	19.418	115.418	0.000	346.13	0.00	28.78	498.5	548.299
1	19.501	115.501	0.000	337.25	0.00	28.74	498.2	547.190
1	19.585	115.585	0.000	329.64	0.00	28.71	498.0	546.031
1	19.668	115.668	0.000	322.58	0.00	28.67	497.7	544.825
1	19.751	115.751	0.000	315.86	0.00	28.63	497.5	543.574
1	19.835	115.835	0.000	309.24	0.00	28.60	497.2	542.280
1	19.918	115.918	0.000	302.63	0.00	28.56	496.9	540.942
1	20.001	116.001	0.000	295.92	0.00	28.51	496.6	539.560
1	20.085	116.085	0.000	288.33	0.00	28.47	496.3	538.127
1	20.168	116.168	0.000	279.48	0.00	28.43	496.0	536.636
1	20.251	116.251	0.000	262.17	0.00	28.38	495.6	535.029
1	20.335	116.335	0.000	253.19	0.00	28.33	495.3	533.361
1	20.418	116.418	0.000	248.21	0.00	28.28	494.9	531.662
1	20.501	116.501	0.000	243.99	0.00	28.23	494.5	529.937
1	20.585	116.585	0.000	239.39	0.00	28.17	494.2	528.182
1	20.668	116.668	0.000	234.89	0.00	28.12	493.8	526.399
1	20.751	116.751	0.000	230.63	0.00	28.07	493.4	524.590
1	20.835	116.835	0.000	226.60	0.00	28.01	493.0	522.755
1	20.918	116.918	0.000	222.75	0.00	27.95	492.6	520.897
1	21.001	117.001	0.000	219.07	0.00	27.90	492.2	519.016
1	21.085	117.085	0.000	215.55	0.00	27.84	491.8	517.114
1	21.168	117.168	0.000	212.16	0.00	27.78	491.3	515.191
1	21.251	117.251	0.000	209.23	0.00	27.73	490.9	513.251
1	21.335	117.335	0.000	206.52	0.00	27.67	490.5	511.296
1	21.418	117.418	0.000	203.92	0.00	27.61	490.1	509.325
1	21.501	117.501	0.000	201.43	0.00	27.55	489.6	507.340
1	21.585	117.585	0.000	199.02	0.00	27.49	489.2	505.342
1	21.668	117.668	0.000	196.69	0.00	27.43	488.8	503.330
1	21.751	117.751	0.000	194.42	0.00	27.37	488.3	501.306
1	21.835	117.835	0.000	192.22	0.00	27.31	487.9	499.270
1	21.918	117.918	0.000	190.08	0.00	27.25	487.4	497.223
1	22.001	118.001	0.000	188.00	0.00	27.18	487.0	495.163
1	22.085	118.085	0.000	185.97	0.00	27.12	486.5	493.094
1	22.168	118.168	0.000	184.00	0.00	27.06	486.1	491.013
1	22.251	118.251	0.000	182.15	0.00	27.00	485.6	488.923
1	22.335	118.335	0.000	180.38	0.00	26.93	485.2	486.824
1	22.418	118.418	0.000	178.65	0.00	26.87	484.7	484.716
1	22.501	118.501	0.000	176.97	0.00	26.80	484.3	482.599
1	22.585	118.585	0.000	175.33	0.00	26.74	483.9	480.474
1	22.668	118.668	0.000	173.72	0.00	26.67	483.5	478.341
1	22.751	118.751	0.000	172.16	0.00	26.61	483.0	476.200
1	22.835	118.835	0.000	170.63	0.00	26.54	482.6	474.051
1	22.918	118.918	0.000	169.14	0.00	26.47	482.2	471.896
1	23.001	119.001	0.000	167.68	0.00	26.41	481.7	469.733
1	23.085	119.085	0.000	166.25	0.00	26.34	481.3	467.563
1	23.168	119.168	0.000	164.86	0.00	26.27	480.9	465.387
1	23.251	119.251	0.000	163.49	0.00	26.21	480.4	463.204
1	23.335	119.335	0.000	162.16	0.00	26.14	480.0	461.015
1	23.418	119.418	0.000	160.85	0.00	26.07	479.5	458.820
1	23.501	119.501	0.000	159.57	0.00	26.00	479.1	456.620
1	23.585	119.585	0.000	158.32	0.00	25.94	478.7	454.413
1	23.668	119.668	0.000	157.09	0.00	25.87	478.2	452.202
1	23.751	119.751	0.000	155.89	0.00	25.80	477.8	449.985
1	23.835	119.835	0.000	154.71	0.00	25.73	477.3	447.763
1	23.918	119.918	0.000	153.56	0.00	25.66	476.9	445.537
1	24.001	120.001	0.000	152.42	0.00	25.59	476.4	443.305
1	24.085	120.085	0.000	149.83	0.00	25.52	476.0	441.059
1	24.168	120.168	0.000	145.01	0.00	25.45	475.5	438.783
1	24.251	120.251	0.000	138.40	0.00	25.38	475.0	436.465
1	24.335	120.335	0.000	130.31	0.00	25.31	474.6	434.094
1	24.418	120.418	0.000	118.44	0.00	25.24	474.1	431.644
1	24.501	120.501	0.000	98.47	0.00	25.16	473.6	429.061
1	24.585	120.585	0.000	71.03	0.00	25.07	473.0	426.292
1	24.668	120.668	0.000	57.59	0.00	24.98	472.5	423.435
1	24.751	120.751	0.000	48.88	0.00	24.89	471.9	420.521
1	24.835	120.835	0.000	41.82	0.00	24.80	471.4	417.563
1	24.918	120.918	0.000	35.73	0.00	24.70	470.8	414.566
1	25.001	121.001	0.000	31.08	0.00	24.60	470.3	411.541
1	25.085	121.085	0.000	26.69	0.00	24.51	469.7	408.490
1	25.168	121.168	0.000	23.09	0.00	24.41	469.2	405.418
1	25.251	121.251	0.000	19.83	0.00	24.31	468.6	402.327
1	25.335	121.335	0.000	17.11	0.00	24.21	468.0	399.222
1	25.418	121.418	0.000	14.75	0.00	24.11	467.5	396.104
1	25.501	121.501	0.000	12.57	0.00	24.02	466.9	392.976
1	25.585	121.585	0.000	10.70	0.00	23.92	466.3	389.838
1	25.668	121.668	0.000	9.01	0.00	23.82	465.7	386.692
1	25.751	121.751	0.000	7.67	0.00	23.72	465.1	383.542
1	25.835	121.835	0.000	6.41	0.00	23.62	464.6	380.386
1	25.918	121.918	0.000	5.50	0.00	23.52	464.0	377.229
1	26.001	122.001	0.000	4.72	0.00	23.41	463.4	374.070
1	26.085	122.085	0.000	3.95	0.00	23.31	462.8	370.910
1	26.168	122.168	0.000	3.24	0.00	23.21	462.2	367.749
1	26.251	122.251	0.000	2.99	0.00	23.11	461.7	364.590
1	26.335	122.335	0.000	2.85	0.00	23.01	461.1	361.434
1	26.418	122.418	0.000	2.71	0.00	22.91	460.2	358.283
1	26.501	122.501	0.000	2.57	0.00	22.81	459.1	355.139
1	26.585	122.585	0.000	2.44	0.00	22.71	458.0	352.002

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 1  26.668 122.668        0.000     2.30     0.00     22.60    456.8    348.871
 1  26.751 122.751        0.000     2.17     0.00     22.50    455.7    345.748
 1  26.835 122.835        0.000     2.03     0.00     22.40    454.5    342.632
 1  26.918 122.918        0.000     1.90     0.00     22.30    453.4    339.523
 1  27.001 123.001        0.000     1.77     0.00     22.20    452.2    336.420
 1  27.085 123.085        0.000     1.64     0.00     22.09    451.1    333.325
 1  27.168 123.168        0.000     1.51     0.00     21.99    449.9    330.237
 1  27.251 123.251        0.000     1.38     0.00     21.89    448.8    327.155
 1  27.335 123.335        0.000     1.25     0.00     21.79    447.7    324.081
 1  27.418 123.418        0.000     1.13     0.00     21.69    446.5    321.013
 1  27.501 123.501        0.000     1.00     0.00     21.59    445.4    317.952
 1  27.585 123.585        0.000     0.88     0.00     21.49    444.3    314.899
 1  27.668 123.668        0.000     0.75     0.00     21.39    443.2    311.852
 1  27.751 123.751        0.000     0.63     0.00     21.29    442.0    308.812
 1  27.835 123.835        0.000     0.51     0.00     21.19    440.9    305.779
 1  27.918 123.918        0.000     0.38     0.00     21.09    439.8    302.752

  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
--------------------------------------------------------------------------------
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   1350.726 AF
    BASIN  STORAGE =      0.000 AF (WITH      0.000 AF INITIALLY FILLED)
    OUTFLOW VOLUME =   1350.728 AF
    LOSS    VOLUME =      0.000 AF


********************************************************************************
  FLOW PROCESS FROM NODE    780.00 TO NODE    780.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================

           STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
        (Note: Time indicated is at END of Each Unit Intervals)
--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      125.0     250.0     375.0     500.0
--------------------------------------------------------------------------------
  96.000    301.4903     32.60  . Q     V .         .         .         .
 (PEAK DAY 2, HOUR  24.000)
  96.083    301.7169     32.90  . Q     V .         .         .         .
 (PEAK DAY 1, HOUR   0.083)
  96.167    301.9554     34.62  . Q     V .         .         .         .
 (PEAK DAY 1, HOUR   0.167)
  96.250    302.2167     37.95  .  Q    V .         .         .         .
 (PEAK DAY 1, HOUR   0.250)
  96.333    302.5105     42.65  .  Q    V .         .         .         .
 (PEAK DAY 1, HOUR   0.333)
  96.417    302.8511     49.45  .  Q    V .         .         .         .
 (PEAK DAY 1, HOUR   0.417)
  96.500    303.2701     60.84  .   Q   V .         .         .         .
 (PEAK DAY 1, HOUR   0.500)
  96.583    303.8102     78.42  .     Q V .         .         .         .
 (PEAK DAY 1, HOUR   0.583)
  96.667    304.4594     94.28  .      Q V.         .         .         .
 (PEAK DAY 1, HOUR   0.667)
  96.750    305.1714    103.37  .       QV.         .         .         .
 (PEAK DAY 1, HOUR   0.750)
  96.833    305.9271    109.74  .       QV.         .         .         .
 (PEAK DAY 1, HOUR   0.833)
  96.917    306.7193    115.02  .        Q.         .         .         .
 (PEAK DAY 1, HOUR   0.917)
  97.000    307.5417    119.41  .        Q.         .         .         .
 (PEAK DAY 1, HOUR   1.000)
  97.083    308.3900    123.17  .        Q.         .         .         .
 (PEAK DAY 1, HOUR   1.083)
  97.167    309.2614    126.54  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   1.167)
  97.250    310.1534    129.52  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   1.250)
  97.333    311.0637    132.18  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   1.333)
  97.417    311.9901    134.51  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   1.417)
  97.500    312.9313    136.66  .        VQ         .         .         .
 (PEAK DAY 1, HOUR   1.500)
  97.583    313.8861    138.64  .        V.Q        .         .         .
 (PEAK DAY 1, HOUR   1.583)
  97.667    314.8534    140.45  .        V.Q        .         .         .
 (PEAK DAY 1, HOUR   1.667)
  97.750    315.8318    142.07  .        V.Q        .         .         .
 (PEAK DAY 1, HOUR   1.750)
  97.833    316.8204    143.54  .        V.Q        .         .         .
 (PEAK DAY 1, HOUR   1.833)
  97.917    317.8181    144.87  .        V.Q        .         .         .
 (PEAK DAY 1, HOUR   1.917)
  98.000    318.8237    146.01  .        V.Q        .         .         .
 (PEAK DAY 1, HOUR   2.000)
  98.083    319.8369    147.11  .        V.Q        .         .         .
 (PEAK DAY 1, HOUR   2.083)
  98.167    320.8575    148.19  .        V.Q        .         .         .
 (PEAK DAY 1, HOUR   2.167)
  98.250    321.8843    149.09  .        V.Q        .         .         .
 (PEAK DAY 1, HOUR   2.250)
  98.333    322.9158    149.78  .        V.Q        .         .         .
 (PEAK DAY 1, HOUR   2.333)
  98.417    323.9517    150.42  .        V. Q       .         .         .
 (PEAK DAY 1, HOUR   2.417)
  98.500    324.9921    151.06  .        V. Q       .         .         .
 (PEAK DAY 1, HOUR   2.500)
  98.583    326.0369    151.70  .        V. Q       .         .         .
 (PEAK DAY 1, HOUR   2.583)
  98.667    327.0862    152.36  .        V. Q       .         .         .
 (PEAK DAY 1, HOUR   2.667)
  98.750    328.1400    153.01  .        V. Q       .         .         .
 (PEAK DAY 1, HOUR   2.750)
  98.833    329.1984    153.68  .        V. Q       .         .         .
 (PEAK DAY 1, HOUR   2.833)
  98.917    330.2614    154.35  .        V. Q       .         .         .
 (PEAK DAY 1, HOUR   2.917)
  99.000    331.3290    155.02  .        V. Q       .         .         .
 (PEAK DAY 1, HOUR   3.000)
  99.083    332.4014    155.71  .        V. Q       .         .         .
 (PEAK DAY 1, HOUR   3.083)
  99.167    333.4785    156.40  .        V. Q       .         .         .
 (PEAK DAY 1, HOUR   3.167)
  99.250    334.5604    157.09  .        V. Q       .         .         .
 (PEAK DAY 1, HOUR   3.250)
  99.333    335.6472    157.80  .        V. Q       .         .         .
 (PEAK DAY 1, HOUR   3.333)
  99.417    336.7388    158.51  .        V. Q       .         .         .
 (PEAK DAY 1, HOUR   3.417)
  99.500    337.8354    159.22  .         V Q       .         .         .
 (PEAK DAY 1, HOUR   3.500)
  99.583    338.9370    159.95  .         V Q       .         .         .
 (PEAK DAY 1, HOUR   3.583)
  99.667    340.0435    160.68  .         V Q       .         .         .
 (PEAK DAY 1, HOUR   3.667)
  99.750    341.1552    161.42  .         V Q       .         .         .
 (PEAK DAY 1, HOUR   3.750)
  99.833    342.2721    162.16  .         V Q       .         .         .
 (PEAK DAY 1, HOUR   3.833)
  99.917    343.3941    162.91  .         V  Q      .         .         .
 (PEAK DAY 1, HOUR   3.917)
 100.000    344.5213    163.68  .         V  Q      .         .         .
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(PEAK DAY 1, HOUR 4.000)
100.083 345.6538 164.44 . V Q . . .
(PEAK DAY 1, HOUR 4.083)
100.167 346.7917 165.22 . V Q . . .
(PEAK DAY 1, HOUR 4.167)
100.250 347.9348 165.97 . V Q . . .
(PEAK DAY 1, HOUR 4.250)
100.333 349.0827 166.68 . V Q . . .
(PEAK DAY 1, HOUR 4.333)
100.417 350.2355 167.39 . V Q . . .
(PEAK DAY 1, HOUR 4.417)
100.500 351.3933 168.11 . V Q . . .
(PEAK DAY 1, HOUR 4.500)
100.583 352.5560 168.83 . V Q . . .
(PEAK DAY 1, HOUR 4.583)
100.667 353.7238 169.56 . V Q . . .
(PEAK DAY 1, HOUR 4.667)
100.750 354.8966 170.30 . V Q . . .
(PEAK DAY 1, HOUR 4.750)
100.833 356.0746 171.05 . V Q . . .
(PEAK DAY 1, HOUR 4.833)
100.917 357.2578 171.80 . V Q . . .
(PEAK DAY 1, HOUR 4.917)
101.000 358.4463 172.57 . V Q . . .
(PEAK DAY 1, HOUR 5.000)
101.083 359.6401 173.34 . V Q . . .
(PEAK DAY 1, HOUR 5.083)
101.167 360.8393 174.12 . V Q . . .
(PEAK DAY 1, HOUR 5.167)
101.250 362.0435 174.86 . V Q . . .
(PEAK DAY 1, HOUR 5.250)
101.333 363.2507 175.27 . V Q . . .
(PEAK DAY 1, HOUR 5.333)
101.417 364.4589 175.43 . V Q . . .
(PEAK DAY 1, HOUR 5.417)
101.500 365.6687 175.67 . V Q . . .
(PEAK DAY 1, HOUR 5.500)
101.583 366.8806 175.98 . V Q . . .
(PEAK DAY 1, HOUR 5.583)
101.667 368.0952 176.35 . V Q . . .
(PEAK DAY 1, HOUR 5.667)
101.750 369.3126 176.78 . V Q . . .
(PEAK DAY 1, HOUR 5.750)
101.833 370.5334 177.26 . V Q . . .
(PEAK DAY 1, HOUR 5.833)
101.917 371.7578 177.79 . .V Q . . .
(PEAK DAY 1, HOUR 5.917)
102.000 372.9862 178.36 . .V Q . . .
(PEAK DAY 1, HOUR 6.000)
102.083 374.2187 178.97 . .V Q . . .
(PEAK DAY 1, HOUR 6.083)
102.167 375.4557 179.61 . .V Q . . .
(PEAK DAY 1, HOUR 6.167)
102.250 376.6973 180.29 . .V Q . . .
(PEAK DAY 1, HOUR 6.250)
102.333 377.9438 181.00 . .V Q . . .
(PEAK DAY 1, HOUR 6.333)
102.417 379.1954 181.73 . .V Q . . .
(PEAK DAY 1, HOUR 6.417)
102.500 380.4523 182.49 . .V Q . . .
(PEAK DAY 1, HOUR 6.500)
102.583 381.7145 183.28 . .V Q . . .
(PEAK DAY 1, HOUR 6.583)
102.667 382.9824 184.09 . .V Q . . .
(PEAK DAY 1, HOUR 6.667)
102.750 384.2560 184.92 . .V Q . . .
(PEAK DAY 1, HOUR 6.750)
102.833 385.5354 185.78 . .V Q . . .
(PEAK DAY 1, HOUR 6.833)
102.917 386.8209 186.65 . .V Q . . .
(PEAK DAY 1, HOUR 6.917)
103.000 388.1125 187.54 . .V Q . . .
(PEAK DAY 1, HOUR 7.000)
103.083 389.4103 188.45 . .V Q . . .
(PEAK DAY 1, HOUR 7.083)
103.167 390.7146 189.38 . .V Q . . .
(PEAK DAY 1, HOUR 7.167)
103.250 392.0255 190.33 . .V Q . . .
(PEAK DAY 1, HOUR 7.250)
103.333 393.3429 191.30 . .V Q . . .
(PEAK DAY 1, HOUR 7.333)
103.417 394.6672 192.28 . .V Q . . .
(PEAK DAY 1, HOUR 7.417)
103.500 395.9983 193.28 . .V Q . . .
(PEAK DAY 1, HOUR 7.500)
103.583 397.3365 194.30 . .V Q . . .
(PEAK DAY 1, HOUR 7.583)
103.667 398.6817 195.33 . .V Q . . .
(PEAK DAY 1, HOUR 7.667)
103.750 400.0342 196.39 . .V Q . . .
(PEAK DAY 1, HOUR 7.750)
103.833 401.3941 197.46 . .V Q . . .
(PEAK DAY 1, HOUR 7.833)
103.917 402.7615 198.54 . .V Q . . .
(PEAK DAY 1, HOUR 7.917)
104.000 404.1345 199.35 . .V Q . . .
(PEAK DAY 1, HOUR 8.000)
104.083 405.5109 199.86 . . V Q . . .
(PEAK DAY 1, HOUR 8.083)
104.167 406.8909 200.38 . . V Q . . .
(PEAK DAY 1, HOUR 8.167)
104.250 408.2747 200.93 . . V Q . . .
(PEAK DAY 1, HOUR 8.250)
104.333 409.6627 201.52 . . V Q . . .
(PEAK DAY 1, HOUR 8.333)
104.417 411.0549 202.15 . . V Q . . .
(PEAK DAY 1, HOUR 8.417)
104.500 412.4517 202.82 . . V Q . . .
(PEAK DAY 1, HOUR 8.500)
104.583 413.8534 203.52 . . V Q . . .
(PEAK DAY 1, HOUR 8.583)
104.667 415.2600 204.25 . . V Q . . .
(PEAK DAY 1, HOUR 8.667)
104.750 416.6720 205.02 . . V Q . . .
(PEAK DAY 1, HOUR 8.750)
104.833 418.0895 205.82 . . V Q . . .
(PEAK DAY 1, HOUR 8.833)
104.917 419.5128 206.66 . . V Q . . .
(PEAK DAY 1, HOUR 8.917)
105.000 420.9421 207.53 . . V Q . . .
(PEAK DAY 1, HOUR 9.000)
105.083 422.3775 208.43 . . V Q . . .
(PEAK DAY 1, HOUR 9.083)
105.167 423.8194 209.36 . . V Q . . .
(PEAK DAY 1, HOUR 9.167)
105.250 425.2680 210.33 . . V Q . . .
(PEAK DAY 1, HOUR 9.250)
105.333 426.7234 211.33 . . V Q . . .
(PEAK DAY 1, HOUR 9.333)
105.417 428.1859 212.36 . . V Q . . .
(PEAK DAY 1, HOUR 9.417)
105.500 429.6557 213.42 . . V Q . . .
(PEAK DAY 1, HOUR 9.500)
105.583 431.1331 214.51 . . V Q . . .

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 (PEAK DAY 1, HOUR   9.583)
105.667    432.6182    215.64  .         . V    Q  .         .         .
 (PEAK DAY 1, HOUR   9.667)
105.750    434.1113    216.80  .         . V    Q  .         .         .
 (PEAK DAY 1, HOUR   9.750)
105.833    435.6125    217.99  .         . V    Q  .         .         .
 (PEAK DAY 1, HOUR   9.833)
105.917    437.1223    219.21  .         . V    Q  .         .         .
 (PEAK DAY 1, HOUR   9.917)
106.000    438.6397    220.33  .         . V    Q  .         .         .
 (PEAK DAY 1, HOUR  10.000)
106.083    440.1630    221.19  .         .  V   Q  .         .         .
 (PEAK DAY 1, HOUR  10.083)
106.167    441.6915    221.93  .         .  V   Q  .         .         .
 (PEAK DAY 1, HOUR  10.167)
106.250    443.2252    222.70  .         .  V   Q  .         .         .
 (PEAK DAY 1, HOUR  10.250)
106.333    444.7645    223.51  .         .  V   Q  .         .         .
 (PEAK DAY 1, HOUR  10.333)
106.417    446.3097    224.35  .         .  V   Q  .         .         .
 (PEAK DAY 1, HOUR  10.417)
106.500    447.8608    225.23  .         .  V    Q .         .         .
 (PEAK DAY 1, HOUR  10.500)
106.583    449.4183    226.14  .         .  V    Q .         .         .
 (PEAK DAY 1, HOUR  10.583)
106.667    450.9822    227.09  .         .  V    Q .         .         .
 (PEAK DAY 1, HOUR  10.667)
106.750    452.5530    228.07  .         .  V    Q .         .         .
 (PEAK DAY 1, HOUR  10.750)
106.833    454.1308    229.09  .         .  V    Q .         .         .
 (PEAK DAY 1, HOUR  10.833)
106.917    455.7158    230.15  .         .  V    Q .         .         .
 (PEAK DAY 1, HOUR  10.917)
107.000    457.3084    231.25  .         .  V    Q .         .         .
 (PEAK DAY 1, HOUR  11.000)
107.083    458.9088    232.38  .         .  V    Q .         .         .
 (PEAK DAY 1, HOUR  11.083)
107.167    460.5173    233.55  .         .  V    Q .         .         .
 (PEAK DAY 1, HOUR  11.167)
107.250    462.1342    234.76  .         .  V    Q .         .         .
 (PEAK DAY 1, HOUR  11.250)
107.333    463.7596    236.01  .         .  V    Q .         .         .
 (PEAK DAY 1, HOUR  11.333)
107.417    465.3939    237.31  .         .  V    Q .         .         .
 (PEAK DAY 1, HOUR  11.417)
107.500    467.0374    238.64  .         .  V     Q.         .         .
 (PEAK DAY 1, HOUR  11.500)
107.583    468.6899    239.94  .         .  V     Q.         .         .
 (PEAK DAY 1, HOUR  11.583)
107.667    470.3492    240.93  .         .  V     Q.         .         .
 (PEAK DAY 1, HOUR  11.667)
107.750    472.0136    241.68  .         .  V     Q.         .         .
 (PEAK DAY 1, HOUR  11.750)
107.833    473.6834    242.46  .         .   V    Q.         .         .
 (PEAK DAY 1, HOUR  11.833)
107.917    475.3589    243.28  .         .   V    Q.         .         .
 (PEAK DAY 1, HOUR  11.917)
108.000    477.0402    244.13  .         .   V    Q.         .         .
 (PEAK DAY 1, HOUR  12.000)
108.083    478.7277    245.02  .         .   V    Q.         .         .
 (PEAK DAY 1, HOUR  12.083)
108.167    480.4218    245.99  .         .   V    Q.         .         .
 (PEAK DAY 1, HOUR  12.167)
108.250    482.1232    247.04  .         .   V    Q.         .         .
 (PEAK DAY 1, HOUR  12.250)
108.333    483.8327    248.22  .         .   V    Q.         .         .
 (PEAK DAY 1, HOUR  12.333)
108.417    485.5512    249.54  .         .   V    Q.         .         .
 (PEAK DAY 1, HOUR  12.417)
108.500    487.2804    251.08  .         .   V     Q         .         .
 (PEAK DAY 1, HOUR  12.500)
108.583    489.0223    252.93  .         .   V     Q         .         .
 (PEAK DAY 1, HOUR  12.583)
108.667    490.7790    255.06  .         .   V     Q         .         .
 (PEAK DAY 1, HOUR  12.667)
108.750    492.5515    257.36  .         .   V     Q         .         .
 (PEAK DAY 1, HOUR  12.750)
108.833    494.3406    259.78  .         .   V     Q         .         .
 (PEAK DAY 1, HOUR  12.833)
108.917    496.1472    262.31  .         .   V     Q         .         .
 (PEAK DAY 1, HOUR  12.917)
109.000    497.9718    264.94  .         .   V     .Q        .         .
 (PEAK DAY 1, HOUR  13.000)
109.083    499.8152    267.66  .         .   V     .Q        .         .
 (PEAK DAY 1, HOUR  13.083)
109.167    501.6780    270.47  .         .   V     .Q        .         .
 (PEAK DAY 1, HOUR  13.167)
109.250    503.5606    273.35  .         .   V     .Q        .         .
 (PEAK DAY 1, HOUR  13.250)
109.333    505.4620    276.09  .         .   V     . Q       .         .
 (PEAK DAY 1, HOUR  13.333)
109.417    507.3791    278.36  .         .    V    . Q       .         .
 (PEAK DAY 1, HOUR  13.417)
109.500    509.3102    280.40  .         .    V    . Q       .         .
 (PEAK DAY 1, HOUR  13.500)
109.583    511.2558    282.50  .         .    V    . Q       .         .
 (PEAK DAY 1, HOUR  13.583)
109.667    513.2162    284.66  .         .    V    . Q       .         .
 (PEAK DAY 1, HOUR  13.667)
109.750    515.1920    286.88  .         .    V    . Q       .         .
 (PEAK DAY 1, HOUR  13.750)
109.833    517.1837    289.18  .         .    V    .  Q      .         .
 (PEAK DAY 1, HOUR  13.833)
109.917    519.1917    291.56  .         .    V    .  Q      .         .
 (PEAK DAY 1, HOUR  13.917)
110.000    521.2167    294.05  .         .    V    .  Q      .         .
 (PEAK DAY 1, HOUR  14.000)
110.083    523.2600    296.68  .         .    V    .  Q      .         .
 (PEAK DAY 1, HOUR  14.083)
110.167    525.3230    299.55  .         .    V    .  Q      .         .
 (PEAK DAY 1, HOUR  14.167)
110.250    527.4079    302.73  .         .    V    .   Q     .         .
 (PEAK DAY 1, HOUR  14.250)
110.333    529.5173    306.28  .         .    V    .   Q     .         .
 (PEAK DAY 1, HOUR  14.333)
110.417    531.6525    310.04  .         .    V    .   Q     .         .
 (PEAK DAY 1, HOUR  14.417)
110.500    533.8156    314.08  .         .    V    .    Q    .         .
 (PEAK DAY 1, HOUR  14.500)
110.583    536.0117    318.87  .         .    V    .    Q    .         .
 (PEAK DAY 1, HOUR  14.583)
110.667    538.2458    324.39  .         .    V    .    Q    .         .
 (PEAK DAY 1, HOUR  14.667)
110.750    540.5211    330.38  .         .     V   .     Q   .         .
 (PEAK DAY 1, HOUR  14.750)
110.833    542.8376    336.35  .         .     V   .     Q   .         .
 (PEAK DAY 1, HOUR  14.833)
110.917    545.1862    341.02  .         .     V   .      Q  .         .
 (PEAK DAY 1, HOUR  14.917)
111.000    547.5604    344.73  .         .     V   .      Q  .         .
 (PEAK DAY 1, HOUR  15.000)
111.083    549.9615    348.64  .         .     V   .      Q  .         .
 (PEAK DAY 1, HOUR  15.083)
111.167    552.3911    352.76  .         .     V   .       Q .         .
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 (PEAK DAY 1, HOUR  15.167)
111.250    554.8504    357.10  .         .     V   .       Q .         .
 (PEAK DAY 1, HOUR  15.250)
111.333    557.3411    361.65  .         .     V   .       Q .         .
 (PEAK DAY 1, HOUR  15.333)
111.417    559.8625    366.10  .         .     V   .        Q.         .
 (PEAK DAY 1, HOUR  15.417)
111.500    562.4120    370.20  .         .     V   .        Q.         .
 (PEAK DAY 1, HOUR  15.500)
111.583    564.9893    374.22  .         .     V   .        Q.         .
 (PEAK DAY 1, HOUR  15.583)
111.667    567.5948    378.32  .         .     V   .         Q         .
 (PEAK DAY 1, HOUR  15.667)
111.750    570.2289    382.47  .         .     V   .         Q         .
 (PEAK DAY 1, HOUR  15.750)
111.833    572.8911    386.55  .         .     V   .         Q         .
 (PEAK DAY 1, HOUR  15.833)
111.917    575.5800    390.42  .         .      V  .         .Q        .
 (PEAK DAY 1, HOUR  15.917)
112.000    578.2949    394.20  .         .      V  .         .Q        .
 (PEAK DAY 1, HOUR  16.000)
112.083    581.0400    398.60  .         .      V  .         .Q        .
 (PEAK DAY 1, HOUR  16.083)
112.167    583.8240    404.24  .         .      V  .         . Q       .
 (PEAK DAY 1, HOUR  16.167)
112.250    586.6568    411.32  .         .      V  .         . Q       .
 (PEAK DAY 1, HOUR  16.250)
112.333    589.5453    419.41  .         .      V  .         .  Q      .
 (PEAK DAY 1, HOUR  16.333)
112.417    592.4985    428.81  .         .      V  .         .   Q     .
 (PEAK DAY 1, HOUR  16.417)
112.500    595.5313    440.37  .         .      V  .         .    Q    .
 (PEAK DAY 1, HOUR  16.500)
112.583    598.6557    453.66  .         .      V  .         .     Q   .
 (PEAK DAY 1, HOUR  16.583)
112.667    601.8439    462.93  .         .      V  .         .      Q  .
 (PEAK DAY 1, HOUR  16.667)
112.750    605.0605    467.06  .         .      V  .         .      Q  .
 (PEAK DAY 1, HOUR  16.750)
112.833    608.3005    470.44  .         .       V .         .      Q  .
 (PEAK DAY 1, HOUR  16.833)
112.917    611.5627    473.67  .         .       V .         .      Q  .
 (PEAK DAY 1, HOUR  16.917)
113.000    614.8464    476.80  .         .       V .         .       Q .
 (PEAK DAY 1, HOUR  17.000)
113.083    618.1500    479.68  .         .       V .         .       Q .
 (PEAK DAY 1, HOUR  17.083)
113.167    621.4718    482.33  .         .       V .         .       Q .
 (PEAK DAY 1, HOUR  17.167)
113.250    624.8103    484.75  .         .       V .         .       Q .
 (PEAK DAY 1, HOUR  17.250)
113.333    628.1645    487.03  .         .       V .         .       Q .
 (PEAK DAY 1, HOUR  17.333)
113.417    631.5332    489.14  .         .       V .         .        Q.
 (PEAK DAY 1, HOUR  17.417)
113.500    634.9148    491.01  .         .       V .         .        Q.
 (PEAK DAY 1, HOUR  17.500)
113.583    638.3073    492.60  .         .       V .         .        Q.
 (PEAK DAY 1, HOUR  17.583)
113.667    641.7091    493.94  .         .        V.         .        Q.
 (PEAK DAY 1, HOUR  17.667)
113.750    645.1187    495.08  .         .        V.         .        Q.
 (PEAK DAY 1, HOUR  17.750)
113.833    648.5350    496.05  .         .        V.         .        Q.
 (PEAK DAY 1, HOUR  17.833)
113.917    651.9570    496.88  .         .        V.         .        Q.
 (PEAK DAY 1, HOUR  17.917)
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114.000    655.3839    497.57  .         .        V.         .        Q.
 (PEAK DAY 1, HOUR  18.000)
114.083    658.8148    498.17  .         .        V.         .        Q.
 (PEAK DAY 1, HOUR  18.083)
114.167    662.2492    498.68  .         .        V.         .        Q.
 (PEAK DAY 1, HOUR  18.167)
114.250    665.6863    499.07  .         .        V.         .        Q.
 (PEAK DAY 1, HOUR  18.250)
114.333    669.1252    499.33  .         .        V.         .        Q.
 (PEAK DAY 1, HOUR  18.333)
114.417    672.5656    499.53  .         .        V.         .        Q.
 (PEAK DAY 1, HOUR  18.417)
114.500    676.0068    499.67  .         .         V         .        Q.
 (PEAK DAY 1, HOUR  18.500)
114.583    679.4485    499.74  .         .         V         .        Q.
 (PEAK DAY 1, HOUR  18.583)
114.667    682.8903    499.75  .         .         V         .        Q.
 (PEAK DAY 1, HOUR  18.667)
114.750    686.3319    499.72  .         .         V         .        Q.
 (PEAK DAY 1, HOUR  18.750)
114.833    689.7730    499.65  .         .         V         .        Q.
 (PEAK DAY 1, HOUR  18.833)
114.917    693.2134    499.55  .         .         V         .        Q.
 (PEAK DAY 1, HOUR  18.917)
115.000    696.6530    499.42  .         .         V         .        Q.
 (PEAK DAY 1, HOUR  19.000)
115.083    700.0915    499.27  .         .         V         .        Q.
 (PEAK DAY 1, HOUR  19.083)
115.167    703.5288    499.10  .         .         V         .        Q.
 (PEAK DAY 1, HOUR  19.167)
115.250    706.9648    498.91  .         .         V         .        Q.
 (PEAK DAY 1, HOUR  19.250)
115.333    710.3994    498.70  .         .        .V         .        Q.
 (PEAK DAY 1, HOUR  19.333)
115.417    713.8324    498.48  .         .        .V         .        Q.
 (PEAK DAY 1, HOUR  19.417)
115.500    717.2638    498.24  .         .        .V         .        Q.
 (PEAK DAY 1, HOUR  19.500)
115.583    720.6935    497.99  .         .        .V         .        Q.
 (PEAK DAY 1, HOUR  19.583)
115.667    724.1214    497.73  .         .        .V         .        Q.
 (PEAK DAY 1, HOUR  19.667)
115.750    727.5475    497.46  .         .        .V         .        Q.
 (PEAK DAY 1, HOUR  19.750)
115.833    730.9716    497.19  .         .        .V         .        Q.
 (PEAK DAY 1, HOUR  19.833)
115.917    734.3938    496.90  .         .        .V         .        Q.
 (PEAK DAY 1, HOUR  19.917)
116.000    737.8139    496.60  .         .        .V         .        Q.
 (PEAK DAY 1, HOUR  20.000)
116.083    741.2319    496.29  .         .        .V         .        Q.
 (PEAK DAY 1, HOUR  20.083)
116.167    744.6478    495.97  .         .        . V        .        Q.
 (PEAK DAY 1, HOUR  20.167)
116.250    748.0612    495.64  .         .        . V        .        Q.
 (PEAK DAY 1, HOUR  20.250)
116.333    751.4722    495.28  .         .        . V        .        Q.
 (PEAK DAY 1, HOUR  20.333)
116.417    754.8807    494.91  .         .        . V        .        Q.
 (PEAK DAY 1, HOUR  20.417)
116.500    758.2866    494.54  .         .        . V        .        Q.
 (PEAK DAY 1, HOUR  20.500)
116.583    761.6898    494.16  .         .        . V        .        Q.
 (PEAK DAY 1, HOUR  20.583)
116.667    765.0905    493.77  .         .        . V        .        Q.
 (PEAK DAY 1, HOUR  20.667)
116.750    768.4883    493.38  .         .        . V        .        Q.
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```
(PEAK DAY 1, HOUR  20.750)
116.833    771.8835    492.98  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  20.833)
116.917    775.2759    492.57  .         .         . V       .         Q.
(PEAK DAY 1, HOUR  20.917)
117.000    778.6655    492.17  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  21.000)
117.083    782.0522    491.75  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  21.083)
117.167    785.4360    491.33  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  21.167)
117.250    788.8170    490.91  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  21.250)
117.333    792.1949    490.49  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  21.333)
117.417    795.5700    490.06  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  21.417)
117.500    798.9421    489.63  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  21.500)
117.583    802.3112    489.19  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  21.583)
117.667    805.6772    488.75  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  21.667)
117.750    809.0403    488.31  .         .         .  V      .         Q.
(PEAK DAY 1, HOUR  21.750)
117.833    812.4003    487.87  .         .         .   V     .         Q.
(PEAK DAY 1, HOUR  21.833)
117.917    815.7571    487.42  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  21.917)
118.000    819.1110    486.97  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  22.000)
118.083    822.4617    486.52  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  22.083)
118.167    825.8093    486.07  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  22.167)
118.250    829.1537    485.61  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  22.250)
118.333    832.4951    485.17  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  22.333)
118.417    835.8336    484.75  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  22.417)
118.500    839.1692    484.32  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  22.500)
118.583    842.5018    483.90  .         .         .   V     .         Q .
(PEAK DAY 1, HOUR  22.583)
118.667    845.8315    483.47  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  22.667)
118.750    849.1582    483.04  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  22.750)
118.833    852.4819    482.60  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  22.833)
118.917    855.8027    482.17  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  22.917)
119.000    859.1204    481.73  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  23.000)
119.083    862.4351    481.30  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  23.083)
119.167    865.7468    480.86  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  23.167)
119.250    869.0555    480.42  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  23.250)
119.333    872.3611    479.98  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  23.333)
119.417    875.6638    479.54  .         .         .    V    .         Q .
(PEAK DAY 1, HOUR  23.417)
119.500    878.9633    479.10  .         .         .     V   .         Q .
(PEAK DAY 1, HOUR  23.500)
119.583    882.2598    478.65  .         .         .     V   .         Q .
(PEAK DAY 1, HOUR  23.583)
119.667    885.5533    478.21  .         .         .     V   .         Q .
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119.750    888.8436    477.76  .         .         .     V   .         Q .
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119.833    892.1309    477.31  .         .         .     V   .         Q .
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119.917    895.4151    476.86  .         .         .     V   .         Q .
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120.000    898.6962    476.42  .         .         .     V   .         Q .
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120.083    901.9742    475.96  .         .         .     V   .         Q .
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120.167    905.2491    475.51  .         .         .     V   .         Q .
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120.333    911.7892    474.57  .         .         .      V  .         Q .
(PEAK DAY 1, HOUR  24.333)
120.417    915.0543    474.09  .         .         .      V  .         Q .
(PEAK DAY 1, HOUR  24.417)
120.500    918.3159    473.58  .         .         .      V  .         Q .
(PEAK DAY 1, HOUR  24.500)
120.583    921.5737    473.04  .         .         .      V  .         Q .
(PEAK DAY 1, HOUR  24.583)
120.667    924.8277    472.48  .         .         .      V  .         Q .
(PEAK DAY 1, HOUR  24.667)
120.750    928.0779    471.93  .         .         .      V  .         Q .
(PEAK DAY 1, HOUR  24.750)
120.833    931.3243    471.39  .         .         .      V  .         Q .
(PEAK DAY 1, HOUR  24.833)
120.917    934.5670    470.84  .         .         .      V  .         Q .
(PEAK DAY 1, HOUR  24.917)
121.000    937.8059    470.28  .         .         .      V  .         Q .
(PEAK DAY 1, HOUR  25.000)
121.083    941.0410    469.73  .         .         .      V  .         Q .
(PEAK DAY 1, HOUR  25.083)
121.167    944.2721    469.16  .         .         .      V  .         Q .
(PEAK DAY 1, HOUR  25.167)
121.250    947.4993    468.59  .         .         .       V .         Q .
(PEAK DAY 1, HOUR  25.250)
121.333    950.7227    468.02  .         .         .       V .         Q .
(PEAK DAY 1, HOUR  25.333)
121.417    953.9420    467.45  .         .         .       V .         Q .
(PEAK DAY 1, HOUR  25.417)
121.500    957.1574    466.88  .         .         .       V .         Q .
(PEAK DAY 1, HOUR  25.500)
121.583    960.3688    466.30  .         .         .       V .         Q .
(PEAK DAY 1, HOUR  25.583)
121.667    963.5763    465.72  .         .         .       V .         Q .
(PEAK DAY 1, HOUR  25.667)
121.750    966.7797    465.14  .         .         .       V .         Q .
(PEAK DAY 1, HOUR  25.750)
121.833    969.9792    464.56  .         .         .       V .         Q .
(PEAK DAY 1, HOUR  25.833)
121.917    973.1746    463.98  .         .         .       V .         Q .
(PEAK DAY 1, HOUR  25.917)
122.000    976.3661    463.40  .         .         .       V .         Q .
(PEAK DAY 1, HOUR  26.000)
122.083    979.5535    462.82  .         .         .        V.         Q .
(PEAK DAY 1, HOUR  26.083)
122.167    982.7369    462.23  .         .         .        V.       Q   .
(PEAK DAY 1, HOUR  26.167)
122.250    985.9164    461.65  .         .         .        V.       Q   .
(PEAK DAY 1, HOUR  26.250)
122.333    989.0918    461.07  .         .         .        V.       Q   .
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```
 (PEAK DAY 1, HOUR  26.333)
122.417    992.2615    460.24  .         .         .        V.     Q   .
 (PEAK DAY 1, HOUR  26.417)
122.500    995.4235    459.12  .         .         .        V.     Q   .
 (PEAK DAY 1, HOUR  26.500)
122.583    998.5775    457.96  .         .         .        V.     Q   .
 (PEAK DAY 1, HOUR  26.583)
122.667   1001.7235    456.81  .         .         .        V.     Q   .
 (PEAK DAY 1, HOUR  26.667)
122.750   1004.8616    455.66  .         .         .        V.     Q   .
 (PEAK DAY 1, HOUR  26.750)
122.833   1007.9919    454.51  .         .         .        V.     Q   .
 (PEAK DAY 1, HOUR  26.833)
122.917   1011.1142    453.36  .         .         .        V.     Q   .
 (PEAK DAY 1, HOUR  26.917)
123.000   1014.2286    452.22  .         .         .         V     Q   .
 (PEAK DAY 1, HOUR  27.000)
123.083   1017.3353    451.08  .         .         .         V     Q   .
 (PEAK DAY 1, HOUR  27.083)
123.167   1020.4340    449.94  .         .         .         V    Q    .
 (PEAK DAY 1, HOUR  27.167)
123.250   1023.5250    448.80  .         .         .         V    Q    .
 (PEAK DAY 1, HOUR  27.250)
123.333   1026.6082    447.67  .         .         .         V    Q    .
 (PEAK DAY 1, HOUR  27.333)
123.417   1029.6835    446.54  .         .         .         V    Q    .
 (PEAK DAY 1, HOUR  27.417)
123.500   1032.7511    445.41  .         .         .         V    Q    .
 (PEAK DAY 1, HOUR  27.500)
123.583   1035.8109    444.29  .         .         .         V    Q    .
 (PEAK DAY 1, HOUR  27.583)
123.667   1038.8630    443.16  .         .         .         V    Q    .
 (PEAK DAY 1, HOUR  27.667)
123.750   1041.9073    442.04  .         .         .         V    Q    .
 (PEAK DAY 1, HOUR  27.750)
123.833   1044.9440    440.92  .         .         .         V    Q    .
 (PEAK DAY 1, HOUR  27.833)
123.917   1047.9729    439.81  .         .         .        .V   Q    .
 (PEAK DAY 1, HOUR  27.917)
124.000   1050.9943    438.69  .         .         .        .V   Q    .
 (PEAK DAY 1, HOUR  28.000)
  Note: Computed Hydrograph continues past two days after the peak day
  of the design storm.
================================================================================

  END OF FLOODSCx ROUTING ANALYSIS
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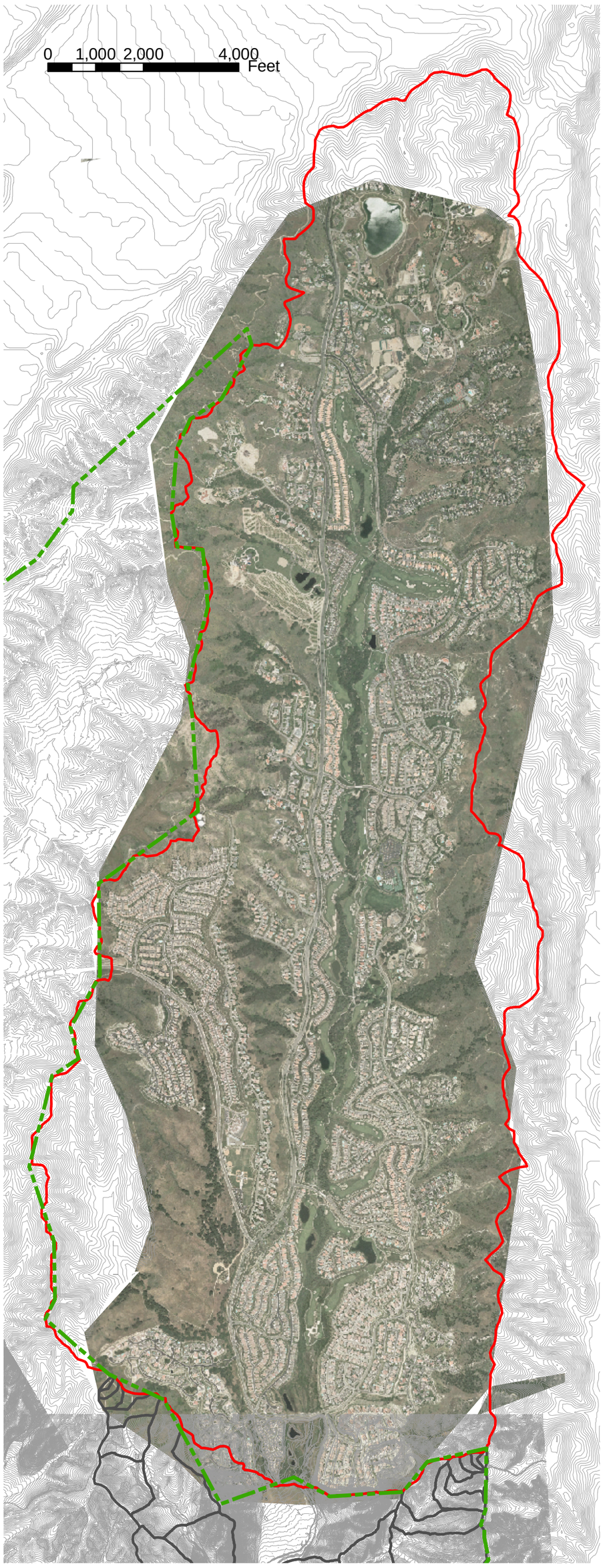
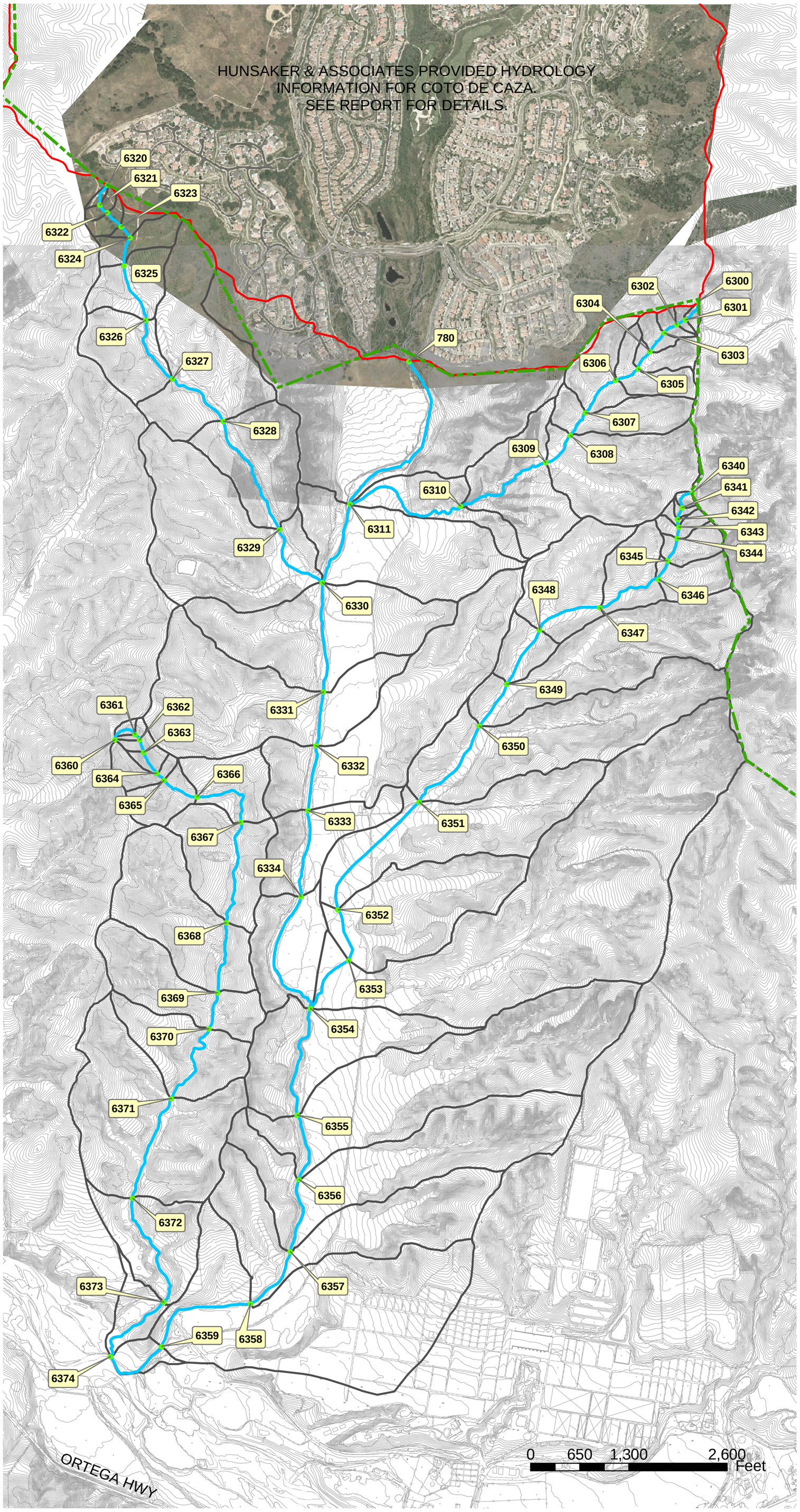




Legend

- RANCHO MISSION VIEJO BOUNDARY
- FLOW LINE
- SUBAREA 7, 35 & 36

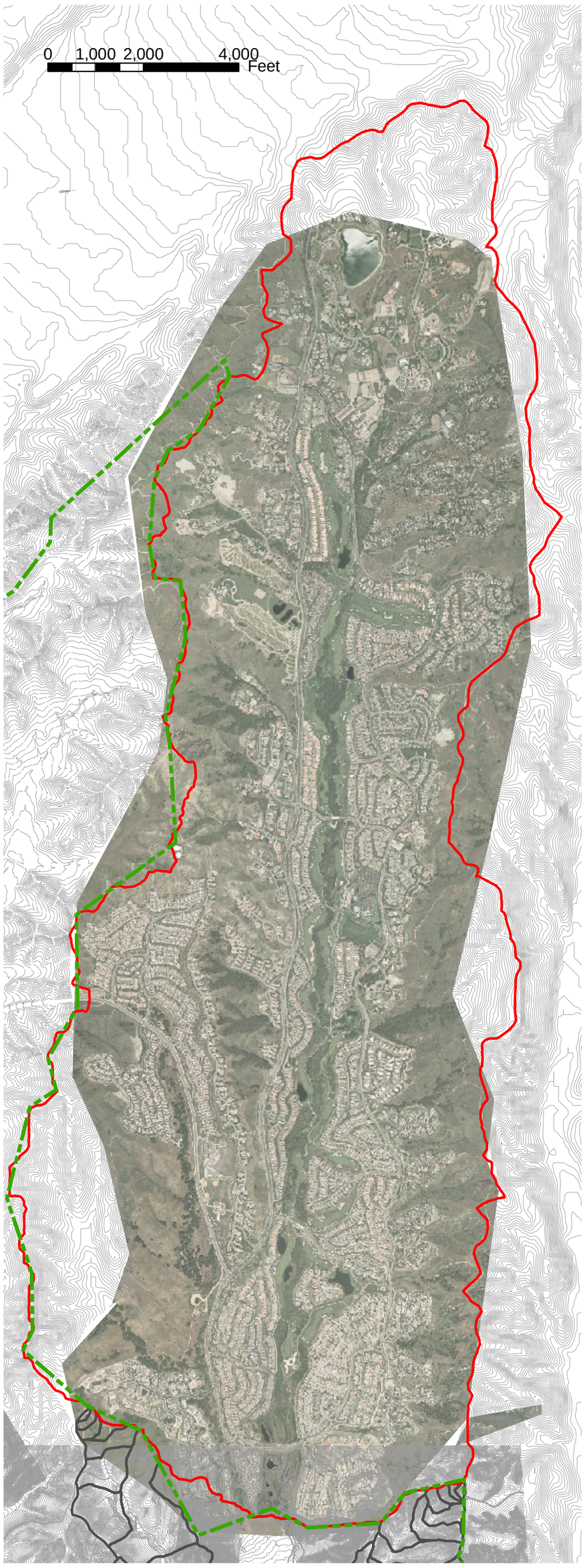
HYDROLOGIC MAP FOR EXISTING CONDITION

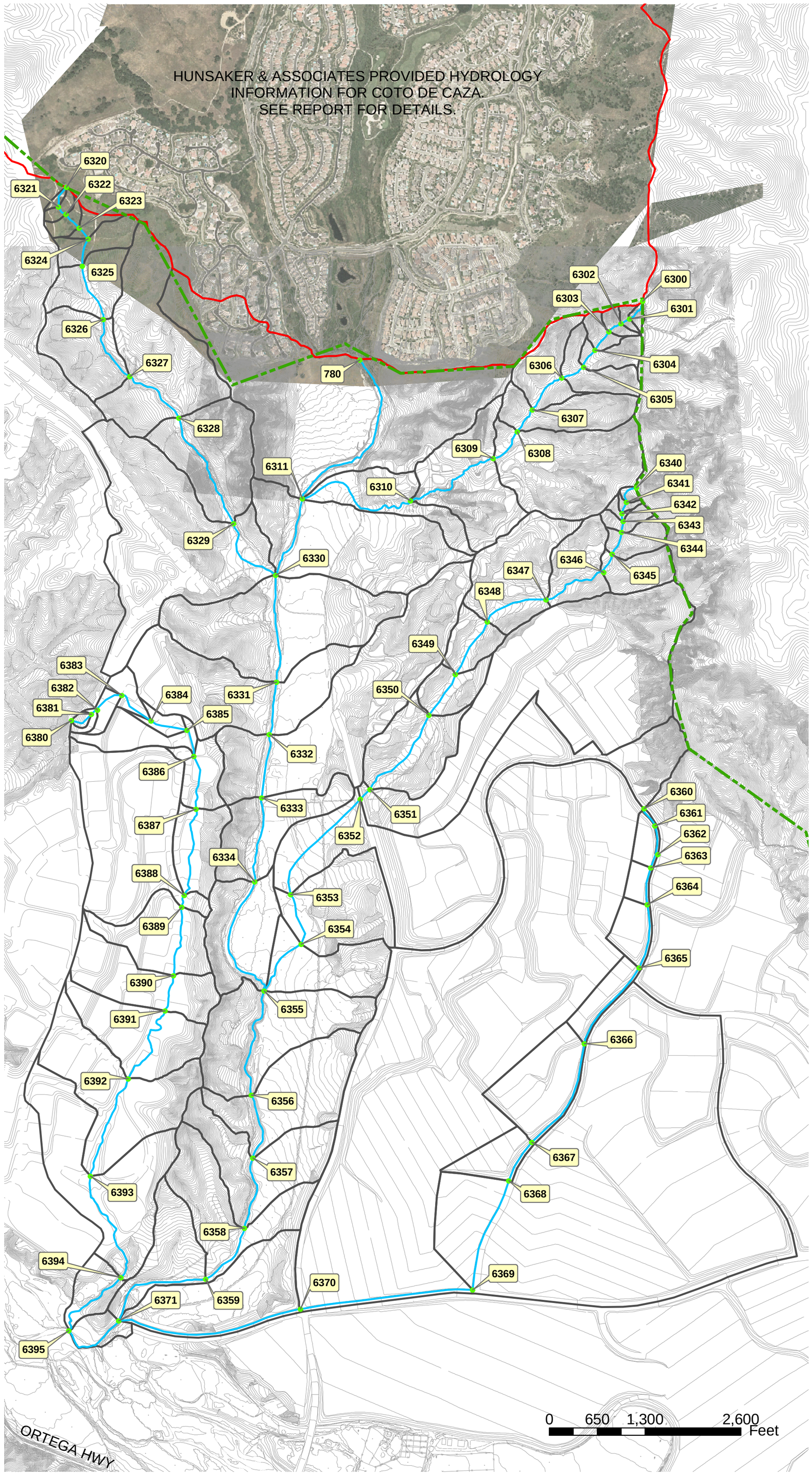
CANADA GOBERNADORA CREEK CHANNEL

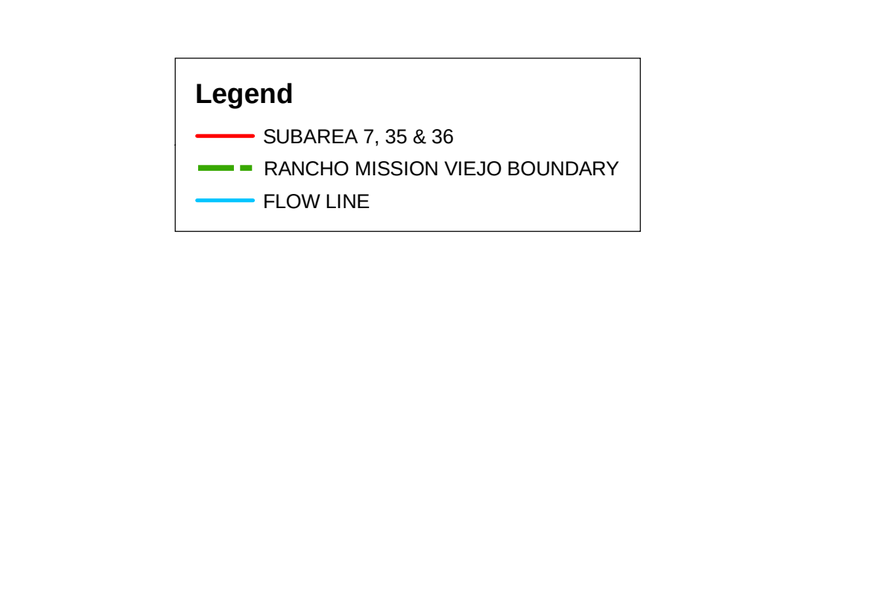
DATE: APRIL 1, 2004

H:/10075501/PH801/RMV WATERSHED/EX/SUBAREA EXISTING 63.MXD

HUITT~ZOLLARS
(714) 734-5100
430 EXCHANGE, SUITE 200
IRVINE, CA 92602







Legend

- SUBAREA 7, 35 & 36
- RANCHO MISSION VIEJO BOUNDARY
- FLOW LINE

HYDROLOGIC MAP FOR PROPOSED CONDITION

CANADA GOBERNADORA

DATE: APRIL 1, 2004

H:/10075501/PH801/RMV WATERSHED/EX/SUBAREA PROPOSED 63.MXD

HUITT~ZOLLARS
(714) 734-5100
430 EXCHANGE, SUITE 200
IRVINE, CA 92602

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

HYDROLOGIC REPORT

TO

THE BASELINE HYDROLOGIC CONDITIONS

CAÑADA CHIQUITA

PREPARED FOR

RANCHO MISSION VIEJO

APRIL 2, 2004



VOLUME V

HUITT-ZOLLARS

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TECHNICAL APPENDIX V-B – HYDROLOGIC ANALYSIS – PROPOSED CONDITION

INTRODUCTION

A Hydrology Report for Canada Chiquita of the San Juan Creek system has been completed to the confluence with San Juan Creek. The watershed encompasses approximately 6.35 square miles. The watershed elevations range from approximately 180 feet above sea level at the downstream confluence with San Juan Creek to approximately 1,200 feet above sea level at the headwaters.

A 100-Year High Confidence analysis was prepared. The hydrologic analysis was completed in accordance with the 1986 Orange County Hydrology Manual and 1995 Orange County Hydrology Manual Addendum No. 1. The application of the procedures outlined in these two documents and the assumptions used to develop hydrologic parameters are described in this report.

MODEL OVERVIEW

Rational method models were completed for both the existing and proposed condition models. Additionally, a single area hydrograph was prepared for each drainage condition at the confluence with San Juan Creek.

To model the 100-Year High Confidence analysis, the Advanced Engineering Software RATSCx program was utilized. The RATSCx program was used to develop both the rational method analysis and the hydrograph analysis. The hydrograph was based on data calculated from the rational method analysis. The time of concentration (Tc) from the rational method was used to calculate the basin lag at the hydrograph location.

ASSUMPTIONS

Base Maps and Topographic Data

The base map for the existing condition model was created using aerial topography with 2-, 5-, and 10-foot contours. The base map for the proposed condition utilized mass grade topographic information that was spliced into existing aerial topography for each of the proposed development bubbles.

Rainfall

100-Year High Confidence rainfall intensities and depths were derived from the Orange County Hydrology Manual. The Non-Mountainous rainfall zone, for areas below the 2,000' elevation, was utilized.

Land Use

As part of the Philip Williams & Associates (PWA) report titled, "Baseline Hydrologic Conditions – San Juan & Upper San Mateo Watersheds," dated May 30, 2001, PWA developed "Land Use Sub-Categories" for the HEC-1 model. Based on descriptions of these sub-categories, the land uses were mapped to hydrologic land uses for input into the models according to Table 1. PWA prepared land use mapping for both the existing and several proposed development conditions. For the proposed condition hydrologic analysis, only one, the Ranch Plan Alternative (B4G), land use plan was evaluated.

Hydrologic Soils

Hydrologic soils were assigned based on the Orange County Hydrology Manual.

Antecedent Moisture Condition

As outlined in the Orange County Hydrology Manual Addendum No. 1, Antecedent Moisture Condition (AMC) II was used for all analyses.

Depth Area Adjustments

As outlined in the Orange County Hydrology Manual, Sierra Madre depth area adjustments were chosen for all calculations.

LAND USE MAPPING

Land Use Sub-Category	Hydrologic Land Use
General Transportation	Commercial
General Urban Commercial	Commercial
General Developed Areas	5-7 Dwellings/Acre
Fluctuating Shoreline	Public Park
Lakes/Open Water	Public Park
General Disturbed Areas	Barren (Poor)
Broadleaf Chaparral	Chaparral, Broadleaf (Fair)
Broadleaf Chaparral and Sage	Chaparral, Broadleaf (Fair)
Chaparral – Sage Scrub	Chaparral, Broadleaf (Fair)
General Chaparral	Chaparral, Broadleaf (Fair)
Rural Residential	Chaparral, Broadleaf (Fair)
Narrowleaf Chaparral	Chaparral, Narrowleaf (Fair)
General Grassland	Grass (Fair)
Live Oak Savanna	Grass (Fair)
Sumac Savanna	Grass (Fair)
Disturbed Wetlands	Meadows or Cienegas (Fair)
Meadow and Marsh	Meadows or Cienegas (Good)
General Sage Scrub	Open Brush (Fair)
Rock with Plants	Open Brush (Fair)
Sage Scrub- Grassland	Open Brush (Fair)
Streams and Creeks	Open Brush (Fair)
Forest	Woodland (Fair)
Woodland and Riparian	Woodland (Fair)
General Agriculture	Fallow (Poor)
General Nurseries	Orchards, Evergreen (Fair)
General Orchards	Orchards, Evergreen (Fair)
Irrigated Row Crops	Pasture, Dryland (Fair)
Row Crops	Pasture, Dryland (Fair)
General Parks	Turf (Fair)

Table 1 – Land Use Mapping

S-Graphs

S-Graph proportions were assigned based on a review of topographic and land use data, as well as aerial photography. Generally, the rugged terrain in the upper portions of the watershed was assigned to a "Mountain" S-Graph, while the lower portions were assigned "Foothill" and "Valley" S-Graphs. For the proposed condition analysis, development bubble areas were assumed to change from "Valley – Undeveloped" to "Valley – Developed".

Channel Geometry

Channel geometry was determined based on estimated cross-sections taken from the topographic data at several locations. Channel sizes were incrementally increased as the model moved downstream. Channels were sized to convey the 100-Year High Confidence peak flow rates without overtopping. Additionally, travel times for individual reaches meet the County criteria outlined in the Hydrology Manual on Pages D-12 and D-15.

Sub-Areas

In general, sub-areas were developed so that the sub-area sizes gradually increased as the study progressed downstream. Concentration nodes were located at major confluences or other points of significance. Generally, these concentration nodes defined the sub-areas rather than the sub-area size defining a concentration node.

CONCLUSIONS

Hydrologic Results

The results of the hydrologic analyses Canada Chiquita at San Juan Creek are presented in Table 2.

Impact of Proposed Development

The proposed development appears to have little impact on the drainage characteristics of Canada Chiquita at the San Juan Creek confluence. Percentage wise, the increase in peak flow rate due to development was only estimated to be 0.4% and the total storm runoff volume decreased slightly.

HYDROLOGIC SUMMARY

Existing Condition

Node	Location	Total Area (acres)	Total Area (sq. mi.)	Lag (hr)	Peak Flow Rate (cfs)	Runoff Volume (ac-ft)
826	San Juan Creek	4,066	6.35	0.85	3,357	1,219

Proposed Condition

Node	Location	Total Area (acres)	Total Area (sq. mi.)	Lag (hr)	Peak Flow Rate (cfs)	Runoff Volume (ac-ft)
826	San Juan Creek	4,063	6.35	0.84	3,369	1,189

Table 2 – Hydrologic Summary – 100-Year – High Confidence

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

TECHNICAL APPENDIX V-A
HYDROLOGIC ANALYSIS
EXISTING CONDITION
100-YEAR HIGH CONFIDENCE

```
 ************************************************************************
             RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
           (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
         (c) Copyright 1983-2003 Advanced Engineering Software (aes)
             Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                          Analysis prepared by:

                          Huitt - Zollars, Inc.
                         430 Exchange, Suite 200
                          Irvine, CA. 92602-1309
                             714 - 734 - 5100

 ------------------------------------------------------------------------
  FILE NAME: CE31100H.DAT
  TIME/DATE OF STUDY: 14:21 03/31/2004
 ========================================================================
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
 ========================================================================
                    --*TIME-OF-CONCENTRATION MODEL*--

  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  *DATA BANK RAINFALL USED*
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
  *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

  UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
    WATERSHED LAG = 0.80 * Tc
          S-GRAPH TYPE                  PERCENTAGE(DECIMAL)
        VALLEY(DEVELOPED)                    0.020
        FOOTHILL                             0.140
        MOUNTAIN                             0.620
        VALLEY(UNDEVELOPED)/DESERT           0.220
        DESERT(UNDEVELOPED)                  0.000
    SIERRA MADRE DEPTH-AREA FACTORS USED.
                      AREA-AVERAGED
        DURATION    RAINFALL(INCH)
        5-MINUTES         0.52
       30-MINUTES         1.09
        1-HOUR            1.45
        3-HOUR            2.43
        6-HOUR            3.36
       24-HOUR            5.63
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


 ************************************************************************
  FLOW PROCESS FROM NODE   3100.00 TO NODE   3101.00 IS CODE =  21
 ------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
 ========================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   329.00
  ELEVATION DATA: UPSTREAM(FEET) =   1195.00  DOWNSTREAM(FEET) =   1090.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    9.013
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.414
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS   Tc
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        1.20      0.25       1.00    77    9.01
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      4.50
  TOTAL AREA(ACRES) =      1.20   PEAK FLOW RATE(CFS) =      4.50

 ************************************************************************
  FLOW PROCESS FROM NODE   3101.00 TO NODE   3102.00 IS CODE =  51
 ------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
 ========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1090.00  DOWNSTREAM(FEET) =   1060.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   246.00   CHANNEL SLOPE =  0.1220
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      4.50
  FLOW VELOCITY(FEET/SEC.) =   5.99   FLOW DEPTH(FEET) =   0.50
  TRAVEL TIME(MIN.) =   0.68   Tc(MIN.) =   9.70
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3102.00 =   575.00 FEET.

 ************************************************************************
  FLOW PROCESS FROM NODE   3101.00 TO NODE   3102.00 IS CODE =  81
 ------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ========================================================================
  MAINLINE Tc(MIN) =   9.70
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.249
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        0.20      0.30       1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.70      0.25       1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        0.10      0.25       1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.00      SUBAREA RUNOFF(CFS) =    3.59
  EFFECTIVE AREA(ACRES) =      2.20   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      2.20       PEAK FLOW RATE(CFS) =       7.91

 ************************************************************************
  FLOW PROCESS FROM NODE   3102.00 TO NODE   3103.00 IS CODE =  51
 ------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
 ========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1060.00  DOWNSTREAM(FEET) =   1050.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   131.00   CHANNEL SLOPE =  0.0763
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      7.91
```

```
 FLOW VELOCITY(FEET/SEC.) =   5.83   FLOW DEPTH(FEET) =   0.77
 TRAVEL TIME(MIN.) =   0.37   Tc(MIN.) =  10.07
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3103.00 =   706.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3102.00 TO NODE   3103.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  10.07
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.145
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"                B        0.80      0.30       1.00    66
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        2.60      0.25       1.00    77
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           C        0.10      0.25       1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    3.50      SUBAREA RUNOFF(CFS) =   12.23
 EFFECTIVE AREA(ACRES) =      5.70   AREA-AVERAGED Fm(INCH/HR) =  0.26
 AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =      5.70       PEAK FLOW RATE(CFS) =      19.94

****************************************************************************
 FLOW PROCESS FROM NODE   3103.00 TO NODE   3104.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   1050.00  DOWNSTREAM(FEET) =   1040.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   141.00   CHANNEL SLOPE =  0.0709
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     19.94
 FLOW VELOCITY(FEET/SEC.) =   7.05   FLOW DEPTH(FEET) =   0.96
 TRAVEL TIME(MIN.) =   0.33   Tc(MIN.) =  10.41
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3104.00 =   847.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3103.00 TO NODE   3104.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  10.41
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.079
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"                B        0.80      0.30       1.00    66
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           B        0.60      0.30       1.00    69
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        2.70      0.25       1.00    77
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    4.10      SUBAREA RUNOFF(CFS) =   14.07
 EFFECTIVE AREA(ACRES) =      9.80   AREA-AVERAGED Fm(INCH/HR) =  0.26
 AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =      9.80       PEAK FLOW RATE(CFS) =      33.66

****************************************************************************
 FLOW PROCESS FROM NODE   3104.00 TO NODE   3105.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   1040.00  DOWNSTREAM(FEET) =   1030.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   156.00   CHANNEL SLOPE =  0.0641
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     33.66
 FLOW VELOCITY(FEET/SEC.) =   7.83   FLOW DEPTH(FEET) =   1.30
 TRAVEL TIME(MIN.) =   0.33   Tc(MIN.) =  10.74
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3105.00 =  1003.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3104.00 TO NODE   3105.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  10.74
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.012
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"                B        1.50      0.30       1.00    66
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           B        0.90      0.30       1.00    69
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        3.50      0.25       1.00    77
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    5.90      SUBAREA RUNOFF(CFS) =   19.87
 EFFECTIVE AREA(ACRES) =     15.70   AREA-AVERAGED Fm(INCH/HR) =  0.27
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     15.70       PEAK FLOW RATE(CFS) =      52.95

****************************************************************************
 FLOW PROCESS FROM NODE   3105.00 TO NODE   3106.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   1030.00  DOWNSTREAM(FEET) =   1010.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   462.00   CHANNEL SLOPE =  0.0433
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     52.95
 FLOW VELOCITY(FEET/SEC.) =   7.61   FLOW DEPTH(FEET) =   1.82
 TRAVEL TIME(MIN.) =   1.01   Tc(MIN.) =  11.75
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3106.00 =  1465.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3105.00 TO NODE   3106.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  11.75
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.810
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"                B        0.90      0.30       1.00    66
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           B        3.10      0.30       1.00    69
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        6.20      0.25       1.00    77
```

```
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        0.10      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   10.30      SUBAREA RUNOFF(CFS) =   32.82
  EFFECTIVE AREA(ACRES) =     26.00   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     26.00       PEAK FLOW RATE(CFS) =      82.91

****************************************************************************
  FLOW PROCESS FROM NODE   3106.00 TO NODE   3107.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1010.00  DOWNSTREAM(FEET) =    980.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   589.00   CHANNEL SLOPE =  0.0509
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     82.91
  FLOW VELOCITY(FEET/SEC.) =   8.98   FLOW DEPTH(FEET) =   1.89
  TRAVEL TIME(MIN.) =   1.09   Tc(MIN.) =  12.84
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3107.00 =  2054.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3106.00 TO NODE   3107.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.84
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.611
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        1.30      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        2.70      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        4.30      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        1.50      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    9.80      SUBAREA RUNOFF(CFS) =   29.46
  EFFECTIVE AREA(ACRES) =     35.80   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     35.80       PEAK FLOW RATE(CFS) =     107.70

****************************************************************************
  FLOW PROCESS FROM NODE   3107.00 TO NODE   3108.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    980.00  DOWNSTREAM(FEET) =    970.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   322.00   CHANNEL SLOPE =  0.0311
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    107.70
  FLOW VELOCITY(FEET/SEC.) =   8.01   FLOW DEPTH(FEET) =   2.46
  TRAVEL TIME(MIN.) =   0.67   Tc(MIN.) =  13.51
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3108.00 =  2376.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3107.00 TO NODE   3108.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  13.51
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.514
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        1.20      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        3.90      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        8.60      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        2.40      0.25      1.00    79
  NATURAL FAIR COVER
  "WOODLAND"                  C        2.20      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   18.30      SUBAREA RUNOFF(CFS) =   53.53
  EFFECTIVE AREA(ACRES) =     54.10   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     54.10       PEAK FLOW RATE(CFS) =     158.12

****************************************************************************
  FLOW PROCESS FROM NODE   3108.00 TO NODE   3109.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    970.00  DOWNSTREAM(FEET) =    950.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   654.00   CHANNEL SLOPE =  0.0306
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    158.12
  FLOW VELOCITY(FEET/SEC.) =   8.72   FLOW DEPTH(FEET) =   2.70
  TRAVEL TIME(MIN.) =   1.25   Tc(MIN.) =  14.76
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3109.00 =  3030.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3108.00 TO NODE   3109.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  14.76
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.334
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        1.30      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        6.30      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.20      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.90      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       10.40      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        6.00      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   25.10      SUBAREA RUNOFF(CFS) =   69.32
  EFFECTIVE AREA(ACRES) =     79.20   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     79.20       PEAK FLOW RATE(CFS) =     218.68
```

```
****************************************************************************
  FLOW PROCESS FROM NODE   3108.00 TO NODE   3109.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  14.76
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.334
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  C        0.30      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.30      SUBAREA RUNOFF(CFS) =    0.83
  EFFECTIVE AREA(ACRES) =     79.50   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     79.50       PEAK FLOW RATE(CFS) =     219.52

****************************************************************************
  FLOW PROCESS FROM NODE   3109.00 TO NODE   3110.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    950.00  DOWNSTREAM(FEET) =    890.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1548.00   CHANNEL SLOPE =  0.0388
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    219.52
  FLOW VELOCITY(FEET/SEC.) =  10.37   FLOW DEPTH(FEET) =   3.02
  TRAVEL TIME(MIN.) =   2.49   Tc(MIN.) =  17.25
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3110.00 =  4578.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3109.00 TO NODE   3110.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.25
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.048
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        5.50      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B       10.40      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B        2.20      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        3.80      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       22.10      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        1.80      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   45.80      SUBAREA RUNOFF(CFS) =  114.52
  EFFECTIVE AREA(ACRES) =    125.30   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    125.30       PEAK FLOW RATE(CFS) =     313.56

****************************************************************************
  FLOW PROCESS FROM NODE   3110.00 TO NODE   3111.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    890.00  DOWNSTREAM(FEET) =    850.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1572.00   CHANNEL SLOPE =  0.0254
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    313.56
  FLOW VELOCITY(FEET/SEC.) =   9.67   FLOW DEPTH(FEET) =   3.72
  TRAVEL TIME(MIN.) =   2.71   Tc(MIN.) =  19.96
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3111.00 =  6150.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3110.00 TO NODE   3111.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.96
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.804
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        0.40      0.30      1.00    63
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.80      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        9.40      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B        1.60      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        3.50      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       23.40      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   39.10      SUBAREA RUNOFF(CFS) =   89.31
  EFFECTIVE AREA(ACRES) =    164.40   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    164.40       PEAK FLOW RATE(CFS) =     375.31

****************************************************************************
  FLOW PROCESS FROM NODE   3110.00 TO NODE   3111.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.96
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.804
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        4.70      0.25      1.00    79
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        0.80      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                  D        1.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    6.60      SUBAREA RUNOFF(CFS) =   15.25
  EFFECTIVE AREA(ACRES) =    171.00   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    171.00       PEAK FLOW RATE(CFS) =     390.57

****************************************************************************
  FLOW PROCESS FROM NODE   3111.00 TO NODE   3112.00 IS CODE =  51
----------------------------------------------------------------------------
```

```
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    850.00  DOWNSTREAM(FEET) =    810.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1623.00   CHANNEL SLOPE =  0.0246
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    390.57
  FLOW VELOCITY(FEET/SEC.) =  10.13   FLOW DEPTH(FEET) =   4.19
  TRAVEL TIME(MIN.) =   2.67   Tc(MIN.) =  22.63
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3112.00 =  7773.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3111.00 TO NODE   3112.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  22.63
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.602
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        B        1.50      0.30       0.50    56
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        3.10      0.30       1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B       10.70      0.30       1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.40      0.30       1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.50      0.25       1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       16.70      0.25       1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =   32.90      SUBAREA RUNOFF(CFS) =   69.15
  EFFECTIVE AREA(ACRES) =    203.90   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    203.90       PEAK FLOW RATE(CFS) =     428.73

****************************************************************************
  FLOW PROCESS FROM NODE   3111.00 TO NODE   3112.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  22.63
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.602
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        2.30      0.25       1.00    79
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D        5.10      0.20       0.50    75
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        0.90      0.20       1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.40      0.20       1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.71
  SUBAREA AREA(ACRES) =    8.70      SUBAREA RUNOFF(CFS) =   19.17
  EFFECTIVE AREA(ACRES) =    212.60   AREA-AVERAGED Fm(INCH/HR) =  0.26
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =    212.60       PEAK FLOW RATE(CFS) =     447.89

****************************************************************************
  FLOW PROCESS FROM NODE   3112.00 TO NODE   3113.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    810.00  DOWNSTREAM(FEET) =    770.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1754.00   CHANNEL SLOPE =  0.0228
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    447.89
  FLOW VELOCITY(FEET/SEC.) =  10.18   FLOW DEPTH(FEET) =   4.59
  TRAVEL TIME(MIN.) =   2.87   Tc(MIN.) =  25.50
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3113.00 =  9527.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3112.00 TO NODE   3113.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  25.50
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.434
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        B       11.20      0.30       0.50    56
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        2.90      0.30       1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B       10.30      0.30       1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.40      0.30       1.00    60
  NATURAL FAIR COVER
  "GRASS"                     C        1.10      0.25       1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       19.10      0.25       1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.88
  SUBAREA AREA(ACRES) =   45.00      SUBAREA RUNOFF(CFS) =   88.85
  EFFECTIVE AREA(ACRES) =    257.60   AREA-AVERAGED Fm(INCH/HR) =  0.26
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =    257.60       PEAK FLOW RATE(CFS) =     504.54

****************************************************************************
  FLOW PROCESS FROM NODE   3112.00 TO NODE   3113.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  25.50
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.434
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        4.00      0.25       1.00    79
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D       16.30      0.20       0.50    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.60
  SUBAREA AREA(ACRES) =   20.30      SUBAREA RUNOFF(CFS) =   42.10
  EFFECTIVE AREA(ACRES) =    277.90   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.94
  TOTAL AREA(ACRES) =    277.90       PEAK FLOW RATE(CFS) =     546.64

****************************************************************************
  FLOW PROCESS FROM NODE   3113.00 TO NODE   3114.00 IS CODE =  51
----------------------------------------------------------------------------
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```
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    770.00  DOWNSTREAM(FEET) =    740.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1443.00   CHANNEL SLOPE =  0.0208
 CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    546.64
 FLOW VELOCITY(FEET/SEC.) =  10.33   FLOW DEPTH(FEET) =   4.87
 TRAVEL TIME(MIN.) =   2.33   Tc(MIN.) =  27.83
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3114.00 = 10970.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3113.00 TO NODE   3114.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
 MAINLINE Tc(MIN) =  27.83
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.316
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"       B        8.10      0.30       0.50    56
 NATURAL FAIR COVER
 "OPEN BRUSH"               B        1.20      0.30       1.00    66
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          B       17.80      0.30       1.00    69
 NATURAL FAIR COVER
 "WOODLAND"                 B        2.00      0.30       1.00    60
 NATURAL FAIR COVER
 "GRASS"                    C        0.20      0.25       1.00    79
 NATURAL FAIR COVER
 "OPEN BRUSH"               C        7.00      0.25       1.00    77
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.89
 SUBAREA AREA(ACRES) =   36.30      SUBAREA RUNOFF(CFS) =   67.26
 EFFECTIVE AREA(ACRES) =    314.20   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.93
 TOTAL AREA(ACRES) =    314.20       PEAK FLOW RATE(CFS) =     584.27

****************************************************************************
 FLOW PROCESS FROM NODE   3113.00 TO NODE   3114.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
 MAINLINE Tc(MIN) =  27.83
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.316
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          C        8.60      0.25       1.00    79
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"       D       10.50      0.20       0.50    75
 NATURAL FAIR COVER
 "OPEN BRUSH"               D        0.60      0.20       1.00    83
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.73
 SUBAREA AREA(ACRES) =   19.70      SUBAREA RUNOFF(CFS) =   38.07
 EFFECTIVE AREA(ACRES) =    333.90   AREA-AVERAGED Fm(INCH/HR) =  0.24
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.92
 TOTAL AREA(ACRES) =    333.90       PEAK FLOW RATE(CFS) =     622.34

****************************************************************************
 FLOW PROCESS FROM NODE   3114.00 TO NODE   3135.00 IS CODE =  51
----------------------------------------------------------------------------
```

```
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    740.00  DOWNSTREAM(FEET) =    710.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1534.00   CHANNEL SLOPE =  0.0196
 CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    622.34
 FLOW VELOCITY(FEET/SEC.) =  10.44   FLOW DEPTH(FEET) =   5.28
 TRAVEL TIME(MIN.) =   2.45   Tc(MIN.) =  30.28
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3135.00 = 12504.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3114.00 TO NODE   3135.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
 MAINLINE Tc(MIN) =  30.28
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.209
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"       B        4.30      0.30       0.50    56
 NATURAL FAIR COVER
 "OPEN BRUSH"               B        2.20      0.30       1.00    66
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          B       16.30      0.30       1.00    69
 NATURAL FAIR COVER
 "OPEN BRUSH"               C        2.30      0.25       1.00    77
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          C        0.40      0.25       1.00    79
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"       D        5.00      0.20       0.50    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.85
 SUBAREA AREA(ACRES) =   30.50      SUBAREA RUNOFF(CFS) =   54.01
 EFFECTIVE AREA(ACRES) =    364.40   AREA-AVERAGED Fm(INCH/HR) =  0.24
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.91
 TOTAL AREA(ACRES) =    364.40       PEAK FLOW RATE(CFS) =     644.47

****************************************************************************
 FLOW PROCESS FROM NODE   3114.00 TO NODE   3135.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
 MAINLINE Tc(MIN) =  30.28
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.209
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"               D        9.70      0.20       1.00    83
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          D        1.80      0.20       1.00    84
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   11.50      SUBAREA RUNOFF(CFS) =   20.80
 EFFECTIVE AREA(ACRES) =    375.90   AREA-AVERAGED Fm(INCH/HR) =  0.24
 AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.92
 TOTAL AREA(ACRES) =    375.90       PEAK FLOW RATE(CFS) =     665.26

****************************************************************************
 FLOW PROCESS FROM NODE   3135.00 TO NODE   3135.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
================================================================================
```

```
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  30.28
 RAINFALL INTENSITY(INCH/HR) =   2.21
 AREA-AVERAGED Fm(INCH/HR) =  0.24
 AREA-AVERAGED Fp(INCH/HR) =  0.26
 AREA-AVERAGED Ap =  0.92
 EFFECTIVE STREAM AREA(ACRES) =   375.90
 TOTAL STREAM AREA(ACRES) =   375.90
 PEAK FLOW RATE(CFS) AT CONFLUENCE =    665.26

****************************************************************************
 FLOW PROCESS FROM NODE   3120.00 TO NODE   3121.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
 >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   313.00
 ELEVATION DATA: UPSTREAM(FEET) =   1215.00  DOWNSTREAM(FEET) =   1100.00

 Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
 SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    8.590
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.577
 SUBAREA Tc AND LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS   Tc
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        0.70      0.25      1.00    77    8.59
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA RUNOFF(CFS) =      2.73
 TOTAL AREA(ACRES) =      0.70   PEAK FLOW RATE(CFS) =      2.73

****************************************************************************
 FLOW PROCESS FROM NODE   3121.00 TO NODE   3122.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   1100.00  DOWNSTREAM(FEET) =   1060.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   261.00   CHANNEL SLOPE =  0.1533
 CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
 CHANNEL FLOW THRU SUBAREA(CFS) =      2.73
 FLOW VELOCITY(FEET/SEC.) =   5.65   FLOW DEPTH(FEET) =   0.36
 TRAVEL TIME(MIN.) =   0.77   Tc(MIN.) =   9.36
 LONGEST FLOWPATH FROM NODE   3120.00 TO NODE   3122.00 =   574.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3121.00 TO NODE   3122.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =   9.36
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.350
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                     B        0.10      0.30      1.00    69
 NATURAL FAIR COVER
 "OPEN BRUSH"                B        0.70      0.30      1.00    66
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        0.60      0.25      1.00    77
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    1.40      SUBAREA RUNOFF(CFS) =    5.13
 EFFECTIVE AREA(ACRES) =      2.10   AREA-AVERAGED Fm(INCH/HR) =  0.27
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =      2.10       PEAK FLOW RATE(CFS) =       7.71

****************************************************************************
 FLOW PROCESS FROM NODE   3122.00 TO NODE   3123.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   1060.00  DOWNSTREAM(FEET) =   1040.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   137.00   CHANNEL SLOPE =  0.1460
 CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
 CHANNEL FLOW THRU SUBAREA(CFS) =      7.71
 FLOW VELOCITY(FEET/SEC.) =   7.38   FLOW DEPTH(FEET) =   0.64
 TRAVEL TIME(MIN.) =   0.31   Tc(MIN.) =   9.67
 LONGEST FLOWPATH FROM NODE   3120.00 TO NODE   3123.00 =   711.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3122.00 TO NODE   3123.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =   9.67
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.258
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                     B        0.20      0.30      1.00    69
 NATURAL FAIR COVER
 "OPEN BRUSH"                B        0.50      0.30      1.00    66
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        1.20      0.25      1.00    77
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    1.90      SUBAREA RUNOFF(CFS) =    6.82
 EFFECTIVE AREA(ACRES) =      4.00   AREA-AVERAGED Fm(INCH/HR) =  0.27
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =      4.00       PEAK FLOW RATE(CFS) =      14.36

****************************************************************************
 FLOW PROCESS FROM NODE   3123.00 TO NODE   3124.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   1040.00  DOWNSTREAM(FEET) =    990.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   450.00   CHANNEL SLOPE =  0.1111
 CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     14.36
 FLOW VELOCITY(FEET/SEC.) =   7.84   FLOW DEPTH(FEET) =   0.94
 TRAVEL TIME(MIN.) =   0.96   Tc(MIN.) =  10.63
 LONGEST FLOWPATH FROM NODE   3120.00 TO NODE   3124.00 =  1161.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3123.00 TO NODE   3124.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  10.63
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.035
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
```

```
  NATURAL FAIR COVER
  "GRASS"                    B        0.90      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.50      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.20      0.30      1.00    60
  NATURAL FAIR COVER
  "GRASS"                    C        0.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        1.90      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    4.90      SUBAREA RUNOFF(CFS) =   16.57
  EFFECTIVE AREA(ACRES) =      8.90   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      8.90       PEAK FLOW RATE(CFS) =      30.13

****************************************************************************
  FLOW PROCESS FROM NODE   3124.00 TO NODE   3125.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    990.00  DOWNSTREAM(FEET) =    975.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   258.00   CHANNEL SLOPE =  0.0581
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     30.13
  FLOW VELOCITY(FEET/SEC.) =   7.32   FLOW DEPTH(FEET) =   1.26
  TRAVEL TIME(MIN.) =   0.59   Tc(MIN.) =  11.21
  LONGEST FLOWPATH FROM NODE   3120.00 TO NODE   3125.00 =  1419.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3124.00 TO NODE   3125.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.21
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.917
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B        0.90      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.20      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        0.80      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                    C        0.10      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        1.80      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.10      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.90      SUBAREA RUNOFF(CFS) =   12.82
  EFFECTIVE AREA(ACRES) =     12.80   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     12.80       PEAK FLOW RATE(CFS) =      42.01

****************************************************************************
  FLOW PROCESS FROM NODE   3125.00 TO NODE   3126.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    975.00  DOWNSTREAM(FEET) =    970.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   109.00   CHANNEL SLOPE =  0.0459
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     42.01
  FLOW VELOCITY(FEET/SEC.) =   7.31   FLOW DEPTH(FEET) =   1.60
  TRAVEL TIME(MIN.) =   0.25   Tc(MIN.) =  11.46
  LONGEST FLOWPATH FROM NODE   3120.00 TO NODE   3126.00 =  1528.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3125.00 TO NODE   3126.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.46
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.868
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.10      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                    B        1.30      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        0.90      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B        0.10      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B        1.10      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        0.60      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    4.10      SUBAREA RUNOFF(CFS) =   13.19
  EFFECTIVE AREA(ACRES) =     16.90   AREA-AVERAGED Fm(INCH/HR) =  0.28
  AREA-AVERAGED Fp(INCH/HR) =  0.28  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     16.90       PEAK FLOW RATE(CFS) =      54.63

****************************************************************************
  FLOW PROCESS FROM NODE   3125.00 TO NODE   3126.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.46
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.868
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        0.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        4.00      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.30      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    4.70      SUBAREA RUNOFF(CFS) =   15.30
  EFFECTIVE AREA(ACRES) =     21.60   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     21.60       PEAK FLOW RATE(CFS) =      69.94

****************************************************************************
  FLOW PROCESS FROM NODE   3126.00 TO NODE   3127.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
```

```
 ELEVATION DATA: UPSTREAM(FEET) =    970.00  DOWNSTREAM(FEET) =    940.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   696.00   CHANNEL SLOPE =  0.0431
 CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     69.94
 FLOW VELOCITY(FEET/SEC.) =   8.06   FLOW DEPTH(FEET) =   1.81
 TRAVEL TIME(MIN.) =   1.44   Tc(MIN.) =  12.90
 LONGEST FLOWPATH FROM NODE   3120.00 TO NODE   3127.00 =  2224.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3126.00 TO NODE   3127.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  12.90
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.602
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       B         2.70      0.30      1.00    63
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           B         1.50      0.30      1.00    69
 NATURAL FAIR COVER
 "WOODLAND"                  B         0.50      0.30      1.00    60
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       C         2.60      0.25      1.00    75
 NATURAL FAIR COVER
 "OPEN BRUSH"                C         1.80      0.25      1.00    77
 NATURAL FAIR COVER
 "WOODLAND"                  C         0.20      0.25      1.00    73
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =     9.30      SUBAREA RUNOFF(CFS) =   27.85
 EFFECTIVE AREA(ACRES) =     30.90   AREA-AVERAGED Fm(INCH/HR) =  0.27
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     30.90       PEAK FLOW RATE(CFS) =      92.62

****************************************************************************
 FLOW PROCESS FROM NODE   3127.00 TO NODE   3128.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    940.00  DOWNSTREAM(FEET) =    920.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   511.00   CHANNEL SLOPE =  0.0391
 CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     92.62
 FLOW VELOCITY(FEET/SEC.) =   8.38   FLOW DEPTH(FEET) =   2.15
 TRAVEL TIME(MIN.) =   1.02   Tc(MIN.) =  13.92
 LONGEST FLOWPATH FROM NODE   3120.00 TO NODE   3128.00 =  2735.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3127.00 TO NODE   3128.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  13.92
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.456
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       B         3.00      0.30      1.00    63
 NATURAL FAIR COVER
 "OPEN BRUSH"                B         1.40      0.30      1.00    66
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           B         8.40      0.30      1.00    69
 NATURAL FAIR COVER
 "WOODLAND"                  B         0.20      0.30      1.00    60
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       C         8.00      0.25      1.00    75
 NATURAL FAIR COVER
 "OPEN BRUSH"                C         5.20      0.25      1.00    77
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   26.20      SUBAREA RUNOFF(CFS) =   75.01
 EFFECTIVE AREA(ACRES) =     57.10   AREA-AVERAGED Fm(INCH/HR) =  0.27
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     57.10       PEAK FLOW RATE(CFS) =     163.57

****************************************************************************
 FLOW PROCESS FROM NODE   3127.00 TO NODE   3128.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  13.92
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.456
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           C         1.00      0.25      1.00    79
 NATURAL FAIR COVER
 "WOODLAND"                  C         0.50      0.25      1.00    73
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    1.50      SUBAREA RUNOFF(CFS) =    4.33
 EFFECTIVE AREA(ACRES) =     58.60   AREA-AVERAGED Fm(INCH/HR) =  0.27
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     58.60       PEAK FLOW RATE(CFS) =     167.90

****************************************************************************
 FLOW PROCESS FROM NODE   3128.00 TO NODE   3129.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    920.00  DOWNSTREAM(FEET) =    870.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   980.00   CHANNEL SLOPE =  0.0510
 CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    167.90
 FLOW VELOCITY(FEET/SEC.) =  10.79   FLOW DEPTH(FEET) =   2.72
 TRAVEL TIME(MIN.) =   1.51   Tc(MIN.) =  15.43
 LONGEST FLOWPATH FROM NODE   3120.00 TO NODE   3129.00 =  3715.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3128.00 TO NODE   3129.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  15.43
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.252
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       B         0.90      0.30      1.00    63
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           B        11.50      0.30      1.00    69
 NATURAL FAIR COVER
 "WOODLAND"                  B         0.90      0.30      1.00    60
```

```
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        2.10      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        7.30      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        6.10      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   28.80      SUBAREA RUNOFF(CFS) =   77.21
  EFFECTIVE AREA(ACRES) =     87.40   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     87.40       PEAK FLOW RATE(CFS) =     234.33

****************************************************************************
  FLOW PROCESS FROM NODE   3128.00 TO NODE   3129.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  15.43
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.252
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C        3.30      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.30      SUBAREA RUNOFF(CFS) =    8.92
  EFFECTIVE AREA(ACRES) =     90.70   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     90.70       PEAK FLOW RATE(CFS) =     243.25

****************************************************************************
  FLOW PROCESS FROM NODE   3129.00 TO NODE   3130.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    870.00  DOWNSTREAM(FEET) =    840.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   918.00   CHANNEL SLOPE =  0.0327
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    243.25
  FLOW VELOCITY(FEET/SEC.) =   9.99   FLOW DEPTH(FEET) =   3.32
  TRAVEL TIME(MIN.) =   1.53   Tc(MIN.) =  16.96
  LONGEST FLOWPATH FROM NODE   3120.00 TO NODE   3130.00 =  4633.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3129.00 TO NODE   3130.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.96
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.080
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.90      0.30      1.00    63
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.80      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B       26.80      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B        1.40      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        9.90      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       14.60      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   55.40      SUBAREA RUNOFF(CFS) =  139.73
  EFFECTIVE AREA(ACRES) =    146.10   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    146.10       PEAK FLOW RATE(CFS) =     368.98

****************************************************************************
  FLOW PROCESS FROM NODE   3129.00 TO NODE   3130.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.96
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.080
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        7.00      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    7.00      SUBAREA RUNOFF(CFS) =   17.83
  EFFECTIVE AREA(ACRES) =    153.10   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    153.10       PEAK FLOW RATE(CFS) =     386.81

****************************************************************************
  FLOW PROCESS FROM NODE   3130.00 TO NODE   3131.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    840.00  DOWNSTREAM(FEET) =    820.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   882.00   CHANNEL SLOPE =  0.0227
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    386.81
  FLOW VELOCITY(FEET/SEC.) =   9.80   FLOW DEPTH(FEET) =   4.26
  TRAVEL TIME(MIN.) =   1.50   Tc(MIN.) =  18.46
  LONGEST FLOWPATH FROM NODE   3120.00 TO NODE   3131.00 =  5515.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3130.00 TO NODE   3131.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.46
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.935
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        2.80      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B       22.40      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B        2.00      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        4.90      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       20.20      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        9.80      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
```

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 SUBAREA AREA(ACRES) =   62.10      SUBAREA RUNOFF(CFS) =  148.86
 EFFECTIVE AREA(ACRES) =    215.20   AREA-AVERAGED Fm(INCH/HR) =  0.27
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    215.20       PEAK FLOW RATE(CFS) =     515.70

****************************************************************************
 FLOW PROCESS FROM NODE   3130.00 TO NODE   3131.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  18.46
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.935
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "WOODLAND"                  C        1.80      0.25      1.00    73
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    1.80      SUBAREA RUNOFF(CFS) =    4.35
 EFFECTIVE AREA(ACRES) =    217.00   AREA-AVERAGED Fm(INCH/HR) =  0.27
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    217.00       PEAK FLOW RATE(CFS) =     520.05

****************************************************************************
 FLOW PROCESS FROM NODE   3131.00 TO NODE   3132.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    820.00  DOWNSTREAM(FEET) =    800.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   901.00   CHANNEL SLOPE =  0.0222
 CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    520.05
 FLOW VELOCITY(FEET/SEC.) =  10.47   FLOW DEPTH(FEET) =   4.98
 TRAVEL TIME(MIN.) =   1.43   Tc(MIN.) =  19.90
 LONGEST FLOWPATH FROM NODE   3120.00 TO NODE   3132.00 =  6416.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3131.00 TO NODE   3132.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  19.90
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.809
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       B        0.90      0.30      1.00    63
 NATURAL FAIR COVER
 "OPEN BRUSH"                B        4.00      0.30      1.00    66
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           B       25.00      0.30      1.00    69
 NATURAL FAIR COVER
 "WOODLAND"                  B        1.80      0.30      1.00    60
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       C        3.90      0.25      1.00    75
 NATURAL FAIR COVER
 "OPEN BRUSH"                C       24.80      0.25      1.00    77
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   60.40      SUBAREA RUNOFF(CFS) =  137.69
 EFFECTIVE AREA(ACRES) =    277.40   AREA-AVERAGED Fm(INCH/HR) =  0.27
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    277.40       PEAK FLOW RATE(CFS) =     633.09

****************************************************************************
 FLOW PROCESS FROM NODE   3131.00 TO NODE   3132.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  19.90
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.809
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           C       11.10      0.25      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   11.10      SUBAREA RUNOFF(CFS) =   25.57
 EFFECTIVE AREA(ACRES) =    288.50   AREA-AVERAGED Fm(INCH/HR) =  0.27
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    288.50       PEAK FLOW RATE(CFS) =     658.66

****************************************************************************
 FLOW PROCESS FROM NODE   3132.00 TO NODE   3133.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    800.00  DOWNSTREAM(FEET) =    780.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   940.00   CHANNEL SLOPE =  0.0213
 CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    658.66
 FLOW VELOCITY(FEET/SEC.) =  10.93   FLOW DEPTH(FEET) =   5.32
 TRAVEL TIME(MIN.) =   1.43   Tc(MIN.) =  21.33
 LONGEST FLOWPATH FROM NODE   3120.00 TO NODE   3133.00 =  7356.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3132.00 TO NODE   3133.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  21.33
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.699
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"                B        2.50      0.30      1.00    66
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           B       22.20      0.30      1.00    69
 NATURAL FAIR COVER
 "GRASS"                     C        0.40      0.25      1.00    79
 NATURAL FAIR COVER
 "OPEN BRUSH"                C       20.10      0.25      1.00    77
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           C        6.60      0.25      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   51.80      SUBAREA RUNOFF(CFS) =  113.06
 EFFECTIVE AREA(ACRES) =    340.30   AREA-AVERAGED Fm(INCH/HR) =  0.27
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    340.30       PEAK FLOW RATE(CFS) =     743.11

****************************************************************************
 FLOW PROCESS FROM NODE   3133.00 TO NODE   3134.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
```

```
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    780.00  DOWNSTREAM(FEET) =    765.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   596.00   CHANNEL SLOPE =  0.0252
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    743.11
  FLOW VELOCITY(FEET/SEC.) =  12.00   FLOW DEPTH(FEET) =   5.42
  TRAVEL TIME(MIN.) =   0.83   Tc(MIN.) =  22.16
  LONGEST FLOWPATH FROM NODE   3120.00 TO NODE   3134.00 =  7952.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3133.00 TO NODE   3134.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  22.16
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.636
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                B       15.60      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B       55.20      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B        3.60      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.10      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       75.10      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C       28.10      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  177.70      SUBAREA RUNOFF(CFS) =  378.26
  EFFECTIVE AREA(ACRES) =    518.00   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    518.00       PEAK FLOW RATE(CFS) =    1102.10

****************************************************************************
  FLOW PROCESS FROM NODE   3133.00 TO NODE   3134.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  22.16
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.636
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  C        1.50      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.50      SUBAREA RUNOFF(CFS) =    3.22
  EFFECTIVE AREA(ACRES) =    519.50   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    519.50       PEAK FLOW RATE(CFS) =    1105.32

****************************************************************************
  FLOW PROCESS FROM NODE   3134.00 TO NODE   3135.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    765.00  DOWNSTREAM(FEET) =    710.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2076.00   CHANNEL SLOPE =  0.0265
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1105.32
  FLOW VELOCITY(FEET/SEC.) =  13.51   FLOW DEPTH(FEET) =   6.20
  TRAVEL TIME(MIN.) =   2.56   Tc(MIN.) =  24.72
  LONGEST FLOWPATH FROM NODE   3120.00 TO NODE   3135.00 = 10028.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3134.00 TO NODE   3135.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  24.72
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.477
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        4.10      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B       39.20      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.40      0.30      1.00    60
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       26.40      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        7.10      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   77.20      SUBAREA RUNOFF(CFS) =  152.76
  EFFECTIVE AREA(ACRES) =    596.70   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    596.70       PEAK FLOW RATE(CFS) =    1183.64

****************************************************************************
  FLOW PROCESS FROM NODE   3135.00 TO NODE   3135.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  24.72
  RAINFALL INTENSITY(INCH/HR) =   2.48
  AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =   596.70
  TOTAL STREAM AREA(ACRES) =   596.70
  PEAK FLOW RATE(CFS) AT CONFLUENCE =   1183.64

  ** CONFLUENCE DATA **
   STREAM     Q      Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1    665.26  30.28    2.209  0.26( 0.24) 0.92   375.9    3100.00
      2   1183.64  24.72    2.477  0.27( 0.27) 1.00   596.7    3120.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM     Q      Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1   1800.61  24.72    2.477  0.27( 0.26) 0.97   903.6    3120.00
      2   1705.26  30.28    2.209  0.27( 0.26) 0.97   972.6    3100.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =   1800.61    Tc(MIN.) =    24.72
```

```
 EFFECTIVE AREA(ACRES) =   903.57   AREA-AVERAGED Fm(INCH/HR) =  0.26
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.97
 TOTAL AREA(ACRES) =    972.60
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3135.00 = 12504.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3135.00 TO NODE   3136.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    710.00  DOWNSTREAM(FEET) =    690.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1157.00   CHANNEL SLOPE =  0.0173
 CHANNEL BASE(FEET) =    9.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   9.00
 CHANNEL FLOW THRU SUBAREA(CFS) =   1800.61
 FLOW VELOCITY(FEET/SEC.) =  13.00   FLOW DEPTH(FEET) =   8.10
 TRAVEL TIME(MIN.) =   1.48   Tc(MIN.) =  26.20
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3136.00 = 13661.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3135.00 TO NODE   3136.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  26.20
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.397
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"       B        6.80      0.30       0.50    56
 NATURAL FAIR COVER
 "OPEN BRUSH"               B        3.20      0.30       1.00    66
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          B       28.90      0.30       1.00    69
 NATURAL FAIR COVER
 "WOODLAND"                 B        0.40      0.30       1.00    60
 NATURAL FAIR COVER
 "OPEN BRUSH"               C        4.50      0.25       1.00    77
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"       D        2.90      0.20       0.50    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.90
 SUBAREA AREA(ACRES) =   46.70      SUBAREA RUNOFF(CFS) =   89.80
 EFFECTIVE AREA(ACRES) =    950.27   AREA-AVERAGED Fm(INCH/HR) =  0.26
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.97
 TOTAL AREA(ACRES) =   1019.30       PEAK FLOW RATE(CFS) =    1825.86

****************************************************************************
 FLOW PROCESS FROM NODE   3135.00 TO NODE   3136.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  26.20
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.397
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"               D       11.70      0.20       1.00    83
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          D        9.10      0.20       1.00    84
 NATURAL FAIR COVER
 "WOODLAND"                 D        0.20      0.20       1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   21.00      SUBAREA RUNOFF(CFS) =   41.53
 EFFECTIVE AREA(ACRES) =    971.27   AREA-AVERAGED Fm(INCH/HR) =  0.26
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.97
 TOTAL AREA(ACRES) =   1040.30       PEAK FLOW RATE(CFS) =    1867.40

****************************************************************************
 FLOW PROCESS FROM NODE   3136.00 TO NODE   3137.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    690.00  DOWNSTREAM(FEET) =    685.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   609.00   CHANNEL SLOPE =  0.0082
 CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
 CHANNEL FLOW THRU SUBAREA(CFS) =   1867.40
 FLOW VELOCITY(FEET/SEC.) =   9.92   FLOW DEPTH(FEET) =   9.60
 TRAVEL TIME(MIN.) =   1.02   Tc(MIN.) =  27.22
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3137.00 = 14270.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3136.00 TO NODE   3137.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  27.22
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.344
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"       B        5.80      0.30       0.50    56
 NATURAL FAIR COVER
 "GRASS"                    B        0.40      0.30       1.00    69
 NATURAL FAIR COVER
 "OPEN BRUSH"               B        3.80      0.30       1.00    66
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          B       32.50      0.30       1.00    69
 NATURAL FAIR COVER
 "OPEN BRUSH"               C       29.80      0.25       1.00    77
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          C        3.60      0.25       1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.96
 SUBAREA AREA(ACRES) =   75.90      SUBAREA RUNOFF(CFS) =  141.93
 EFFECTIVE AREA(ACRES) =   1047.17   AREA-AVERAGED Fm(INCH/HR) =  0.26
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.97
 TOTAL AREA(ACRES) =   1116.20       PEAK FLOW RATE(CFS) =    1962.84

****************************************************************************
 FLOW PROCESS FROM NODE   3136.00 TO NODE   3137.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  27.22
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.344
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"       D        0.40      0.20       0.50    75
 NATURAL FAIR COVER
 "GRASS"                    D        0.40      0.20       1.00    84
 NATURAL FAIR COVER
 "OPEN BRUSH"               D       10.30      0.20       1.00    83
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          D       11.00      0.20       1.00    84
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 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
 SUBAREA AREA(ACRES) =   22.10      SUBAREA RUNOFF(CFS) =   42.69
 EFFECTIVE AREA(ACRES) =   1069.27   AREA-AVERAGED Fm(INCH/HR) =  0.26
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.97
 TOTAL AREA(ACRES) =   1138.30       PEAK FLOW RATE(CFS) =    2005.52

****************************************************************************
 FLOW PROCESS FROM NODE   3137.00 TO NODE   3138.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    685.00  DOWNSTREAM(FEET) =    675.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   740.00   CHANNEL SLOPE =  0.0135
 CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
 CHANNEL FLOW THRU SUBAREA(CFS) =   2005.52
 FLOW VELOCITY(FEET/SEC.) =  12.17   FLOW DEPTH(FEET) =   8.78
 TRAVEL TIME(MIN.) =   1.01   Tc(MIN.) =  28.24
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3138.00 = 15010.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3137.00 TO NODE   3138.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  28.24
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.298
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"       B       20.70      0.30      0.50    56
 NATURAL FAIR COVER
 "OPEN BRUSH"               B        1.50      0.30      1.00    66
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          B        6.20      0.30      1.00    69
 NATURAL FAIR COVER
 "OPEN BRUSH"               C        0.40      0.25      1.00    77
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"       D       11.70      0.20      0.50    75
 NATURAL FAIR COVER
 "GRASS"                    D        2.10      0.20      1.00    84
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.62
 SUBAREA AREA(ACRES) =   42.60      SUBAREA RUNOFF(CFS) =   81.69
 EFFECTIVE AREA(ACRES) =   1111.87   AREA-AVERAGED Fm(INCH/HR) =  0.26
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.96
 TOTAL AREA(ACRES) =   1180.90       PEAK FLOW RATE(CFS) =    2042.18

****************************************************************************
 FLOW PROCESS FROM NODE   3137.00 TO NODE   3138.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  28.24
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.298
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"               D       12.40      0.20      1.00    83
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          D        3.30      0.20      1.00    84
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   15.70      SUBAREA RUNOFF(CFS) =   29.64
 EFFECTIVE AREA(ACRES) =   1127.57   AREA-AVERAGED Fm(INCH/HR) =  0.26
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.96
 TOTAL AREA(ACRES) =   1196.60       PEAK FLOW RATE(CFS) =    2071.82

****************************************************************************
 FLOW PROCESS FROM NODE   3138.00 TO NODE   3139.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    675.00  DOWNSTREAM(FEET) =    655.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   977.00   CHANNEL SLOPE =  0.0205
 CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
 CHANNEL FLOW THRU SUBAREA(CFS) =   2071.82
 FLOW VELOCITY(FEET/SEC.) =  14.33   FLOW DEPTH(FEET) =   8.02
 TRAVEL TIME(MIN.) =   1.14   Tc(MIN.) =  29.37
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3139.00 = 15987.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3138.00 TO NODE   3139.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  29.37
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.248
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      B        0.40      0.30      1.00    63
 AGRICULTURAL POOR COVER
 "FALLOW"                   B        8.60      0.30      1.00    86
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"       B        1.00      0.30      0.50    56
 NATURAL FAIR COVER
 "OPEN BRUSH"               B        9.70      0.30      1.00    66
 COMMERCIAL                 B        5.60      0.30      0.10    56
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          B       12.10      0.30      1.00    69
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.85
 SUBAREA AREA(ACRES) =   37.40      SUBAREA RUNOFF(CFS) =   67.05
 EFFECTIVE AREA(ACRES) =   1164.97   AREA-AVERAGED Fm(INCH/HR) =  0.26
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.95
 TOTAL AREA(ACRES) =   1234.00       PEAK FLOW RATE(CFS) =    2088.12

****************************************************************************
 FLOW PROCESS FROM NODE   3138.00 TO NODE   3139.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  29.37
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.248
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "WOODLAND"                 B        0.20      0.30      1.00    60
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      C        5.40      0.25      1.00    75
 AGRICULTURAL POOR COVER
 "FALLOW"                   C        1.30      0.25      1.00    91
 NATURAL POOR COVER
 "BARREN"                   C        4.00      0.25      1.00    91
 NATURAL FAIR COVER
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"OPEN BRUSH"                C       20.10      0.25      1.00    77
COMMERCIAL                  C        2.70      0.25      0.10    69
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
SUBAREA AREA(ACRES) =   33.70      SUBAREA RUNOFF(CFS) =   61.12
EFFECTIVE AREA(ACRES) =   1198.67   AREA-AVERAGED Fm(INCH/HR) =  0.26
AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.95
TOTAL AREA(ACRES) =   1267.70       PEAK FLOW RATE(CFS) =    2149.24

****************************************************************************
FLOW PROCESS FROM NODE   3138.00 TO NODE   3139.00 IS CODE =  81
----------------------------------------------------------------------------
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
MAINLINE Tc(MIN) =  29.37
* 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.248
SUBAREA LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
     LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
AGRICULTURAL FAIR COVER
"PASTURE,DRYLAND"           C        1.10      0.25      1.00    79
NATURAL FAIR COVER
"WOODLAND"                  C        2.80      0.25      1.00    73
AGRICULTURAL POOR COVER
"FALLOW"                    D        2.20      0.20      1.00    94
NATURAL FAIR COVER
"GRASS"                     D        1.90      0.20      1.00    84
NATURAL FAIR COVER
"OPEN BRUSH"                D       17.50      0.20      1.00    83
COMMERCIAL                  D        2.00      0.20      0.10    75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
SUBAREA AREA(ACRES) =   27.50      SUBAREA RUNOFF(CFS) =   50.82
EFFECTIVE AREA(ACRES) =   1226.17   AREA-AVERAGED Fm(INCH/HR) =  0.25
AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.95
TOTAL AREA(ACRES) =   1295.20       PEAK FLOW RATE(CFS) =    2200.07

****************************************************************************
FLOW PROCESS FROM NODE   3138.00 TO NODE   3139.00 IS CODE =  81
----------------------------------------------------------------------------
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
MAINLINE Tc(MIN) =  29.37
* 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.248
SUBAREA LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
     LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
AGRICULTURAL FAIR COVER
"PASTURE,DRYLAND"           D        1.40      0.20      1.00    84
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
SUBAREA AREA(ACRES) =    1.40      SUBAREA RUNOFF(CFS) =    2.58
EFFECTIVE AREA(ACRES) =   1227.57   AREA-AVERAGED Fm(INCH/HR) =  0.25
AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.95
TOTAL AREA(ACRES) =   1296.60       PEAK FLOW RATE(CFS) =    2202.65

****************************************************************************
FLOW PROCESS FROM NODE   3139.00 TO NODE   3140.00 IS CODE =  51
----------------------------------------------------------------------------
>>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
ELEVATION DATA: UPSTREAM(FEET) =    655.00  DOWNSTREAM(FEET) =    640.00
CHANNEL LENGTH THRU SUBAREA(FEET) =   701.00   CHANNEL SLOPE =  0.0214
CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
CHANNEL FLOW THRU SUBAREA(CFS) =   2202.65
FLOW VELOCITY(FEET/SEC.) =  14.79   FLOW DEPTH(FEET) =   8.19
TRAVEL TIME(MIN.) =   0.79   Tc(MIN.) =  30.16
LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3140.00 = 16688.00 FEET.

****************************************************************************
FLOW PROCESS FROM NODE   3139.00 TO NODE   3140.00 IS CODE =  81
----------------------------------------------------------------------------
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
MAINLINE Tc(MIN) =  30.16
* 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.214
SUBAREA LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
     LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
AGRICULTURAL POOR COVER
"FALLOW"                    B       26.00      0.30      1.00    86
NATURAL FAIR COVER
"OPEN BRUSH"                B        5.80      0.30      1.00    66
NATURAL GOOD COVER
"MEADOWS"                   B        0.90      0.30      1.00    58
AGRICULTURAL FAIR COVER
"PASTURE,DRYLAND"           B        1.00      0.30      1.00    69
NATURAL FAIR COVER
"WOODLAND"                  B        2.80      0.30      1.00    60
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF"       C        1.80      0.25      1.00    75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
SUBAREA AREA(ACRES) =   38.30      SUBAREA RUNOFF(CFS) =   66.05
EFFECTIVE AREA(ACRES) =   1265.87   AREA-AVERAGED Fm(INCH/HR) =  0.26
AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.95
TOTAL AREA(ACRES) =   1334.90       PEAK FLOW RATE(CFS) =    2231.38

****************************************************************************
FLOW PROCESS FROM NODE   3139.00 TO NODE   3140.00 IS CODE =  81
----------------------------------------------------------------------------
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
MAINLINE Tc(MIN) =  30.16
* 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.214
SUBAREA LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
     LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
AGRICULTURAL POOR COVER
"FALLOW"                    C        5.60      0.25      1.00    91
NATURAL FAIR COVER
"OPEN BRUSH"                C       28.50      0.25      1.00    77
NATURAL GOOD COVER
"MEADOWS"                   C        0.20      0.25      1.00    71
NATURAL FAIR COVER
"WOODLAND"                  C        1.80      0.25      1.00    73
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF"       D        0.10      0.20      1.00    81
AGRICULTURAL FAIR COVER
"PASTURE,DRYLAND"           D        0.20      0.20      1.00    84
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
SUBAREA AREA(ACRES) =   36.40      SUBAREA RUNOFF(CFS) =   64.35
EFFECTIVE AREA(ACRES) =   1302.27   AREA-AVERAGED Fm(INCH/HR) =  0.25
AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.95
TOTAL AREA(ACRES) =   1371.30       PEAK FLOW RATE(CFS) =    2295.73

****************************************************************************
FLOW PROCESS FROM NODE   3140.00 TO NODE   3141.00 IS CODE =  51
----------------------------------------------------------------------------
>>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
```

```
 ELEVATION DATA: UPSTREAM(FEET) =    640.00  DOWNSTREAM(FEET) =    620.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   903.00   CHANNEL SLOPE =  0.0221
 CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
 CHANNEL FLOW THRU SUBAREA(CFS) =   2295.73
 FLOW VELOCITY(FEET/SEC.) =  15.15   FLOW DEPTH(FEET) =   8.29
 TRAVEL TIME(MIN.) =   0.99   Tc(MIN.) =  31.16
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3141.00 = 17591.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3140.00 TO NODE   3141.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  31.16
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.176
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL POOR COVER
 "FALLOW"                    B       38.40      0.30       1.00    86
 NATURAL FAIR COVER
 "GRASS"                     B        0.20      0.30       1.00    69
 NATURAL FAIR COVER
 "OPEN BRUSH"                B        3.70      0.30       1.00    66
 COMMERCIAL                  B        0.60      0.30       0.10    56
 NATURAL FAIR COVER
 "WOODLAND"                  B        0.90      0.30       1.00    60
 AGRICULTURAL POOR COVER
 "FALLOW"                    C        0.80      0.25       1.00    91
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
 SUBAREA AREA(ACRES) =   44.60      SUBAREA RUNOFF(CFS) =   75.48
 EFFECTIVE AREA(ACRES) =   1346.87   AREA-AVERAGED Fm(INCH/HR) =  0.26
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.96
 TOTAL AREA(ACRES) =   1415.90       PEAK FLOW RATE(CFS) =    2326.95

****************************************************************************
 FLOW PROCESS FROM NODE   3140.00 TO NODE   3141.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  31.16
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.176
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       D        2.60      0.20       1.00    81
 AGRICULTURAL POOR COVER
 "FALLOW"                    D        8.90      0.20       1.00    94
 NATURAL POOR COVER
 "BARREN"                    D        0.60      0.20       1.00    93
 NATURAL FAIR COVER
 "GRASS"                     D        1.40      0.20       1.00    84
 NATURAL FAIR COVER
 "OPEN BRUSH"                D       16.70      0.20       1.00    83
 COMMERCIAL                  D        0.70      0.20       0.10    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
 SUBAREA AREA(ACRES) =   30.90      SUBAREA RUNOFF(CFS) =   55.07
 EFFECTIVE AREA(ACRES) =   1377.77   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.96
 TOTAL AREA(ACRES) =   1446.80       PEAK FLOW RATE(CFS) =    2382.02

****************************************************************************
```

```
 FLOW PROCESS FROM NODE   3141.00 TO NODE   3142.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    620.00  DOWNSTREAM(FEET) =    590.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1040.00   CHANNEL SLOPE =  0.0288
 CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
 CHANNEL FLOW THRU SUBAREA(CFS) =   2382.02
 FLOW VELOCITY(FEET/SEC.) =  16.86   FLOW DEPTH(FEET) =   7.89
 TRAVEL TIME(MIN.) =   1.03   Tc(MIN.) =  32.19
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3142.00 = 18631.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3141.00 TO NODE   3142.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  32.19
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.137
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL POOR COVER
 "FALLOW"                    B       28.30      0.30       1.00    86
 NATURAL FAIR COVER
 "GRASS"                     B        0.70      0.30       1.00    69
 NATURAL FAIR COVER
 "OPEN BRUSH"                B        4.60      0.30       1.00    66
 NATURAL FAIR COVER
 "WOODLAND"                  B        2.80      0.30       1.00    60
 AGRICULTURAL POOR COVER
 "FALLOW"                    C       24.70      0.25       1.00    91
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       C        2.00      0.25       1.00    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   63.10      SUBAREA RUNOFF(CFS) =  105.52
 EFFECTIVE AREA(ACRES) =   1440.87   AREA-AVERAGED Fm(INCH/HR) =  0.26
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.96
 TOTAL AREA(ACRES) =   1509.90       PEAK FLOW RATE(CFS) =    2439.11

****************************************************************************
 FLOW PROCESS FROM NODE   3141.00 TO NODE   3142.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  32.19
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.137
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"                C       20.50      0.25       1.00    77
 NATURAL FAIR COVER
 "WOODLAND"                  C        2.60      0.25       1.00    73
 AGRICULTURAL POOR COVER
 "FALLOW"                    D        1.80      0.20       1.00    94
 NATURAL FAIR COVER
 "OPEN BRUSH"                D        1.00      0.20       1.00    83
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   25.90      SUBAREA RUNOFF(CFS) =   44.11
 EFFECTIVE AREA(ACRES) =   1466.77   AREA-AVERAGED Fm(INCH/HR) =  0.26
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.96
 TOTAL AREA(ACRES) =   1535.80       PEAK FLOW RATE(CFS) =    2483.22
```

```
****************************************************************************
  FLOW PROCESS FROM NODE   3142.00 TO NODE   3143.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    590.00  DOWNSTREAM(FEET) =    560.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1232.00   CHANNEL SLOPE =  0.0244
  CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2483.22
  FLOW VELOCITY(FEET/SEC.) =  16.01   FLOW DEPTH(FEET) =   8.42
  TRAVEL TIME(MIN.) =   1.28   Tc(MIN.) =  33.47
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3143.00 = 19863.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3142.00 TO NODE   3143.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  33.47
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.088
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   B       27.30      0.30       1.00    86
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        4.90      0.30       1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        2.60      0.30       1.00    60
  AGRICULTURAL POOR COVER
  "FALLOW"                   C        5.80      0.25       1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C        2.60      0.25       1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       11.40      0.25       1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   54.60      SUBAREA RUNOFF(CFS) =   88.76
  EFFECTIVE AREA(ACRES) =   1521.37   AREA-AVERAGED Fm(INCH/HR) =  0.26
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.96
  TOTAL AREA(ACRES) =   1590.40       PEAK FLOW RATE(CFS) =    2507.65

****************************************************************************
  FLOW PROCESS FROM NODE   3142.00 TO NODE   3143.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  33.47
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.088
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.50      0.25       1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.10      0.20       1.00    81
  AGRICULTURAL POOR COVER
  "FALLOW"                   D        3.20      0.20       1.00    94
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       32.70      0.20       1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   37.50      SUBAREA RUNOFF(CFS) =   63.70
  EFFECTIVE AREA(ACRES) =   1558.87   AREA-AVERAGED Fm(INCH/HR) =  0.26
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.96
  TOTAL AREA(ACRES) =   1627.90       PEAK FLOW RATE(CFS) =    2571.35

****************************************************************************
  FLOW PROCESS FROM NODE   3143.00 TO NODE   3144.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    560.00  DOWNSTREAM(FEET) =    555.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   394.00   CHANNEL SLOPE =  0.0127
  CHANNEL BASE(FEET) =   15.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2571.35
  FLOW VELOCITY(FEET/SEC.) =  12.55   FLOW DEPTH(FEET) =   8.66
  TRAVEL TIME(MIN.) =   0.52   Tc(MIN.) =  33.99
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3144.00 = 20257.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3143.00 TO NODE   3144.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  33.99
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.068
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   B       28.70      0.30       1.00    86
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        2.40      0.30       1.00    66
  NATURAL GOOD COVER
  "MEADOWS"                  B        0.30      0.30       1.00    58
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.60      0.30       1.00    60
  AGRICULTURAL POOR COVER
  "FALLOW"                   C        1.20      0.25       1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C        0.80      0.25       1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   34.00      SUBAREA RUNOFF(CFS) =   54.20
  EFFECTIVE AREA(ACRES) =   1592.87   AREA-AVERAGED Fm(INCH/HR) =  0.26
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.96
  TOTAL AREA(ACRES) =   1661.90       PEAK FLOW RATE(CFS) =    2597.64

****************************************************************************
  FLOW PROCESS FROM NODE   3143.00 TO NODE   3144.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  33.99
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.068
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        6.00      0.25       1.00    77
  AGRICULTURAL POOR COVER
  "FALLOW"                   D        2.90      0.20       1.00    94
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        6.20      0.20       1.00    83
  NATURAL GOOD COVER
  "MEADOWS"                  D        0.20      0.20       1.00    78
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
```

```
  SUBAREA AREA(ACRES) =   15.30      SUBAREA RUNOFF(CFS) =   25.46
  EFFECTIVE AREA(ACRES) =   1608.17   AREA-AVERAGED Fm(INCH/HR) =  0.26
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.96
  TOTAL AREA(ACRES) =   1677.20       PEAK FLOW RATE(CFS) =    2623.10

****************************************************************************
  FLOW PROCESS FROM NODE   3144.00 TO NODE   3145.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    555.00  DOWNSTREAM(FEET) =    540.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   504.00   CHANNEL SLOPE =  0.0298
  CHANNEL BASE(FEET) =   15.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2623.10
  FLOW VELOCITY(FEET/SEC.) =  17.21   FLOW DEPTH(FEET) =   6.95
  TRAVEL TIME(MIN.) =   0.49   Tc(MIN.) =  34.48
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3145.00 = 20761.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3144.00 TO NODE   3145.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  34.48
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.050
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B         0.40      0.30      1.00    63
  AGRICULTURAL POOR COVER
  "FALLOW"                   B        17.20      0.30      1.00    86
  NATURAL FAIR COVER
  "OPEN BRUSH"               B         5.10      0.30      1.00    66
  NATURAL GOOD COVER
  "MEADOWS"                  B         0.30      0.30      1.00    58
  NATURAL FAIR COVER
  "WOODLAND"                 B         2.00      0.30      1.00    60
  AGRICULTURAL POOR COVER
  "FALLOW"                   C         1.30      0.25      1.00    91
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   26.30      SUBAREA RUNOFF(CFS) =   41.47
  EFFECTIVE AREA(ACRES) =   1634.47   AREA-AVERAGED Fm(INCH/HR) =  0.26
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.96
  TOTAL AREA(ACRES) =   1703.50       PEAK FLOW RATE(CFS) =    2637.73

****************************************************************************
  FLOW PROCESS FROM NODE   3144.00 TO NODE   3145.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  34.48
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.050
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C         0.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C         7.40      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        47.10      0.20      1.00    81
  AGRICULTURAL POOR COVER
  "FALLOW"                   D         5.40      0.20      1.00    94
  NATURAL FAIR COVER
  "GRASS"                    D         0.30      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                 D         0.90      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   61.50      SUBAREA RUNOFF(CFS) =  102.03
  EFFECTIVE AREA(ACRES) =   1695.97   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.96
  TOTAL AREA(ACRES) =   1765.00       PEAK FLOW RATE(CFS) =    2739.76

****************************************************************************
  FLOW PROCESS FROM NODE   3145.00 TO NODE   3146.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    540.00  DOWNSTREAM(FEET) =    500.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1156.00   CHANNEL SLOPE =  0.0346
  CHANNEL BASE(FEET) =   15.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2739.76
  FLOW VELOCITY(FEET/SEC.) =  18.39   FLOW DEPTH(FEET) =   6.83
  TRAVEL TIME(MIN.) =   1.05   Tc(MIN.) =  35.53
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3146.00 = 21917.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3145.00 TO NODE   3146.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  35.53
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.014
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   B        25.90      0.30      1.00    86
  NATURAL FAIR COVER
  "OPEN BRUSH"               B         1.70      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B         0.50      0.30      1.00    60
  AGRICULTURAL POOR COVER
  "FALLOW"                   C        10.80      0.25      1.00    91
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C         3.50      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        17.40      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   59.80      SUBAREA RUNOFF(CFS) =   93.68
  EFFECTIVE AREA(ACRES) =   1755.77   AREA-AVERAGED Fm(INCH/HR) =  0.26
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =   1824.80       PEAK FLOW RATE(CFS) =    2779.13

****************************************************************************
  FLOW PROCESS FROM NODE   3145.00 TO NODE   3146.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  35.53
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.014
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   D        17.60      0.20      1.00    94
```

```
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        7.00      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D        1.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   25.70      SUBAREA RUNOFF(CFS) =   41.96
  EFFECTIVE AREA(ACRES) =   1781.47   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =   1850.50       PEAK FLOW RATE(CFS) =    2821.09

****************************************************************************
  FLOW PROCESS FROM NODE   3146.00 TO NODE   3147.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    500.00  DOWNSTREAM(FEET) =    484.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   399.00   CHANNEL SLOPE =  0.0401
  CHANNEL BASE(FEET) =   15.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2821.09
  FLOW VELOCITY(FEET/SEC.) =  19.57   FLOW DEPTH(FEET) =   6.66
  TRAVEL TIME(MIN.) =   0.34   Tc(MIN.) =  35.87
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3147.00 = 22316.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3146.00 TO NODE   3147.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  35.87
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.004
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                    B        9.50      0.30      1.00    86
  NATURAL FAIR COVER
  "OPEN BRUSH"                B       10.90      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                  B        1.20      0.30      1.00    60
  AGRICULTURAL POOR COVER
  "FALLOW"                    C        5.00      0.25      1.00    91
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        5.40      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        0.40      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   32.40      SUBAREA RUNOFF(CFS) =   50.17
  EFFECTIVE AREA(ACRES) =   1813.87   AREA-AVERAGED Fm(INCH/HR) =  0.26
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =   1882.90       PEAK FLOW RATE(CFS) =    2854.92

****************************************************************************
  FLOW PROCESS FROM NODE   3146.00 TO NODE   3147.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  35.87
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.004
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D       10.50      0.20      1.00    81
```

```
  AGRICULTURAL POOR COVER
  "FALLOW"                    D        8.30      0.20      1.00    94
  NATURAL FAIR COVER
  "OPEN BRUSH"                D       43.50      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D        5.00      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   67.30      SUBAREA RUNOFF(CFS) =  109.27
  EFFECTIVE AREA(ACRES) =   1881.17   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =   1950.20       PEAK FLOW RATE(CFS) =    2964.18

****************************************************************************
  FLOW PROCESS FROM NODE   3147.00 TO NODE   3148.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    484.00  DOWNSTREAM(FEET) =    460.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1058.00   CHANNEL SLOPE =  0.0227
  CHANNEL BASE(FEET) =   15.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2964.18
  FLOW VELOCITY(FEET/SEC.) =  16.11   FLOW DEPTH(FEET) =   8.00
  TRAVEL TIME(MIN.) =   1.09   Tc(MIN.) =  36.96
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3148.00 = 23374.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3147.00 TO NODE   3148.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  36.96
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.971
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                    B        3.50      0.30      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                  B        1.60      0.30      1.00    60
  AGRICULTURAL POOR COVER
  "FALLOW"                    C        0.80      0.25      1.00    91
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        3.90      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        1.80      0.25      1.00    73
  AGRICULTURAL POOR COVER
  "FALLOW"                    D        0.10      0.20      1.00    94
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   11.70      SUBAREA RUNOFF(CFS) =   17.90
  EFFECTIVE AREA(ACRES) =   1892.87   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =   1961.90       PEAK FLOW RATE(CFS) =    2964.18
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   3147.00 TO NODE   3148.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  36.96
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.971
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
```

```
       LAND USE             GROUP   (ACRES)   (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.60      0.20       1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D        3.50      0.20       1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    4.10      SUBAREA RUNOFF(CFS) =    6.54
  EFFECTIVE AREA(ACRES) =   1896.97   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =   1966.00       PEAK FLOW RATE(CFS) =    2964.18
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   3148.00 TO NODE   3149.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    460.00  DOWNSTREAM(FEET) =    440.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1137.00   CHANNEL SLOPE =  0.0176
  CHANNEL BASE(FEET) =   15.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2964.18
  FLOW VELOCITY(FEET/SEC.) =  14.69   FLOW DEPTH(FEET) =   8.56
  TRAVEL TIME(MIN.) =   1.29   Tc(MIN.) =  38.25
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3149.00 = 24511.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3148.00 TO NODE   3149.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  38.25
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.932
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)   (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                    B       31.10      0.30       1.00    86
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        7.00      0.30       1.00    66
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      B        1.60      0.30       1.00    72
  NATURAL FAIR COVER
  "WOODLAND"                  B        2.50      0.30       1.00    60
  AGRICULTURAL POOR COVER
  "FALLOW"                    C        6.10      0.25       1.00    91
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        4.60      0.25       1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   52.90      SUBAREA RUNOFF(CFS) =   78.20
  EFFECTIVE AREA(ACRES) =   1949.87   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =   2018.90       PEAK FLOW RATE(CFS) =    2964.18
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   3148.00 TO NODE   3149.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  38.25
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.932
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
```

```
       LAND USE             GROUP   (ACRES)   (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                    D       15.20      0.20       1.00    94
  NATURAL FAIR COVER
  "GRASS"                     D       21.30      0.20       1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D       41.50      0.20       1.00    83
  NATURAL GOOD COVER
  "MEADOWS"                   D        0.40      0.20       1.00    78
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      D        9.10      0.20       1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                  D        2.00      0.20       1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   89.50      SUBAREA RUNOFF(CFS) =  139.55
  EFFECTIVE AREA(ACRES) =   2039.37   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =   2108.40       PEAK FLOW RATE(CFS) =    3084.70

****************************************************************************
  FLOW PROCESS FROM NODE   3149.00 TO NODE   3150.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    440.00  DOWNSTREAM(FEET) =    420.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   579.00   CHANNEL SLOPE =  0.0345
  CHANNEL BASE(FEET) =   15.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3084.70
  FLOW VELOCITY(FEET/SEC.) =  18.99   FLOW DEPTH(FEET) =   7.29
  TRAVEL TIME(MIN.) =   0.51   Tc(MIN.) =  38.76
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3150.00 = 25090.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3149.00 TO NODE   3150.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  38.76
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.917
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)   (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                    B       20.70      0.30       1.00    86
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        0.40      0.30       1.00    63
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        2.70      0.30       1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                  B        2.50      0.30       1.00    60
  AGRICULTURAL POOR COVER
  "FALLOW"                    C       17.20      0.25       1.00    91
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C       13.40      0.25       1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   56.90      SUBAREA RUNOFF(CFS) =   84.19
  EFFECTIVE AREA(ACRES) =   2096.27   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =   2165.30       PEAK FLOW RATE(CFS) =    3140.90

****************************************************************************
  FLOW PROCESS FROM NODE   3149.00 TO NODE   3150.00 IS CODE =  81
----------------------------------------------------------------------------
```

```
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  38.76
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.917
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     C        5.30      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       96.30      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        5.30      0.25      1.00    73
  AGRICULTURAL POOR COVER
  "FALLOW"                    D        0.70      0.20      1.00    94
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        1.30      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                     D        8.50      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  117.40      SUBAREA RUNOFF(CFS) =  176.63
  EFFECTIVE AREA(ACRES) =   2213.67   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =   2282.70       PEAK FLOW RATE(CFS) =    3317.53

********************************************************************************
  FLOW PROCESS FROM NODE   3149.00 TO NODE   3150.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  38.76
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.917
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        6.70      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.30      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    7.00      SUBAREA RUNOFF(CFS) =   10.82
  EFFECTIVE AREA(ACRES) =   2220.67   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =   2289.70       PEAK FLOW RATE(CFS) =    3328.35

********************************************************************************
  FLOW PROCESS FROM NODE   3150.00 TO NODE   3151.00 IS CODE =  51
--------------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    420.00  DOWNSTREAM(FEET) =    400.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1410.00   CHANNEL SLOPE =  0.0142
  CHANNEL BASE(FEET) =   15.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3328.35
  FLOW VELOCITY(FEET/SEC.) =  14.00   FLOW DEPTH(FEET) =   9.65
  TRAVEL TIME(MIN.) =   1.68   Tc(MIN.) =  40.44
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3151.00 = 26500.00 FEET.

********************************************************************************
  FLOW PROCESS FROM NODE   3150.00 TO NODE   3151.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  40.44
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.870
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                    B       19.60      0.30      1.00    86
  NATURAL GOOD COVER
  "MEADOWS"                   B        0.20      0.30      1.00    58
  NATURAL FAIR COVER
  "WOODLAND"                  B        3.30      0.30      1.00    60
  AGRICULTURAL POOR COVER
  "FALLOW"                    C       18.00      0.25      1.00    91
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        2.60      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C        2.10      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   45.80      SUBAREA RUNOFF(CFS) =   65.73
  EFFECTIVE AREA(ACRES) =   2266.47   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =   2335.50       PEAK FLOW RATE(CFS) =    3328.35
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

********************************************************************************
  FLOW PROCESS FROM NODE   3150.00 TO NODE   3151.00 IS CODE =  81
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  40.44
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.870
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       40.10      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  C        6.10      0.25      1.00    73
  NATURAL FAIR COVER
  "GRASS"                     D        1.20      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        3.30      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   50.80      SUBAREA RUNOFF(CFS) =   74.27
  EFFECTIVE AREA(ACRES) =   2317.27   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =   2386.30       PEAK FLOW RATE(CFS) =    3373.83

********************************************************************************
  FLOW PROCESS FROM NODE   3151.00 TO NODE   3152.00 IS CODE =  51
--------------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    400.00  DOWNSTREAM(FEET) =    398.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   191.00   CHANNEL SLOPE =  0.0105
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3373.83
  FLOW VELOCITY(FEET/SEC.) =  12.39   FLOW DEPTH(FEET) =   9.30
  TRAVEL TIME(MIN.) =   0.26   Tc(MIN.) =  40.70
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3152.00 = 26691.00 FEET.
```

```
****************************************************************************
  FLOW PROCESS FROM NODE   3151.00 TO NODE   3152.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  40.70
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.864
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   B       17.20      0.30      1.00    86
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.60      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        1.80      0.30      1.00    60
  AGRICULTURAL POOR COVER
  "FALLOW"                   C       16.70      0.25      1.00    91
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        6.70      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       32.50      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   76.50      SUBAREA RUNOFF(CFS) =  110.20
  EFFECTIVE AREA(ACRES) =   2393.77   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =   2462.80       PEAK FLOW RATE(CFS) =    3471.70

****************************************************************************
  FLOW PROCESS FROM NODE   3152.00 TO NODE   3153.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    398.00  DOWNSTREAM(FEET) =    396.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   231.00   CHANNEL SLOPE =  0.0087
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3471.70
  FLOW VELOCITY(FEET/SEC.) =  11.66   FLOW DEPTH(FEET) =   9.95
  TRAVEL TIME(MIN.) =   0.33   Tc(MIN.) =  41.03
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3153.00 = 26922.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3152.00 TO NODE   3153.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  41.03
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.856
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   B        3.60      0.30      1.00    86
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.40      0.30      1.00    60
  AGRICULTURAL POOR COVER
  "FALLOW"                   C       49.10      0.25      1.00    91
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        3.30      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                    C        3.50      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       11.70      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   71.60      SUBAREA RUNOFF(CFS) =  103.33
  EFFECTIVE AREA(ACRES) =   2465.37   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =   2534.40       PEAK FLOW RATE(CFS) =    3558.66

****************************************************************************
  FLOW PROCESS FROM NODE   3152.00 TO NODE   3153.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  41.03
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.856
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.40      0.25      1.00    73
  AGRICULTURAL POOR COVER
  "FALLOW"                   D        8.00      0.20      1.00    94
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        1.70      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D        0.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   10.50      SUBAREA RUNOFF(CFS) =   15.63
  EFFECTIVE AREA(ACRES) =   2475.87   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =   2544.90       PEAK FLOW RATE(CFS) =    3574.30

****************************************************************************
  FLOW PROCESS FROM NODE   3153.00 TO NODE   3154.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    396.00  DOWNSTREAM(FEET) =    385.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   894.00   CHANNEL SLOPE =  0.0123
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3574.30
  FLOW VELOCITY(FEET/SEC.) =  13.34   FLOW DEPTH(FEET) =   9.18
  TRAVEL TIME(MIN.) =   1.12   Tc(MIN.) =  42.14
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3154.00 = 27816.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3153.00 TO NODE   3154.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  42.14
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.831
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   B       17.20      0.30      1.00    86
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        0.40      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        1.40      0.30      1.00    60
  AGRICULTURAL POOR COVER
  "FALLOW"                   C        2.40      0.25      1.00    91
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        2.00      0.25      1.00    77
  AGRICULTURAL POOR COVER
```

```
"FALLOW"                  D        9.00      0.20      1.00    94
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
SUBAREA AREA(ACRES) =   32.40      SUBAREA RUNOFF(CFS) =   45.64
EFFECTIVE AREA(ACRES) =   2508.27   AREA-AVERAGED Fm(INCH/HR) =  0.25
AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.98
TOTAL AREA(ACRES) =   2577.30       PEAK FLOW RATE(CFS) =    3574.30
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
FLOW PROCESS FROM NODE   3153.00 TO NODE   3154.00 IS CODE =  81
----------------------------------------------------------------------------
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
MAINLINE Tc(MIN) =  42.14
* 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.831
SUBAREA LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
     LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
NATURAL FAIR COVER
"WOODLAND"                D        0.10      0.20      1.00    79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
SUBAREA AREA(ACRES) =    0.10      SUBAREA RUNOFF(CFS) =    0.15
EFFECTIVE AREA(ACRES) =   2508.37   AREA-AVERAGED Fm(INCH/HR) =  0.25
AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.98
TOTAL AREA(ACRES) =   2577.40       PEAK FLOW RATE(CFS) =    3574.30
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
FLOW PROCESS FROM NODE   3154.00 TO NODE   3155.00 IS CODE =  51
----------------------------------------------------------------------------
>>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
ELEVATION DATA: UPSTREAM(FEET) =    385.00  DOWNSTREAM(FEET) =    380.00
CHANNEL LENGTH THRU SUBAREA(FEET) =   712.00   CHANNEL SLOPE =  0.0070
CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
CHANNEL FLOW THRU SUBAREA(CFS) =   3574.30
FLOW VELOCITY(FEET/SEC.) =  10.72   FLOW DEPTH(FEET) =   9.63
TRAVEL TIME(MIN.) =   1.11   Tc(MIN.) =  43.25
LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3155.00 = 28528.00 FEET.

****************************************************************************
FLOW PROCESS FROM NODE   3154.00 TO NODE   3155.00 IS CODE =  81
----------------------------------------------------------------------------
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
MAINLINE Tc(MIN) =  43.25
* 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.805
SUBAREA LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
     LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
AGRICULTURAL POOR COVER
"FALLOW"                  B       30.70      0.30      1.00    86
NATURAL FAIR COVER
"GRASS"                   B        0.40      0.30      1.00    69
NATURAL FAIR COVER
"OPEN BRUSH"              B        4.90      0.30      1.00    66
AGRICULTURAL FAIR COVER
"PASTURE,DRYLAND"         B       14.20      0.30      1.00    69
NATURAL FAIR COVER
"WOODLAND"                B        2.20      0.30      1.00    60
AGRICULTURAL POOR COVER
"FALLOW"                  C       24.50      0.25      1.00    91
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
SUBAREA AREA(ACRES) =   76.90      SUBAREA RUNOFF(CFS) =  105.28
EFFECTIVE AREA(ACRES) =   2585.27   AREA-AVERAGED Fm(INCH/HR) =  0.25
AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.98
TOTAL AREA(ACRES) =   2654.30       PEAK FLOW RATE(CFS) =    3610.63

****************************************************************************
FLOW PROCESS FROM NODE   3154.00 TO NODE   3155.00 IS CODE =  81
----------------------------------------------------------------------------
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
MAINLINE Tc(MIN) =  43.25
* 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.805
SUBAREA LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
     LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF"     C        4.70      0.25      1.00    75
NATURAL POOR COVER
"BARREN"                  C        4.60      0.25      1.00    91
NATURAL FAIR COVER
"GRASS"                   C       18.80      0.25      1.00    79
NATURAL FAIR COVER
"OPEN BRUSH"              C       77.90      0.25      1.00    77
AGRICULTURAL FAIR COVER
"PASTURE,DRYLAND"         C       17.20      0.25      1.00    79
NATURAL FAIR COVER
"WOODLAND"                C        1.30      0.25      1.00    73
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
SUBAREA AREA(ACRES) =  124.50      SUBAREA RUNOFF(CFS) =  174.26
EFFECTIVE AREA(ACRES) =   2709.77   AREA-AVERAGED Fm(INCH/HR) =  0.25
AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.98
TOTAL AREA(ACRES) =   2778.80       PEAK FLOW RATE(CFS) =    3784.90

****************************************************************************
FLOW PROCESS FROM NODE   3154.00 TO NODE   3155.00 IS CODE =  81
----------------------------------------------------------------------------
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
MAINLINE Tc(MIN) =  43.25
* 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.805
SUBAREA LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
     LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
AGRICULTURAL POOR COVER
"FALLOW"                  D        8.20      0.20      1.00    94
NATURAL FAIR COVER
"OPEN BRUSH"              D        1.50      0.20      1.00    83
AGRICULTURAL FAIR COVER
"PASTURE,DRYLAND"         D       15.70      0.20      1.00    84
NATURAL FAIR COVER
"WOODLAND"                D        0.60      0.20      1.00    79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
SUBAREA AREA(ACRES) =   26.00      SUBAREA RUNOFF(CFS) =   37.56
EFFECTIVE AREA(ACRES) =   2735.77   AREA-AVERAGED Fm(INCH/HR) =  0.25
AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.98
TOTAL AREA(ACRES) =   2804.80       PEAK FLOW RATE(CFS) =    3822.46

****************************************************************************
FLOW PROCESS FROM NODE   3155.00 TO NODE   3156.00 IS CODE =  51
----------------------------------------------------------------------------
>>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
ELEVATION DATA: UPSTREAM(FEET) =    380.00  DOWNSTREAM(FEET) =    360.00
```

```
  CHANNEL LENGTH THRU SUBAREA(FEET) =   424.00   CHANNEL SLOPE =  0.0472
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3822.46
  FLOW VELOCITY(FEET/SEC.) =  21.39   FLOW DEPTH(FEET) =   5.80
  TRAVEL TIME(MIN.) =   0.33   Tc(MIN.) =  43.58
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3156.00 = 28952.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3155.00 TO NODE   3156.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  43.58
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.798
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   B       15.40      0.30       1.00    86
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        2.20      0.30       1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B       11.60      0.30       1.00    69
  AGRICULTURAL POOR COVER
  "FALLOW"                   C        3.60      0.25       1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C        0.70      0.25       1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        1.90      0.25       1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   35.40      SUBAREA RUNOFF(CFS) =   47.99
  EFFECTIVE AREA(ACRES) =   2771.17   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =   2840.20       PEAK FLOW RATE(CFS) =    3851.74

****************************************************************************
  FLOW PROCESS FROM NODE   3155.00 TO NODE   3156.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  43.58
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.798
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        0.90      0.25       1.00    79
  AGRICULTURAL POOR COVER
  "FALLOW"                   D       12.50      0.20       1.00    94
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        1.60      0.20       1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D       10.90      0.20       1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                 D        0.60      0.20       1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   26.50      SUBAREA RUNOFF(CFS) =   38.06
  EFFECTIVE AREA(ACRES) =   2797.67   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =   2866.70       PEAK FLOW RATE(CFS) =    3889.81

****************************************************************************
  FLOW PROCESS FROM NODE   3156.00 TO NODE   3157.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    360.00  DOWNSTREAM(FEET) =    352.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   647.00   CHANNEL SLOPE =  0.0124
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3889.81
  FLOW VELOCITY(FEET/SEC.) =  13.44   FLOW DEPTH(FEET) =   8.61
  TRAVEL TIME(MIN.) =   0.80   Tc(MIN.) =  44.38
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3157.00 = 29599.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3156.00 TO NODE   3157.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  44.38
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.779
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   B        7.70      0.30       1.00    86
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.10      0.30       1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B       11.30      0.30       1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.70      0.30       1.00    60
  AGRICULTURAL POOR COVER
  "FALLOW"                   C        0.20      0.25       1.00    91
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.20      0.25       1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   21.20      SUBAREA RUNOFF(CFS) =   28.24
  EFFECTIVE AREA(ACRES) =   2818.87   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =   2887.90       PEAK FLOW RATE(CFS) =    3889.81
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   3156.00 TO NODE   3157.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  44.38
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.779
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   D        4.10      0.20       1.00    94
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       10.60      0.20       1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D       28.50      0.20       1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                 D        0.60      0.20       1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   43.80      SUBAREA RUNOFF(CFS) =   62.25
  EFFECTIVE AREA(ACRES) =   2862.67   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =   2931.70       PEAK FLOW RATE(CFS) =    3933.83
============================================================================
```

```
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   2931.70  TC(MIN.) =     44.38
  EFFECTIVE AREA(ACRES) =   2862.67  AREA-AVERAGED Fm(INCH/HR)=  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.98
  PEAK FLOW RATE(CFS)   =   3933.83

  ** PEAK FLOW RATE TABLE **
   STREAM     Q      Tc   Intensity   Fp(Fm)      Ap   Ae      HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)        (ACRES)    NODE
      1   3933.83  44.38    1.779  0.26( 0.25) 0.98  2862.7    3120.00
      2   3677.66  50.26    1.646  0.26( 0.25) 0.98  2931.7    3100.00
================================================================================
================================================================================
  END OF RATIONAL METHOD ANALYSIS
```

```
 ************************************************************************
             RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
            (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                           Analysis prepared by:

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                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
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  ************************** DESCRIPTION OF STUDY **************************
 * AREA 08 (EXISTING CONDITION)                                           *
 * 100-YEAR HIGH CONFIDENCE STORM EVENT                                   *
 * CHIQUITA                                                               *
  ************************************************************************

   FILE NAME: CE08100H.DAT
   TIME/DATE OF STUDY: 14:37 03/31/2004
 ========================================================================
   USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
 ========================================================================
                      --*TIME-OF-CONCENTRATION MODEL*--

   USER SPECIFIED STORM EVENT(YEAR) =  100.00
   SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
   SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
   *DATA BANK RAINFALL USED*
   *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

   *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
      HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
      WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
 NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
 ===  =====  =========  =================  ======  ===== ====== ===== =======
   1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

   GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
     1. Relative Flow-Depth =  0.00 FEET
        as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
     2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
   *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
    OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
   *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

   UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
     WATERSHED LAG = 0.80 * Tc
           S-GRAPH TYPE                  PERCENTAGE(DECIMAL)
         VALLEY(DEVELOPED)                    0.020
         FOOTHILL                             0.140
         MOUNTAIN                             0.620
         VALLEY(UNDEVELOPED)/DESERT           0.220
         DESERT(UNDEVELOPED)                  0.000
     SIERRA MADRE DEPTH-AREA FACTORS USED.
                     AREA-AVERAGED
         DURATION    RAINFALL(INCH)
         5-MINUTES         0.52
        30-MINUTES         1.09
         1-HOUR            1.45
         3-HOUR            2.43
         6-HOUR            3.36
        24-HOUR            5.63
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*

 ************************************************************************
   FLOW PROCESS FROM NODE    800.00 TO NODE    801.00 IS CODE =  21
 ------------------------------------------------------------------------
   >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
   >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
 ========================================================================
   INITIAL SUBAREA FLOW-LENGTH(FEET) =   326.00
   ELEVATION DATA: UPSTREAM(FEET) =    513.00  DOWNSTREAM(FEET) =    445.00

   Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
   SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    9.778
   * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.213
   SUBAREA Tc AND LOSS RATE DATA(AMC  II):
    DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS   Tc
        LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
   AGRICULTURAL FAIR COVER
   "PASTURE,DRYLAND"          C        0.10      0.25       1.00    79    9.78
   AGRICULTURAL FAIR COVER
   "PASTURE,DRYLAND"          D        0.20      0.20       1.00    84    9.78
   SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
   SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
   SUBAREA RUNOFF(CFS) =      1.08
   TOTAL AREA(ACRES) =      0.30   PEAK FLOW RATE(CFS) =      1.08

 ************************************************************************
   FLOW PROCESS FROM NODE    801.00 TO NODE    802.00 IS CODE =  51
 ------------------------------------------------------------------------
   >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
   >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
 ========================================================================
   ELEVATION DATA: UPSTREAM(FEET) =    445.00  DOWNSTREAM(FEET) =    400.00
   CHANNEL LENGTH THRU SUBAREA(FEET) =   194.00   CHANNEL SLOPE =  0.2320
   CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
   MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
   CHANNEL FLOW THRU SUBAREA(CFS) =      1.08
   FLOW VELOCITY(FEET/SEC.) =   4.89   FLOW DEPTH(FEET) =   0.19
   TRAVEL TIME(MIN.) =   0.66   Tc(MIN.) =  10.44
   LONGEST FLOWPATH FROM NODE    800.00 TO NODE    802.00 =   520.00 FEET.

 ************************************************************************
   FLOW PROCESS FROM NODE    801.00 TO NODE    802.00 IS CODE =  81
 ------------------------------------------------------------------------
   >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ========================================================================
   MAINLINE Tc(MIN) =  10.44
   * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.072
   SUBAREA LOSS RATE DATA(AMC  II):
    DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
        LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
   AGRICULTURAL FAIR COVER
   "PASTURE,DRYLAND"          C        0.10      0.25       1.00    79
   AGRICULTURAL FAIR COVER
   "PASTURE,DRYLAND"          D        0.10      0.20       1.00    84
   SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
   SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
   SUBAREA AREA(ACRES) =    0.20      SUBAREA RUNOFF(CFS) =    0.69
   EFFECTIVE AREA(ACRES) =      0.50   AREA-AVERAGED Fm(INCH/HR) =  0.22
   AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
   TOTAL AREA(ACRES) =      0.50       PEAK FLOW RATE(CFS) =       1.73

 ************************************************************************
   FLOW PROCESS FROM NODE    802.00 TO NODE    803.00 IS CODE =  51
 ------------------------------------------------------------------------
   >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
   >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
 ========================================================================
```

```
  ELEVATION DATA: UPSTREAM(FEET) =    400.00  DOWNSTREAM(FEET) =    395.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    10.00   CHANNEL SLOPE =  0.5000
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      1.73
  FLOW VELOCITY(FEET/SEC.) =   7.42   FLOW DEPTH(FEET) =   0.20
  TRAVEL TIME(MIN.) =   0.02   Tc(MIN.) =  10.46
  LONGEST FLOWPATH FROM NODE    800.00 TO NODE    803.00 =   530.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    802.00 TO NODE    803.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.46
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.068
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        0.50      0.25      1.00    79
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D        0.60      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.10      SUBAREA RUNOFF(CFS) =    3.81
  EFFECTIVE AREA(ACRES) =      1.60   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.60       PEAK FLOW RATE(CFS) =       5.54

****************************************************************************
  FLOW PROCESS FROM NODE    803.00 TO NODE    804.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    395.00  DOWNSTREAM(FEET) =    390.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    94.00   CHANNEL SLOPE =  0.0532
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      5.54
  FLOW VELOCITY(FEET/SEC.) =   4.66   FLOW DEPTH(FEET) =   0.70
  TRAVEL TIME(MIN.) =   0.34   Tc(MIN.) =  10.80
  LONGEST FLOWPATH FROM NODE    800.00 TO NODE    804.00 =   624.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    803.00 TO NODE    804.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.80
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.001
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        0.20      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.20      SUBAREA RUNOFF(CFS) =    0.68
  EFFECTIVE AREA(ACRES) =      1.80   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.80       PEAK FLOW RATE(CFS) =       6.12

****************************************************************************
  FLOW PROCESS FROM NODE    804.00 TO NODE    805.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    390.00  DOWNSTREAM(FEET) =    385.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    30.00   CHANNEL SLOPE =  0.1667
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      6.12
  FLOW VELOCITY(FEET/SEC.) =   7.27   FLOW DEPTH(FEET) =   0.54
  TRAVEL TIME(MIN.) =   0.07   Tc(MIN.) =  10.87
  LONGEST FLOWPATH FROM NODE    800.00 TO NODE    805.00 =   654.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    804.00 TO NODE    805.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.87
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.987
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        0.90      0.25      1.00    79
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D        1.10      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    2.00      SUBAREA RUNOFF(CFS) =    6.78
  EFFECTIVE AREA(ACRES) =      3.80   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      3.80       PEAK FLOW RATE(CFS) =      12.87

****************************************************************************
  FLOW PROCESS FROM NODE    805.00 TO NODE    806.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    385.00  DOWNSTREAM(FEET) =    350.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   388.00   CHANNEL SLOPE =  0.0902
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     12.87
  FLOW VELOCITY(FEET/SEC.) =   7.02   FLOW DEPTH(FEET) =   0.94
  TRAVEL TIME(MIN.) =   0.92   Tc(MIN.) =  11.79
  LONGEST FLOWPATH FROM NODE    800.00 TO NODE    806.00 =  1042.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    805.00 TO NODE    806.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.79
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.803
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        2.40      0.25      1.00    79
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D        1.40      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.80      SUBAREA RUNOFF(CFS) =   12.21
  EFFECTIVE AREA(ACRES) =      7.60   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
```

```
  TOTAL AREA(ACRES) =      7.60       PEAK FLOW RATE(CFS) =      24.45

****************************************************************************
  FLOW PROCESS FROM NODE    806.00 TO NODE    807.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    350.00  DOWNSTREAM(FEET) =    280.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   815.00   CHANNEL SLOPE =  0.0859
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     24.45
  FLOW VELOCITY(FEET/SEC.) =   7.96   FLOW DEPTH(FEET) =   1.02
  TRAVEL TIME(MIN.) =   1.71   Tc(MIN.) =  13.49
  LONGEST FLOWPATH FROM NODE    800.00 TO NODE    807.00 =  1857.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    806.00 TO NODE    807.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  13.49
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.517
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        1.10      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        0.30      0.25      1.00    79
  NATURAL FAIR COVER
  "WOODLAND"                  C        0.40      0.25      1.00    73
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.40      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        4.80      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    7.00      SUBAREA RUNOFF(CFS) =   20.82
  EFFECTIVE AREA(ACRES) =     14.60   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     14.60       PEAK FLOW RATE(CFS) =      43.32

****************************************************************************
  FLOW PROCESS FROM NODE    807.00 TO NODE    808.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    280.00  DOWNSTREAM(FEET) =    250.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   387.00   CHANNEL SLOPE =  0.0775
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     43.32
  FLOW VELOCITY(FEET/SEC.) =   8.95   FLOW DEPTH(FEET) =   1.42
  TRAVEL TIME(MIN.) =   0.72   Tc(MIN.) =  14.21
  LONGEST FLOWPATH FROM NODE    800.00 TO NODE    808.00 =  2244.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    807.00 TO NODE    808.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  14.21
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.413
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.70      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        2.60      0.25      1.00    79
  NATURAL FAIR COVER
  "WOODLAND"                  C        0.60      0.25      1.00    73
  NATURAL FAIR COVER
  "GRASS"                     D        0.10      0.20      1.00    84
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D       11.00      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   15.00      SUBAREA RUNOFF(CFS) =   43.21
  EFFECTIVE AREA(ACRES) =     29.60   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     29.60       PEAK FLOW RATE(CFS) =      85.16

****************************************************************************
  FLOW PROCESS FROM NODE    808.00 TO NODE    809.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    250.00  DOWNSTREAM(FEET) =    195.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   615.00   CHANNEL SLOPE =  0.0894
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     85.16
  FLOW VELOCITY(FEET/SEC.) =  11.25   FLOW DEPTH(FEET) =   1.93
  TRAVEL TIME(MIN.) =   0.91   Tc(MIN.) =  15.12
  LONGEST FLOWPATH FROM NODE    800.00 TO NODE    809.00 =  2859.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    808.00 TO NODE    809.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  15.12
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.286
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     A        0.40      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"                A        6.90      0.40      1.00    46
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           A        4.40      0.40      1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                  A       12.00      0.40      1.00    36
  NATURAL FAIR COVER
  "GRASS"                     B        4.00      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        1.40      0.30      1.00    66
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.38
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   29.10      SUBAREA RUNOFF(CFS) =   76.07
  EFFECTIVE AREA(ACRES) =     58.70   AREA-AVERAGED Fm(INCH/HR) =  0.30
  AREA-AVERAGED Fp(INCH/HR) =  0.30  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     58.70       PEAK FLOW RATE(CFS) =     157.84

****************************************************************************
  FLOW PROCESS FROM NODE    808.00 TO NODE    809.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
```

```
==========================================================================
  MAINLINE Tc(MIN) =  15.12
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.286
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B       16.90      0.30       1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B        6.20      0.30       1.00    60
  NATURAL POOR COVER
  "BARREN"                   C        0.10      0.25       1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C       82.60      0.25       1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       12.50      0.25       1.00    77
  COMMERCIAL                 C        5.20      0.25       0.10    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.96
  SUBAREA AREA(ACRES) =  123.50      SUBAREA RUNOFF(CFS) =  337.48
  EFFECTIVE AREA(ACRES) =    182.20   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =    182.20       PEAK FLOW RATE(CFS) =     495.32

****************************************************************************
  FLOW PROCESS FROM NODE    808.00 TO NODE    809.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  15.12
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.286
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        1.60      0.25       1.00    79
  NATURAL FAIR COVER
  "WOODLAND"                 C       49.50      0.25       1.00    73
  NATURAL FAIR COVER
  "GRASS"                    D        7.50      0.20       1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       12.90      0.20       1.00    83
  PUBLIC PARK                D        0.10      0.20       0.85    75
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D       18.90      0.20       1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   90.50      SUBAREA RUNOFF(CFS) =  249.07
  EFFECTIVE AREA(ACRES) =    272.70   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =    272.70       PEAK FLOW RATE(CFS) =     744.39

****************************************************************************
  FLOW PROCESS FROM NODE    808.00 TO NODE    809.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  15.12
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.286
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 D       12.30      0.20       1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   12.30      SUBAREA RUNOFF(CFS) =   34.16
  EFFECTIVE AREA(ACRES) =    285.00   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =    285.00       PEAK FLOW RATE(CFS) =     778.56

****************************************************************************
  FLOW PROCESS FROM NODE    809.00 TO NODE    826.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    195.00  DOWNSTREAM(FEET) =    176.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  6031.00   CHANNEL SLOPE =  0.0032
  CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    778.56
  FLOW VELOCITY(FEET/SEC.) =   4.30   FLOW DEPTH(FEET) =   2.03
  TRAVEL TIME(MIN.) =  23.37   Tc(MIN.) =  38.49
  LONGEST FLOWPATH FROM NODE    800.00 TO NODE    826.00 =  8890.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    809.00 TO NODE    826.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  38.49
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.925
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        0.90      0.40       1.00    46
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A        0.10      0.40       1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A        5.20      0.40       1.00    36
  NATURAL FAIR COVER
  "GRASS"                    B        5.70      0.30       1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.70      0.30       1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B        1.40      0.30       1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.34
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   15.00      SUBAREA RUNOFF(CFS) =   21.38
  EFFECTIVE AREA(ACRES) =    300.00   AREA-AVERAGED Fm(INCH/HR) =  0.26
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =    300.00       PEAK FLOW RATE(CFS) =     778.56
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE    809.00 TO NODE    826.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  38.49
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.925
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 B       10.30      0.30       1.00    60
  NATURAL FAIR COVER
  "GRASS"                    C      143.70      0.25       1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       11.50      0.25       1.00    77
  COMMERCIAL                 C        2.90      0.25       0.10    69
  AGRICULTURAL FAIR COVER
```

```
"PASTURE,DRYLAND"          C        0.30      0.25      1.00    79
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF"      C        0.90      0.25      1.00    75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
SUBAREA AREA(ACRES) =  169.60      SUBAREA RUNOFF(CFS) =  255.83
EFFECTIVE AREA(ACRES) =    469.60   AREA-AVERAGED Fm(INCH/HR) =  0.25
AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.98
TOTAL AREA(ACRES) =    469.60       PEAK FLOW RATE(CFS) =     778.56
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
FLOW PROCESS FROM NODE    809.00 TO NODE    826.00 IS CODE =  81
----------------------------------------------------------------------------
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
MAINLINE Tc(MIN) =  38.49
* 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.925
SUBAREA LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
     LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
NATURAL FAIR COVER
"WOODLAND"                 C        8.30      0.25      1.00    73
NATURAL FAIR COVER
"GRASS"                    D       14.50      0.20      1.00    84
NATURAL FAIR COVER
"OPEN BRUSH"               D       22.20      0.20      1.00    83
AGRICULTURAL FAIR COVER
"PASTURE,DRYLAND"          D        6.80      0.20      1.00    84
NATURAL FAIR COVER
"WOODLAND"                 D       19.00      0.20      1.00    79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
SUBAREA AREA(ACRES) =   70.80      SUBAREA RUNOFF(CFS) =  109.56
EFFECTIVE AREA(ACRES) =    540.40   AREA-AVERAGED Fm(INCH/HR) =  0.25
AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.99
TOTAL AREA(ACRES) =    540.40       PEAK FLOW RATE(CFS) =     816.25

****************************************************************************
FLOW PROCESS FROM NODE    826.00 TO NODE    826.00 IS CODE =  10
----------------------------------------------------------------------------
>>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
FLOW PROCESS FROM NODE   3157.00 TO NODE   3157.00 IS CODE = 15.1
----------------------------------------------------------------------------
>>>>>DEFINE MEMORY BANK # 2 <<<<<
============================================================================
PEAK FLOWRATE TABLE FILE NAME: CE31100H.DNA
MEMORY BANK #  2 DEFINED AS FOLLOWS:
 STREAM     Q      Tc      Fp(Fm)      Ap    Ae      HEADWATER
 NUMBER   (CFS) (MIN.)   (INCH/HR)        (ACRES)     NODE
    1   3933.83  44.38  0.26( 0.25) 0.98  2862.7    3120.00
    2   3677.66  50.26  0.26( 0.25) 0.98  2931.7    3100.00
  TOTAL AREA(ACRES) =  2931.70
LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3157.00 = 29599.00 FEET.

****************************************************************************
FLOW PROCESS FROM NODE   3157.00 TO NODE   3157.00 IS CODE = 14.0
----------------------------------------------------------------------------
>>>>>MEMORY BANK #  2 COPIED ONTO MAIN-STREAM MEMORY<<<<<
============================================================================

MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
 STREAM     Q      Tc      Fp(Fm)      Ap    Ae      HEADWATER
 NUMBER   (CFS) (MIN.)   (INCH/HR)        (ACRES)     NODE
    1   3933.83  44.38  0.26( 0.25) 0.98  2862.7    3120.00
    2   3677.66  50.26  0.26( 0.25) 0.98  2931.7    3100.00
  TOTAL AREA(ACRES) =  2931.70
LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3157.00 = 29599.00 FEET.

****************************************************************************
FLOW PROCESS FROM NODE   3157.00 TO NODE   3157.00 IS CODE =  12
----------------------------------------------------------------------------
>>>>>CLEAR MEMORY BANK # 2 <<<<<
============================================================================

****************************************************************************
FLOW PROCESS FROM NODE   3157.00 TO NODE    820.00 IS CODE =  51
----------------------------------------------------------------------------
>>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
ELEVATION DATA: UPSTREAM(FEET) =    352.00  DOWNSTREAM(FEET) =    310.00
CHANNEL LENGTH THRU SUBAREA(FEET) =  2262.00   CHANNEL SLOPE =  0.0186
CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
CHANNEL FLOW THRU SUBAREA(CFS) =   3933.83
FLOW VELOCITY(FEET/SEC.) =  15.56   FLOW DEPTH(FEET) =   7.72
TRAVEL TIME(MIN.) =   2.42   Tc(MIN.) =  46.81
LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    820.00 = 31861.00 FEET.

****************************************************************************
FLOW PROCESS FROM NODE   3157.00 TO NODE    820.00 IS CODE =  81
----------------------------------------------------------------------------
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
MAINLINE Tc(MIN) =  46.81
* 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.723
SUBAREA LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
     LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
AGRICULTURAL POOR COVER
"FALLOW"                   B       31.50      0.30      1.00    86
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF"      B        0.90      0.30      1.00    63
NATURAL FAIR COVER
"GRASS"                    B        0.20      0.30      1.00    69
AGRICULTURAL FAIR COVER
"ORCHARDS"                 B        0.10      0.30      1.00    65
NATURAL FAIR COVER
"OPEN BRUSH"               B        0.40      0.30      1.00    66
AGRICULTURAL FAIR COVER
"PASTURE,DRYLAND"          B        5.40      0.30      1.00    69
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
SUBAREA AREA(ACRES) =   38.50      SUBAREA RUNOFF(CFS) =   49.32
EFFECTIVE AREA(ACRES) =   2901.17   AREA-AVERAGED Fm(INCH/HR) =  0.25
AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.98
TOTAL AREA(ACRES) =   2970.20       PEAK FLOW RATE(CFS) =    3933.83
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
FLOW PROCESS FROM NODE   3157.00 TO NODE    820.00 IS CODE =  81
----------------------------------------------------------------------------
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
MAINLINE Tc(MIN) =  46.81
* 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.723
SUBAREA LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
     LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
NATURAL FAIR COVER
```

```
"WOODLAND"                B        0.20      0.30      1.00    60
AGRICULTURAL POOR COVER
"FALLOW"                  C        8.40      0.25      1.00    91
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF"     C       19.40      0.25      1.00    75
NATURAL FAIR COVER
"GRASS"                   C        7.40      0.25      1.00    79
NATURAL FAIR COVER
"OPEN BRUSH"              C       39.90      0.25      1.00    77
AGRICULTURAL POOR COVER
"FALLOW"                  D        5.80      0.20      1.00    94
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
SUBAREA AREA(ACRES) =   81.10      SUBAREA RUNOFF(CFS) =  107.80
EFFECTIVE AREA(ACRES) =   2982.27   AREA-AVERAGED Fm(INCH/HR) =  0.25
AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.98
TOTAL AREA(ACRES) =   3051.30       PEAK FLOW RATE(CFS) =    3947.42

****************************************************************************
FLOW PROCESS FROM NODE   3157.00 TO NODE    820.00 IS CODE =  81
----------------------------------------------------------------------------
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
MAINLINE Tc(MIN) =  46.81
* 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.723
SUBAREA LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
     LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
NATURAL FAIR COVER
"GRASS"                   D        2.60      0.20      1.00    84
AGRICULTURAL FAIR COVER
"ORCHARDS"                D        0.80      0.20      1.00    82
NATURAL FAIR COVER
"OPEN BRUSH"              D        3.20      0.20      1.00    83
AGRICULTURAL FAIR COVER
"PASTURE,DRYLAND"         D       21.70      0.20      1.00    84
NATURAL FAIR COVER
"WOODLAND"                D        4.60      0.20      1.00    79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
SUBAREA AREA(ACRES) =   32.90      SUBAREA RUNOFF(CFS) =   45.11
EFFECTIVE AREA(ACRES) =   3015.17   AREA-AVERAGED Fm(INCH/HR) =  0.25
AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.98
TOTAL AREA(ACRES) =   3084.20       PEAK FLOW RATE(CFS) =    3992.53

****************************************************************************
FLOW PROCESS FROM NODE    820.00 TO NODE    821.00 IS CODE =  51
----------------------------------------------------------------------------
>>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
ELEVATION DATA: UPSTREAM(FEET) =    310.00  DOWNSTREAM(FEET) =    300.00
CHANNEL LENGTH THRU SUBAREA(FEET) =   754.00   CHANNEL SLOPE =  0.0133
CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
CHANNEL FLOW THRU SUBAREA(CFS) =   3992.53
FLOW VELOCITY(FEET/SEC.) =  13.88   FLOW DEPTH(FEET) =   8.57
TRAVEL TIME(MIN.) =   0.91   Tc(MIN.) =  47.71
LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    821.00 = 32615.00 FEET.

****************************************************************************
FLOW PROCESS FROM NODE    820.00 TO NODE    821.00 IS CODE =  81
----------------------------------------------------------------------------
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
MAINLINE Tc(MIN) =  47.71
* 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.703
```

```
SUBAREA LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
     LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
AGRICULTURAL POOR COVER
"FALLOW"                  B        1.90      0.30      1.00    86
NATURAL FAIR COVER
"GRASS"                   B        2.30      0.30      1.00    69
AGRICULTURAL FAIR COVER
"ORCHARDS"                B       16.80      0.30      1.00    65
NATURAL FAIR COVER
"OPEN BRUSH"              B        2.20      0.30      1.00    66
PUBLIC PARK               B        0.20      0.30      0.85    56
AGRICULTURAL FAIR COVER
"PASTURE,DRYLAND"         B       23.70      0.30      1.00    69
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
SUBAREA AREA(ACRES) =   47.10      SUBAREA RUNOFF(CFS) =   59.47
EFFECTIVE AREA(ACRES) =   3062.27   AREA-AVERAGED Fm(INCH/HR) =  0.25
AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.98
TOTAL AREA(ACRES) =   3131.30       PEAK FLOW RATE(CFS) =    3995.47

****************************************************************************
FLOW PROCESS FROM NODE    820.00 TO NODE    821.00 IS CODE =  81
----------------------------------------------------------------------------
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
MAINLINE Tc(MIN) =  47.71
* 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.703
SUBAREA LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
     LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
AGRICULTURAL POOR COVER
"FALLOW"                  C        0.40      0.25      1.00    91
AGRICULTURAL POOR COVER
"FALLOW"                  D        0.70      0.20      1.00    94
NATURAL FAIR COVER
"GRASS"                   D        2.90      0.20      1.00    84
AGRICULTURAL FAIR COVER
"ORCHARDS"                D        4.30      0.20      1.00    82
NATURAL FAIR COVER
"OPEN BRUSH"              D       38.30      0.20      1.00    83
AGRICULTURAL FAIR COVER
"PASTURE,DRYLAND"         D       95.20      0.20      1.00    84
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
SUBAREA AREA(ACRES) =  141.80      SUBAREA RUNOFF(CFS) =  191.75
EFFECTIVE AREA(ACRES) =   3204.07   AREA-AVERAGED Fm(INCH/HR) =  0.25
AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.98
TOTAL AREA(ACRES) =   3273.10       PEAK FLOW RATE(CFS) =    4187.22

****************************************************************************
FLOW PROCESS FROM NODE    820.00 TO NODE    821.00 IS CODE =  81
----------------------------------------------------------------------------
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
MAINLINE Tc(MIN) =  47.71
* 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.703
SUBAREA LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
     LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
NATURAL FAIR COVER
"WOODLAND"                D        1.00      0.20      1.00    79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
SUBAREA AREA(ACRES) =    1.00      SUBAREA RUNOFF(CFS) =    1.35
EFFECTIVE AREA(ACRES) =   3205.07   AREA-AVERAGED Fm(INCH/HR) =  0.25
AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.98
```

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 TOTAL AREA(ACRES) =   3274.10       PEAK FLOW RATE(CFS) =    4188.57

****************************************************************************
 FLOW PROCESS FROM NODE    821.00 TO NODE    822.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    300.00  DOWNSTREAM(FEET) =    270.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1631.00   CHANNEL SLOPE =  0.0184
 CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
 CHANNEL FLOW THRU SUBAREA(CFS) =   4188.57
 FLOW VELOCITY(FEET/SEC.) =  15.81   FLOW DEPTH(FEET) =   8.02
 TRAVEL TIME(MIN.) =   1.72   Tc(MIN.) =  49.43
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    822.00 = 34246.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    821.00 TO NODE    822.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  49.43
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.663
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL POOR COVER
 "FALLOW"                   B       11.10      0.30      1.00    86
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      B        0.40      0.30      1.00    63
 NATURAL FAIR COVER
 "GRASS"                    B        4.20      0.30      1.00    69
 AGRICULTURAL FAIR COVER
 "ORCHARDS"                 B        5.60      0.30      1.00    65
 URBAN FAIR COVER
 "TURF"                     B        0.30      0.30      1.00    65
 NATURAL FAIR COVER
 "OPEN BRUSH"               B        1.10      0.30      1.00    66
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   22.70      SUBAREA RUNOFF(CFS) =   27.85
 EFFECTIVE AREA(ACRES) =   3227.77   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.98
 TOTAL AREA(ACRES) =   3296.80       PEAK FLOW RATE(CFS) =    4188.57
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE    821.00 TO NODE    822.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  49.43
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.663
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL POOR COVER
 "FALLOW"                   C        5.30      0.25      1.00    91
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      C       20.20      0.25      1.00    75
 NATURAL FAIR COVER
 "GRASS"                    C       17.70      0.25      1.00    79
 AGRICULTURAL FAIR COVER
 "ORCHARDS"                 C        0.70      0.25      1.00    77
 NATURAL FAIR COVER
 "OPEN BRUSH"               C       41.60      0.25      1.00    77
 AGRICULTURAL POOR COVER
 "FALLOW"                   D        2.30      0.20      1.00    94
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   87.80      SUBAREA RUNOFF(CFS) =  111.77
 EFFECTIVE AREA(ACRES) =   3315.57   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.98
 TOTAL AREA(ACRES) =   3384.60       PEAK FLOW RATE(CFS) =    4214.10

****************************************************************************
 FLOW PROCESS FROM NODE    821.00 TO NODE    822.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  49.43
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.663
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      D        1.30      0.20      1.00    81
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"       D        0.30      0.20      0.50    75
 NATURAL FAIR COVER
 "GRASS"                    D        5.40      0.20      1.00    84
 AGRICULTURAL FAIR COVER
 "ORCHARDS"                 D        0.20      0.20      1.00    82
 NATURAL FAIR COVER
 "OPEN BRUSH"               D        6.40      0.20      1.00    83
 NATURAL FAIR COVER
 "WOODLAND"                 D        4.00      0.20      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
 SUBAREA AREA(ACRES) =   17.60      SUBAREA RUNOFF(CFS) =   23.20
 EFFECTIVE AREA(ACRES) =   3333.17   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.98
 TOTAL AREA(ACRES) =   3402.20       PEAK FLOW RATE(CFS) =    4237.31

****************************************************************************
 FLOW PROCESS FROM NODE    822.00 TO NODE    823.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    270.00  DOWNSTREAM(FEET) =    255.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1203.00   CHANNEL SLOPE =  0.0125
 CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
 CHANNEL FLOW THRU SUBAREA(CFS) =   4237.31
 FLOW VELOCITY(FEET/SEC.) =  13.81   FLOW DEPTH(FEET) =   9.02
 TRAVEL TIME(MIN.) =   1.45   Tc(MIN.) =  50.88
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    823.00 = 35449.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    822.00 TO NODE    823.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  50.88
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.636
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL POOR COVER
 "FALLOW"                   B        1.50      0.30      1.00    86
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"       B       17.80      0.30      0.50    56
```

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  NATURAL FAIR COVER
  "GRASS"                  B        9.60      0.30      1.00    69
  URBAN FAIR COVER
  "TURF"                   B        5.00      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"             B        3.80      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"        B       11.90      0.30      1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.82
  SUBAREA AREA(ACRES) =   49.60      SUBAREA RUNOFF(CFS) =   62.04
  EFFECTIVE AREA(ACRES) =   3382.77   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =   3451.80       PEAK FLOW RATE(CFS) =    4237.31
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE    822.00 TO NODE    823.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  50.88
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.636
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        4.10      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C        8.90      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       18.20      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        5.70      0.25      1.00    79
  NATURAL FAIR COVER
  "WOODLAND"                  C        2.70      0.25      1.00    73
  AGRICULTURAL POOR COVER
  "FALLOW"                    D        1.40      0.20      1.00    94
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   41.00      SUBAREA RUNOFF(CFS) =   51.20
  EFFECTIVE AREA(ACRES) =   3423.77   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =   3492.80       PEAK FLOW RATE(CFS) =    4268.90

****************************************************************************
  FLOW PROCESS FROM NODE    822.00 TO NODE    823.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  50.88
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.636
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        3.30      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D        6.80      0.20      0.50    75
  NATURAL FAIR COVER
  "GRASS"                     D       49.20      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                      D        4.00      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"                D       33.40      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D       46.90      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  143.60      SUBAREA RUNOFF(CFS) =  186.18
  EFFECTIVE AREA(ACRES) =   3567.37   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =   3636.40       PEAK FLOW RATE(CFS) =    4455.08

****************************************************************************
  FLOW PROCESS FROM NODE    822.00 TO NODE    823.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  50.88
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.636
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  D        2.00      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    2.00      SUBAREA RUNOFF(CFS) =    2.58
  EFFECTIVE AREA(ACRES) =   3569.37   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =   3638.40       PEAK FLOW RATE(CFS) =    4457.67

****************************************************************************
  FLOW PROCESS FROM NODE    823.00 TO NODE    824.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    255.00  DOWNSTREAM(FEET) =    235.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1331.00   CHANNEL SLOPE =  0.0150
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   4457.67
  FLOW VELOCITY(FEET/SEC.) =  14.98   FLOW DEPTH(FEET) =   8.80
  TRAVEL TIME(MIN.) =   1.48   Tc(MIN.) =  52.36
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    824.00 = 36780.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    823.00 TO NODE    824.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  52.36
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.612
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                    B        2.50      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                     B        2.20      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        4.60      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B       23.20      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.60      0.30      1.00    60
  AGRICULTURAL POOR COVER
  "FALLOW"                    C        0.20      0.25      1.00    91
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   33.30      SUBAREA RUNOFF(CFS) =   39.33
  EFFECTIVE AREA(ACRES) =   3602.67   AREA-AVERAGED Fm(INCH/HR) =  0.25
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 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.98
 TOTAL AREA(ACRES) =   3671.70       PEAK FLOW RATE(CFS) =    4457.67
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE    823.00 TO NODE    824.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  52.36
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.612
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      C        1.30      0.25      1.00    75
 NATURAL FAIR COVER
 "GRASS"                    C        9.50      0.25      1.00    79
 NATURAL FAIR COVER
 "OPEN BRUSH"               C       49.80      0.25      1.00    77
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          C       32.30      0.25      1.00    79
 NATURAL FAIR COVER
 "WOODLAND"                 C        7.20      0.25      1.00    73
 AGRICULTURAL POOR COVER
 "FALLOW"                   D        1.00      0.20      1.00    94
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =  101.10      SUBAREA RUNOFF(CFS) =  123.99
 EFFECTIVE AREA(ACRES) =   3703.77   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.98
 TOTAL AREA(ACRES) =   3772.80       PEAK FLOW RATE(CFS) =    4544.90

****************************************************************************
 FLOW PROCESS FROM NODE    823.00 TO NODE    824.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  52.36
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.612
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      D        6.40      0.20      1.00    81
 NATURAL FAIR COVER
 "GRASS"                    D        1.10      0.20      1.00    84
 NATURAL FAIR COVER
 "OPEN BRUSH"               D       16.40      0.20      1.00    83
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          D       41.20      0.20      1.00    84
 NATURAL FAIR COVER
 "WOODLAND"                 D        2.30      0.20      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   67.40      SUBAREA RUNOFF(CFS) =   85.66
 EFFECTIVE AREA(ACRES) =   3771.17   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.98
 TOTAL AREA(ACRES) =   3840.20       PEAK FLOW RATE(CFS) =    4630.56

****************************************************************************
 FLOW PROCESS FROM NODE    824.00 TO NODE    825.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    235.00  DOWNSTREAM(FEET) =    210.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1566.00   CHANNEL SLOPE =  0.0160
 CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
 CHANNEL FLOW THRU SUBAREA(CFS) =   4630.56
 FLOW VELOCITY(FEET/SEC.) =  15.47   FLOW DEPTH(FEET) =   8.85
 TRAVEL TIME(MIN.) =   1.69   Tc(MIN.) =  54.05
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    825.00 = 38346.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    824.00 TO NODE    825.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  54.05
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.585
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          A        0.40      0.40      1.00    49
 AGRICULTURAL POOR COVER
 "FALLOW"                   B        6.30      0.30      1.00    86
 NATURAL FAIR COVER
 "GRASS"                    B        0.40      0.30      1.00    69
 NATURAL FAIR COVER
 "OPEN BRUSH"               B        2.90      0.30      1.00    66
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          B       23.30      0.30      1.00    69
 NATURAL FAIR COVER
 "WOODLAND"                 B        2.30      0.30      1.00    60
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   35.60      SUBAREA RUNOFF(CFS) =   41.14
 EFFECTIVE AREA(ACRES) =   3806.77   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.98
 TOTAL AREA(ACRES) =   3875.80       PEAK FLOW RATE(CFS) =    4630.56
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE    824.00 TO NODE    825.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  54.05
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.585
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL POOR COVER
 "FALLOW"                   C        2.00      0.25      1.00    91
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      C        0.70      0.25      1.00    75
 NATURAL FAIR COVER
 "GRASS"                    C        2.50      0.25      1.00    79
 NATURAL FAIR COVER
 "OPEN BRUSH"               C       22.30      0.25      1.00    77
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          C       27.10      0.25      1.00    79
 NATURAL FAIR COVER
 "WOODLAND"                 C       13.80      0.25      1.00    73
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   68.40      SUBAREA RUNOFF(CFS) =   82.19
 EFFECTIVE AREA(ACRES) =   3875.17   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.98
 TOTAL AREA(ACRES) =   3944.20       PEAK FLOW RATE(CFS) =    4662.26
```

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****************************************************************************
  FLOW PROCESS FROM NODE    824.00 TO NODE    825.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  54.05
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.585
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   D        0.70      0.20      1.00    94
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        8.90      0.20      1.00    83
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D       34.60      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                 D        5.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   49.30      SUBAREA RUNOFF(CFS) =   61.46
  EFFECTIVE AREA(ACRES) =   3924.47   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =   3993.50       PEAK FLOW RATE(CFS) =    4723.72

****************************************************************************
  FLOW PROCESS FROM NODE    825.00 TO NODE    826.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    210.00  DOWNSTREAM(FEET) =    176.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2723.00   CHANNEL SLOPE =  0.0125
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   4723.72
  FLOW VELOCITY(FEET/SEC.) =  14.25   FLOW DEPTH(FEET) =   9.59
  TRAVEL TIME(MIN.) =   3.19   Tc(MIN.) =  57.24
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    826.00 = 41069.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    825.00 TO NODE    826.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  57.24
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.534
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   A        0.20      0.40      1.00    77
  NATURAL FAIR COVER
  "GRASS"                    A        0.40      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        0.90      0.40      1.00    46
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A        0.60      0.40      1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A        0.60      0.40      1.00    36
  AGRICULTURAL POOR COVER
  "FALLOW"                   B        3.60      0.30      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.34
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    6.30      SUBAREA RUNOFF(CFS) =    6.76
  EFFECTIVE AREA(ACRES) =   3930.77   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =   3999.80       PEAK FLOW RATE(CFS) =    4723.72
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE    825.00 TO NODE    826.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  57.24
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.534
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B        1.10      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.40      0.30      1.00    60
  AGRICULTURAL POOR COVER
  "FALLOW"                   C       11.60      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C       19.20      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       16.70      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        0.20      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   49.20      SUBAREA RUNOFF(CFS) =   56.80
  EFFECTIVE AREA(ACRES) =   3979.97   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =   4049.00       PEAK FLOW RATE(CFS) =    4723.72
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE    825.00 TO NODE    826.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  57.24
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.534
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C        1.00      0.25      1.00    73
  AGRICULTURAL POOR COVER
  "FALLOW"                   D        2.50      0.20      1.00    94
  NATURAL FAIR COVER
  "GRASS"                    D        4.50      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        6.40      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D        2.90      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   17.30      SUBAREA RUNOFF(CFS) =   20.73
  EFFECTIVE AREA(ACRES) =   3997.27   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =   4066.30       PEAK FLOW RATE(CFS) =    4723.72
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE    826.00 TO NODE    826.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>PEAK FLOW RATE ESTIMATOR CHANGED TO UNIT-HYDROGRAPH METHOD<<<<<
  >>>>>USING TIME-OF-CONCENTRATION OF LONGEST FLOWPATH<<<<<
============================================================================
```

```
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 22.0%
           MOUNTAIN= 62.0%;FOOTHILL= 14.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.06; LAG(HR) = 0.84; Fm(INCH/HR) = 0.25; Ybar = 0.40
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.82; 30M = 0.82; 1HR = 0.82;
  3HR = 0.97; 6HR = 0.99; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4066.30
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    826.00 = 41069.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0295; Lca/L=0.4,n=.0265; Lca/L=0.5,n=.0243;Lca/L=0.6,n=.0227
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    1218.83
  UNIT-HYDROGRAPH METHOD PEAK FLOW RATE(CFS) =   3358.55
  TOTAL PEAK FLOW RATE(CFS) =   3358.55 (SOURCE FLOW INCLUDED)
  RATIONAL METHOD PEAK FLOW RATE(CFS) =   4723.72
   (UPSTREAM NODE PEAK FLOW RATE(CFS) =   4723.72)
  PEAK FLOW RATE(CFS) USED =   4723.72

****************************************************************************
  FLOW PROCESS FROM NODE    826.00 TO NODE    826.00 IS CODE =  11
----------------------------------------------------------------------------
  >>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
============================================================================

  ** MAIN STREAM CONFLUENCE DATA **
  PEAK FLOW RATE(CFS) =     4723.72    Tc(MIN.) =  63.32
  AREA-AVERAGED Fm(INCH/HR) =  0.25    Ybar = 0.40
  TOTAL AREA(ACRES) =    4066.30
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    826.00 = 41069.00 FEET.

  ** MEMORY BANK #  1 CONFLUENCE DATA **
   STREAM      Q      Tc    Intensity   Fp(Fm)      Ap    Ae      HEADWATER
   NUMBER    (CFS)  (MIN.) (INCH/HR) (INCH/HR)        (ACRES)     NODE
      1    816.25  38.49    1.925  0.25( 0.25) 0.99   540.4      800.00
  LONGEST FLOWPATH FROM NODE    800.00 TO NODE    826.00 =  8890.00 FEET.

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 22.0%
           MOUNTAIN= 62.0%;FOOTHILL= 14.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.06; LAG(HR) = 0.84; Fm(INCH/HR) = 0.25; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.80; 30M = 0.80; 1HR = 0.80;
  3HR = 0.97; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4606.70
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    826.00 = 41069.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0295; Lca/L=0.4,n=.0265; Lca/L=0.5,n=.0243;Lca/L=0.6,n=.0227
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    1367.27
  PEAK FLOW RATE(CFS) =    3710.57
    (UPSTREAM NODE PEAK FLOW RATE(CFS) =   4723.72)
  PEAK FLOW RATE(CFS) USED =   4723.72

****************************************************************************
  FLOW PROCESS FROM NODE    826.00 TO NODE    826.00 IS CODE =  12
----------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE    826.00 TO NODE    847.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    176.00  DOWNSTREAM(FEET) =    175.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   170.00   CHANNEL SLOPE =  0.0059
  CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   4723.72
  FLOW VELOCITY(FEET/SEC.) =  10.13   FLOW DEPTH(FEET) =   4.92
  TRAVEL TIME(MIN.) =   0.28   Tc(MIN.) =  63.60
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    847.00 = 41239.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    826.00 TO NODE    847.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  63.60
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.443
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                A        0.20      0.40       1.00    46
  NATURAL FAIR COVER
  "WOODLAND"                  A        0.10      0.40       1.00    36
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.30      0.20       1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 22.0%
           MOUNTAIN= 62.0%;FOOTHILL= 14.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.06; LAG(HR) = 0.85; Fm(INCH/HR) = 0.25; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.80; 30M = 0.80; 1HR = 0.80;
  3HR = 0.97; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4607.30
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    847.00 = 41239.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0295; Lca/L=0.4,n=.0265; Lca/L=0.5,n=.0243;Lca/L=0.6,n=.0227
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    1367.40
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3703.43
  TOTAL AREA(ACRES) =   4607.30       PEAK FLOW RATE(CFS) =    4723.72
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE    847.00 TO NODE    847.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  PEAK FLOW RATE(CFS) =    4723.72    Tc(MIN.) =  63.60
  AREA-AVERAGED Fm(INCH/HR) =  0.25   Ybar = 0.41
  TOTAL AREA(ACRES) =    4607.30

****************************************************************************
  FLOW PROCESS FROM NODE    830.00 TO NODE    831.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   327.00
  ELEVATION DATA: UPSTREAM(FEET) =    895.00  DOWNSTREAM(FEET) =    820.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    9.606
```

```
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.277
 SUBAREA Tc AND LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS   Tc
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
 NATURAL FAIR COVER
 "GRASS"                     C        0.10      0.25      1.00    79    9.61
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        0.30      0.25      1.00    77    9.61
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA RUNOFF(CFS) =      1.45
 TOTAL AREA(ACRES) =      0.40   PEAK FLOW RATE(CFS) =      1.45

****************************************************************************
 FLOW PROCESS FROM NODE    831.00 TO NODE    832.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    820.00  DOWNSTREAM(FEET) =    790.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   150.00   CHANNEL SLOPE =  0.2000
 CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
 CHANNEL FLOW THRU SUBAREA(CFS) =      1.45
 FLOW VELOCITY(FEET/SEC.) =   5.08   FLOW DEPTH(FEET) =   0.23
 TRAVEL TIME(MIN.) =   0.49   Tc(MIN.) =  10.10
 LONGEST FLOWPATH FROM NODE    830.00 TO NODE    832.00 =   477.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    831.00 TO NODE    832.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  10.10
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.140
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                     C        0.50      0.25      1.00    79
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        0.30      0.25      1.00    77
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    0.80      SUBAREA RUNOFF(CFS) =    2.80
 EFFECTIVE AREA(ACRES) =      1.20   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =      1.20       PEAK FLOW RATE(CFS) =       4.20

****************************************************************************
 FLOW PROCESS FROM NODE    832.00 TO NODE    833.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    790.00  DOWNSTREAM(FEET) =    762.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   200.00   CHANNEL SLOPE =  0.1400
 CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
 CHANNEL FLOW THRU SUBAREA(CFS) =      4.20
 FLOW VELOCITY(FEET/SEC.) =   6.11   FLOW DEPTH(FEET) =   0.47
 TRAVEL TIME(MIN.) =   0.55   Tc(MIN.) =  10.64
 LONGEST FLOWPATH FROM NODE    830.00 TO NODE    833.00 =   677.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    832.00 TO NODE    833.00 IS CODE =  81
----------------------------------------------------------------------------
```

```
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  10.64
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.031
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                     C        0.40      0.25      1.00    79
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        0.80      0.25      1.00    77
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    1.20      SUBAREA RUNOFF(CFS) =    4.08
 EFFECTIVE AREA(ACRES) =      2.40   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =      2.40       PEAK FLOW RATE(CFS) =       8.17

****************************************************************************
 FLOW PROCESS FROM NODE    833.00 TO NODE    834.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    762.00  DOWNSTREAM(FEET) =    754.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   124.00   CHANNEL SLOPE =  0.0645
 CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
 CHANNEL FLOW THRU SUBAREA(CFS) =      8.17
 FLOW VELOCITY(FEET/SEC.) =   5.54   FLOW DEPTH(FEET) =   0.81
 TRAVEL TIME(MIN.) =   0.37   Tc(MIN.) =  11.02
 LONGEST FLOWPATH FROM NODE    830.00 TO NODE    834.00 =   801.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    833.00 TO NODE    834.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  11.02
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.957
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                     C        0.70      0.25      1.00    79
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        1.10      0.25      1.00    77
 NATURAL FAIR COVER
 "GRASS"                     D        0.10      0.20      1.00    84
 NATURAL FAIR COVER
 "OPEN BRUSH"                D        0.40      0.20      1.00    83
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    2.30      SUBAREA RUNOFF(CFS) =    7.70
 EFFECTIVE AREA(ACRES) =      4.70   AREA-AVERAGED Fm(INCH/HR) =  0.24
 AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =      4.70       PEAK FLOW RATE(CFS) =      15.70

****************************************************************************
 FLOW PROCESS FROM NODE    834.00 TO NODE    835.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    754.00  DOWNSTREAM(FEET) =    740.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   550.00   CHANNEL SLOPE =  0.0255
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
```

```
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     15.70
 FLOW VELOCITY(FEET/SEC.) =   4.54   FLOW DEPTH(FEET) =   1.11
 TRAVEL TIME(MIN.) =   2.02   Tc(MIN.) =  13.03
 LONGEST FLOWPATH FROM NODE    830.00 TO NODE    835.00 =  1351.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    834.00 TO NODE    835.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  13.03
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.583
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap      SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                     C        3.30      0.25      1.00    79
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        0.60      0.25      1.00    77
 NATURAL FAIR COVER
 "GRASS"                     D        6.00      0.20      1.00    84
 NATURAL FAIR COVER
 "OPEN BRUSH"                D        0.60      0.20      1.00    83
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   10.50      SUBAREA RUNOFF(CFS) =   31.79
 EFFECTIVE AREA(ACRES) =     15.20   AREA-AVERAGED Fm(INCH/HR) =  0.23
 AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     15.20       PEAK FLOW RATE(CFS) =      45.92

****************************************************************************
 FLOW PROCESS FROM NODE    835.00 TO NODE    836.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    740.00  DOWNSTREAM(FEET) =    624.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   929.00   CHANNEL SLOPE =  0.1249
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     45.92
 FLOW VELOCITY(FEET/SEC.) =  10.86   FLOW DEPTH(FEET) =   1.29
 TRAVEL TIME(MIN.) =   1.43   Tc(MIN.) =  14.46
 LONGEST FLOWPATH FROM NODE    830.00 TO NODE    836.00 =  2280.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    835.00 TO NODE    836.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  14.46
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.378
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap      SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                     C        0.10      0.25      1.00    79
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        0.10      0.25      1.00    77
 AGRICULTURAL POOR COVER
 "FALLOW"                    D        4.50      0.20      1.00    94
 NATURAL FAIR COVER
 "GRASS"                     D       10.40      0.20      1.00    84
 NATURAL FAIR COVER
 "OPEN BRUSH"                D        0.40      0.20      1.00    83
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   15.50      SUBAREA RUNOFF(CFS) =   44.32
 EFFECTIVE AREA(ACRES) =     30.70   AREA-AVERAGED Fm(INCH/HR) =  0.21
 AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     30.70       PEAK FLOW RATE(CFS) =      87.43

****************************************************************************
 FLOW PROCESS FROM NODE    836.00 TO NODE    837.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    624.00  DOWNSTREAM(FEET) =    592.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   417.00   CHANNEL SLOPE =  0.0767
 CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     87.43
 FLOW VELOCITY(FEET/SEC.) =  10.58   FLOW DEPTH(FEET) =   1.74
 TRAVEL TIME(MIN.) =   0.66   Tc(MIN.) =  15.12
 LONGEST FLOWPATH FROM NODE    830.00 TO NODE    837.00 =  2697.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    836.00 TO NODE    837.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  15.12
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.287
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap      SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                     C        0.20      0.25      1.00    79
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        0.60      0.25      1.00    77
 AGRICULTURAL POOR COVER
 "FALLOW"                    D        2.30      0.20      1.00    94
 NATURAL FAIR COVER
 "GRASS"                     D        5.10      0.20      1.00    84
 NATURAL FAIR COVER
 "OPEN BRUSH"                D        1.10      0.20      1.00    83
 NATURAL FAIR COVER
 "WOODLAND"                  D        0.20      0.20      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    9.50      SUBAREA RUNOFF(CFS) =   26.36
 EFFECTIVE AREA(ACRES) =     40.20   AREA-AVERAGED Fm(INCH/HR) =  0.21
 AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     40.20       PEAK FLOW RATE(CFS) =     111.27

****************************************************************************
 FLOW PROCESS FROM NODE    837.00 TO NODE    838.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    592.00  DOWNSTREAM(FEET) =    591.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =    60.00   CHANNEL SLOPE =  0.0167
 CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    111.27
 FLOW VELOCITY(FEET/SEC.) =   6.40   FLOW DEPTH(FEET) =   2.93
 TRAVEL TIME(MIN.) =   0.16   Tc(MIN.) =  15.27
 LONGEST FLOWPATH FROM NODE    830.00 TO NODE    838.00 =  2757.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    837.00 TO NODE    838.00 IS CODE =  81
```

```
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  15.27
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.269
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.30      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C        1.10      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        7.00      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        0.40      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                     D        7.50      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        1.80      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   18.10      SUBAREA RUNOFF(CFS) =   49.62
  EFFECTIVE AREA(ACRES) =     58.30   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     58.30       PEAK FLOW RATE(CFS) =     160.26

************************************************************************
  FLOW PROCESS FROM NODE    837.00 TO NODE    838.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  15.27
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.269
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.20      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.20      SUBAREA RUNOFF(CFS) =    0.55
  EFFECTIVE AREA(ACRES) =     58.50   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     58.50       PEAK FLOW RATE(CFS) =     160.82

************************************************************************
  FLOW PROCESS FROM NODE    838.00 TO NODE    839.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    591.00  DOWNSTREAM(FEET) =    526.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   973.00   CHANNEL SLOPE =  0.0668
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    160.82
  FLOW VELOCITY(FEET/SEC.) =  11.80   FLOW DEPTH(FEET) =   2.48
  TRAVEL TIME(MIN.) =   1.37   Tc(MIN.) =  16.65
  LONGEST FLOWPATH FROM NODE    830.00 TO NODE    839.00 =  3730.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE    838.00 TO NODE    839.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  16.65
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.116
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                    D        3.00      0.20      1.00    94
  NATURAL FAIR COVER
  "GRASS"                     D       16.40      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.60      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   20.00      SUBAREA RUNOFF(CFS) =   52.48
  EFFECTIVE AREA(ACRES) =     78.50   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     78.50       PEAK FLOW RATE(CFS) =     205.19

************************************************************************
  FLOW PROCESS FROM NODE    839.00 TO NODE    840.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    526.00  DOWNSTREAM(FEET) =    455.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1045.00   CHANNEL SLOPE =  0.0679
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    205.19
  FLOW VELOCITY(FEET/SEC.) =  12.62   FLOW DEPTH(FEET) =   2.80
  TRAVEL TIME(MIN.) =   1.38   Tc(MIN.) =  18.03
  LONGEST FLOWPATH FROM NODE    830.00 TO NODE    840.00 =  4775.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE    839.00 TO NODE    840.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =  18.03
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.974
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     C        1.00      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.50      0.25      1.00    77
  NATURAL FAIR COVER
  "GRASS"                     D       31.60      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        1.60      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   35.10      SUBAREA RUNOFF(CFS) =   87.55
  EFFECTIVE AREA(ACRES) =    113.60   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    113.60       PEAK FLOW RATE(CFS) =     282.71

************************************************************************
  FLOW PROCESS FROM NODE    840.00 TO NODE    841.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    455.00  DOWNSTREAM(FEET) =    409.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   675.00   CHANNEL SLOPE =  0.0681
```

```
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    282.71
  FLOW VELOCITY(FEET/SEC.) =  13.65   FLOW DEPTH(FEET) =   2.97
  TRAVEL TIME(MIN.) =   0.82   Tc(MIN.) =  18.85
  LONGEST FLOWPATH FROM NODE    830.00 TO NODE    841.00 =  5450.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    840.00 TO NODE    841.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.85
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.901
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                  B        6.00      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                   B        7.40      0.30      1.00    69
  AGRICULTURAL POOR COVER
  "FALLOW"                  D        4.10      0.20      1.00    94
  NATURAL FAIR COVER
  "GRASS"                   D       24.80      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                D        0.90      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   43.20      SUBAREA RUNOFF(CFS) =  103.81
  EFFECTIVE AREA(ACRES) =    156.80   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    156.80       PEAK FLOW RATE(CFS) =     379.11

****************************************************************************
  FLOW PROCESS FROM NODE    841.00 TO NODE    842.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    409.00  DOWNSTREAM(FEET) =    405.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   142.00   CHANNEL SLOPE =  0.0282
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    379.11
  FLOW VELOCITY(FEET/SEC.) =  10.56   FLOW DEPTH(FEET) =   3.99
  TRAVEL TIME(MIN.) =   0.22   Tc(MIN.) =  19.08
  LONGEST FLOWPATH FROM NODE    830.00 TO NODE    842.00 =  5592.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    841.00 TO NODE    842.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.08
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.881
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"     C        0.10      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                   C        7.90      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"              C       26.10      0.25      1.00    77
  NATURAL FAIR COVER
  "GRASS"                   D       19.30      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"              D        2.10      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                D        0.90      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   56.40      SUBAREA RUNOFF(CFS) =  134.57
  EFFECTIVE AREA(ACRES) =    213.20   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    213.20       PEAK FLOW RATE(CFS) =     510.89

****************************************************************************
  FLOW PROCESS FROM NODE    842.00 TO NODE    843.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    405.00  DOWNSTREAM(FEET) =    348.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2041.00   CHANNEL SLOPE =  0.0279
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    510.89
  FLOW VELOCITY(FEET/SEC.) =  11.36   FLOW DEPTH(FEET) =   4.66
  TRAVEL TIME(MIN.) =   2.99   Tc(MIN.) =  22.07
  LONGEST FLOWPATH FROM NODE    830.00 TO NODE    843.00 =  7633.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    842.00 TO NODE    843.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  22.07
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.643
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                  B        0.60      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                   B        2.80      0.30      1.00    69
  NATURAL FAIR COVER
  "GRASS"                   C       10.20      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"              C       17.70      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"              D        0.30      0.20      1.00    83
  AGRICULTURAL POOR COVER
  "FALLOW"                  D        0.80      0.20      1.00    94
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   32.40      SUBAREA RUNOFF(CFS) =   69.67
  EFFECTIVE AREA(ACRES) =    245.60   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    245.60       PEAK FLOW RATE(CFS) =     534.77

****************************************************************************
  FLOW PROCESS FROM NODE    842.00 TO NODE    843.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  22.07
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.643
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE           GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                   D       78.70      0.20      1.00    84
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  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.70      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D        2.00      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   81.40      SUBAREA RUNOFF(CFS) =  178.95
  EFFECTIVE AREA(ACRES) =    327.00   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    327.00       PEAK FLOW RATE(CFS) =     713.72

****************************************************************************
  FLOW PROCESS FROM NODE    843.00 TO NODE    844.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    348.00  DOWNSTREAM(FEET) =    302.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1986.00   CHANNEL SLOPE =  0.0232
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    713.72
  FLOW VELOCITY(FEET/SEC.) =  11.51   FLOW DEPTH(FEET) =   5.43
  TRAVEL TIME(MIN.) =   2.88   Tc(MIN.) =  24.95
  LONGEST FLOWPATH FROM NODE    830.00 TO NODE    844.00 =  9619.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    843.00 TO NODE    844.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  24.95
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.463
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.40      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C       10.70      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       23.90      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        0.30      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                     D       55.10      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        9.40      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   99.80      SUBAREA RUNOFF(CFS) =  201.71
  EFFECTIVE AREA(ACRES) =    426.80   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    426.80       PEAK FLOW RATE(CFS) =     862.61

****************************************************************************
  FLOW PROCESS FROM NODE    843.00 TO NODE    844.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  24.95
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.463
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  D        1.70      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.70      SUBAREA RUNOFF(CFS) =    3.46
  EFFECTIVE AREA(ACRES) =    428.50   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    428.50       PEAK FLOW RATE(CFS) =     866.07

****************************************************************************
  FLOW PROCESS FROM NODE    844.00 TO NODE    845.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    302.00  DOWNSTREAM(FEET) =    273.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1696.00   CHANNEL SLOPE =  0.0171
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    866.07
  FLOW VELOCITY(FEET/SEC.) =  10.78   FLOW DEPTH(FEET) =   6.12
  TRAVEL TIME(MIN.) =   2.62   Tc(MIN.) =  27.57
  LONGEST FLOWPATH FROM NODE    830.00 TO NODE    845.00 = 11315.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    844.00 TO NODE    845.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  27.57
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.327
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.40      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C        4.90      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        4.10      0.25      1.00    77
  AGRICULTURAL POOR COVER
  "FALLOW"                    D       10.10      0.20      1.00    94
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        0.40      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                     D       35.60      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   55.50      SUBAREA RUNOFF(CFS) =  105.82
  EFFECTIVE AREA(ACRES) =    484.00   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    484.00       PEAK FLOW RATE(CFS) =     919.34

****************************************************************************
  FLOW PROCESS FROM NODE    844.00 TO NODE    845.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  27.57
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.327
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        3.80      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D        2.00      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
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  SUBAREA AREA(ACRES) =    5.80      SUBAREA RUNOFF(CFS) =   11.10
  EFFECTIVE AREA(ACRES) =    489.80   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    489.80       PEAK FLOW RATE(CFS) =     930.45

****************************************************************************
  FLOW PROCESS FROM NODE    845.00 TO NODE    846.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    273.00  DOWNSTREAM(FEET) =    240.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1458.00   CHANNEL SLOPE =  0.0226
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    930.45
  FLOW VELOCITY(FEET/SEC.) =  12.18   FLOW DEPTH(FEET) =   5.92
  TRAVEL TIME(MIN.) =   2.00   Tc(MIN.) =  29.56
  LONGEST FLOWPATH FROM NODE    830.00 TO NODE    846.00 = 12773.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    845.00 TO NODE    846.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  29.56
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.239
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   B        2.20      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B        1.00      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B        1.10      0.30      1.00    60
  NATURAL FAIR COVER
  "GRASS"                    C        8.00      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        1.10      0.25      1.00    77
  AGRICULTURAL POOR COVER
  "FALLOW"                   D        7.60      0.20      1.00    94
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   21.00      SUBAREA RUNOFF(CFS) =   37.74
  EFFECTIVE AREA(ACRES) =    510.80   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    510.80       PEAK FLOW RATE(CFS) =     930.45
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE    845.00 TO NODE    846.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  29.56
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.239
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D       15.90      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        6.10      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D        0.20      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
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  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   22.20      SUBAREA RUNOFF(CFS) =   40.74
  EFFECTIVE AREA(ACRES) =    533.00   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    533.00       PEAK FLOW RATE(CFS) =     970.23

****************************************************************************
  FLOW PROCESS FROM NODE    846.00 TO NODE    847.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    240.00  DOWNSTREAM(FEET) =    175.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1949.00   CHANNEL SLOPE =  0.0334
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    970.23
  FLOW VELOCITY(FEET/SEC.) =  14.23   FLOW DEPTH(FEET) =   5.47
  TRAVEL TIME(MIN.) =   2.28   Tc(MIN.) =  31.85
  LONGEST FLOWPATH FROM NODE    830.00 TO NODE    847.00 = 14722.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    846.00 TO NODE    847.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  31.85
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.150
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   B        6.50      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B        2.30      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        2.00      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.60      0.30      1.00    60
  AGRICULTURAL POOR COVER
  "FALLOW"                   C        3.50      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C        2.00      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   16.90      SUBAREA RUNOFF(CFS) =   28.38
  EFFECTIVE AREA(ACRES) =    549.90   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    549.90       PEAK FLOW RATE(CFS) =     970.23
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE    846.00 TO NODE    847.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  31.85
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.150
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        5.50      0.25      1.00    77
  AGRICULTURAL POOR COVER
  "FALLOW"                   D        3.60      0.20      1.00    94
  NATURAL FAIR COVER
  "GRASS"                    D       13.20      0.20      1.00    84
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  NATURAL FAIR COVER
  "OPEN BRUSH"                D        3.40      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.20      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   25.90      SUBAREA RUNOFF(CFS) =   45.20
  EFFECTIVE AREA(ACRES) =    575.80   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    575.80       PEAK FLOW RATE(CFS) =    1000.96

****************************************************************************
  FLOW PROCESS FROM NODE    847.00 TO NODE    847.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  31.85
  RAINFALL INTENSITY(INCH/HR) =   2.15
  AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =   575.80
  TOTAL STREAM AREA(ACRES) =   575.80
  PEAK FLOW RATE(CFS) AT CONFLUENCE =   1000.96
  ** CONFLUENCE DATA **
  STREAM      Q        Tc       AREA      HEADWATER
  NUMBER    (CFS)    (MIN.)   (ACRES)      NODE
     1      4723.72   63.60     4607.30     3100.00
     2      1000.96   31.85      575.80      830.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 22.0%
           MOUNTAIN= 62.0%;FOOTHILL= 14.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.06; LAG(HR) = 0.85; Fm(INCH/HR) = 0.24; Ybar = 0.40
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.78; 30M = 0.78; 1HR = 0.78;
  3HR = 0.97; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   5183.10
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    847.00 = 41239.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0295; Lca/L=0.4,n=.0265; Lca/L=0.5,n=.0243;Lca/L=0.6,n=.0227
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    1548.02
  PEAK FLOW RATE(CFS) =   4111.76
    (UPSTREAM NODE PEAK FLOW RATE(CFS) =   4723.72)
  PEAK FLOW RATE(CFS) USED =   4723.72

****************************************************************************
  FLOW PROCESS FROM NODE    847.00 TO NODE    865.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    175.00  DOWNSTREAM(FEET) =    154.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  6117.00   CHANNEL SLOPE =  0.0034
  CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   4723.72
  FLOW VELOCITY(FEET/SEC.) =   8.50   FLOW DEPTH(FEET) =   5.76
  TRAVEL TIME(MIN.) =  11.99   Tc(MIN.) =  75.59
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    865.00 = 47356.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    847.00 TO NODE    865.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  75.59
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.304
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     A        1.70      0.40      1.00    50
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                  A       15.60      0.40      1.00    44
  NATURAL FAIR COVER
  "OPEN BRUSH"                A        3.10      0.40      1.00    46
  COMMERCIAL                  A        0.60      0.40      0.10    32
  NATURAL FAIR COVER
  "WOODLAND"                  A       14.10      0.40      1.00    36
  AGRICULTURAL POOR COVER
  "FALLOW"                    B        2.90      0.30      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.39
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   38.00
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 22.0%
           MOUNTAIN= 62.0%;FOOTHILL= 14.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.26; LAG(HR) = 1.01; Fm(INCH/HR) = 0.25; Ybar = 0.40
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.78; 30M = 0.78; 1HR = 0.78;
  3HR = 0.97; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =   5221.10
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    865.00 = 47356.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0309; Lca/L=0.4,n=.0277; Lca/L=0.5,n=.0255;Lca/L=0.6,n=.0238
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1551.54
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3582.49
  TOTAL AREA(ACRES) =   5221.10       PEAK FLOW RATE(CFS) =    4723.72
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE    847.00 TO NODE    865.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  75.59
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.304
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        B       16.50      0.30      0.50    56
  NATURAL FAIR COVER
  "GRASS"                     B        1.80      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                  B       22.10      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        1.10      0.30      1.00    66
  COMMERCIAL                  B        0.80      0.30      0.10    56
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B       12.30      0.30      1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.84
  SUBAREA AREA(ACRES) =   54.60
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 22.0%
```

```
          MOUNTAIN= 62.0%;FOOTHILL= 14.0%;DESERT(UNDEV.)=  0.0%
 Tc(HR) = 1.26; LAG(HR) = 1.01; Fm(INCH/HR) = 0.25; Ybar = 0.40
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.78; 30M = 0.78; 1HR = 0.78;
 3HR = 0.97; 6HR = 0.98; 24HR= 0.99
 UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =   5275.70
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    865.00 = 47356.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0309; Lca/L=0.4,n=.0277; Lca/L=0.5,n=.0255;Lca/L=0.6,n=.0238
 TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1564.73
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3613.03
 TOTAL AREA(ACRES) =   5275.70       PEAK FLOW RATE(CFS) =    4723.72
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE    847.00 TO NODE    865.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  75.59
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.304
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 PUBLIC PARK                 B        0.40      0.30       0.85    56
 NATURAL FAIR COVER
 "WOODLAND"                  B        4.50      0.30       1.00    60
 NATURAL FAIR COVER
 "GRASS"                     C       91.40      0.25       1.00    79
 AGRICULTURAL FAIR COVER
 "ORCHARDS"                  C        4.20      0.25       1.00    77
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        5.70      0.25       1.00    77
 COMMERCIAL                  C        2.00      0.25       0.10    69
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
 SUBAREA AREA(ACRES) =  108.20
 UNIT-HYDROGRAPH DATA:
 RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
 S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 22.0%
          MOUNTAIN= 62.0%;FOOTHILL= 14.0%;DESERT(UNDEV.)=  0.0%
 Tc(HR) = 1.26; LAG(HR) = 1.01; Fm(INCH/HR) = 0.25; Ybar = 0.40
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.78; 30M = 0.78; 1HR = 0.78;
 3HR = 0.97; 6HR = 0.98; 24HR= 0.99
 UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =   5383.90
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    865.00 = 47356.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0309; Lca/L=0.4,n=.0277; Lca/L=0.5,n=.0255;Lca/L=0.6,n=.0238
 TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1595.40
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3676.35
 TOTAL AREA(ACRES) =   5383.90       PEAK FLOW RATE(CFS) =    4723.72
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE    847.00 TO NODE    865.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  75.59
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.304
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 PUBLIC PARK                 C        0.70      0.25       0.85    69
 NATURAL FAIR COVER
 "WOODLAND"                  C       10.50      0.25       1.00    73
 AGRICULTURAL POOR COVER
 "FALLOW"                    D       21.70      0.20       1.00    94
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"        D       32.20      0.20       0.50    75
 NATURAL FAIR COVER
 "GRASS"                     D       23.40      0.20       1.00    84
 AGRICULTURAL FAIR COVER
 "ORCHARDS"                  D        2.50      0.20       1.00    82
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.82
 SUBAREA AREA(ACRES) =   91.00
 UNIT-HYDROGRAPH DATA:
 RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
 S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 22.0%
          MOUNTAIN= 62.0%;FOOTHILL= 14.0%;DESERT(UNDEV.)=  0.0%
 Tc(HR) = 1.26; LAG(HR) = 1.01; Fm(INCH/HR) = 0.24; Ybar = 0.40
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.77; 30M = 0.77; 1HR = 0.77;
 3HR = 0.96; 6HR = 0.98; 24HR= 0.99
 UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =   5474.90
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    865.00 = 47356.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0309; Lca/L=0.4,n=.0277; Lca/L=0.5,n=.0255;Lca/L=0.6,n=.0238
 TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1626.46
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3735.80
 TOTAL AREA(ACRES) =   5474.90       PEAK FLOW RATE(CFS) =    4723.72
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE    847.00 TO NODE    865.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  75.59
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.304
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"                D       13.30      0.20       1.00    83
 COMMERCIAL                  D        1.40      0.20       0.10    75
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           D        3.30      0.20       1.00    84
 NATURAL FAIR COVER
 "WOODLAND"                  D       23.10      0.20       1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
 SUBAREA AREA(ACRES) =   41.10
 UNIT-HYDROGRAPH DATA:
 RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
 S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 22.0%
          MOUNTAIN= 62.0%;FOOTHILL= 14.0%;DESERT(UNDEV.)=  0.0%
 Tc(HR) = 1.26; LAG(HR) = 1.01; Fm(INCH/HR) = 0.24; Ybar = 0.40
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.77; 30M = 0.77; 1HR = 0.77;
 3HR = 0.96; 6HR = 0.98; 24HR= 0.99
 UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =   5516.00
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    865.00 = 47356.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0309; Lca/L=0.4,n=.0277; Lca/L=0.5,n=.0255;Lca/L=0.6,n=.0238
 TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1639.11
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3761.27
 TOTAL AREA(ACRES) =   5516.00       PEAK FLOW RATE(CFS) =    4723.72
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE    865.00 TO NODE    865.00 IS CODE =   1
```

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------------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
==============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  PEAK FLOW RATE(CFS) =    4723.72    Tc(MIN.) =  75.59
  AREA-AVERAGED Fm(INCH/HR) =  0.24   Ybar = 0.40
  TOTAL AREA(ACRES) =    5516.00

******************************************************************************
  FLOW PROCESS FROM NODE    850.00 TO NODE    851.00 IS CODE =  21
------------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
==============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   328.00
  ELEVATION DATA: UPSTREAM(FEET) =    718.00  DOWNSTREAM(FEET) =    600.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    5.000
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  6.190
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS   Tc
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D        0.80      0.20       0.50    75    5.00
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.50
  SUBAREA RUNOFF(CFS) =      4.38
  TOTAL AREA(ACRES) =      0.80   PEAK FLOW RATE(CFS) =      4.38

******************************************************************************
  FLOW PROCESS FROM NODE    851.00 TO NODE    852.00 IS CODE =  51
------------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    600.00  DOWNSTREAM(FEET) =    560.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   144.00   CHANNEL SLOPE =  0.2778
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      4.38
  FLOW VELOCITY(FEET/SEC.) =   7.99   FLOW DEPTH(FEET) =   0.39
  TRAVEL TIME(MIN.) =   0.30   Tc(MIN.) =   5.30
  LONGEST FLOWPATH FROM NODE    850.00 TO NODE    852.00 =   472.00 FEET.

******************************************************************************
  FLOW PROCESS FROM NODE    851.00 TO NODE    852.00 IS CODE =  81
------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==============================================================================
  MAINLINE Tc(MIN) =   5.30
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  6.035
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D        1.10      0.20       0.50    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.50
  SUBAREA AREA(ACRES) =    1.10      SUBAREA RUNOFF(CFS) =    5.88
  EFFECTIVE AREA(ACRES) =      1.90   AREA-AVERAGED Fm(INCH/HR) =  0.10
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.50
  TOTAL AREA(ACRES) =      1.90       PEAK FLOW RATE(CFS) =      10.15

******************************************************************************
  FLOW PROCESS FROM NODE    852.00 TO NODE    853.00 IS CODE =  51
------------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    560.00  DOWNSTREAM(FEET) =    540.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   100.00   CHANNEL SLOPE =  0.2000
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     10.15
  FLOW VELOCITY(FEET/SEC.) =   8.85   FLOW DEPTH(FEET) =   0.68
  TRAVEL TIME(MIN.) =   0.19   Tc(MIN.) =   5.49
  LONGEST FLOWPATH FROM NODE    850.00 TO NODE    853.00 =   572.00 FEET.

******************************************************************************
  FLOW PROCESS FROM NODE    852.00 TO NODE    853.00 IS CODE =  81
------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==============================================================================
  MAINLINE Tc(MIN) =   5.49
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.938
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D        1.30      0.20       0.50    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.50
  SUBAREA AREA(ACRES) =    1.30      SUBAREA RUNOFF(CFS) =    6.83
  EFFECTIVE AREA(ACRES) =      3.20   AREA-AVERAGED Fm(INCH/HR) =  0.10
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.50
  TOTAL AREA(ACRES) =      3.20       PEAK FLOW RATE(CFS) =      16.81

******************************************************************************
  FLOW PROCESS FROM NODE    853.00 TO NODE    854.00 IS CODE =  51
------------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    540.00  DOWNSTREAM(FEET) =    510.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   115.00   CHANNEL SLOPE =  0.2609
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     16.81
  FLOW VELOCITY(FEET/SEC.) =  11.13   FLOW DEPTH(FEET) =   0.83
  TRAVEL TIME(MIN.) =   0.17   Tc(MIN.) =   5.66
  LONGEST FLOWPATH FROM NODE    850.00 TO NODE    854.00 =   687.00 FEET.

******************************************************************************
  FLOW PROCESS FROM NODE    853.00 TO NODE    854.00 IS CODE =  81
------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==============================================================================
  MAINLINE Tc(MIN) =   5.66
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.849
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D        2.40      0.20       0.50    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.50
  SUBAREA AREA(ACRES) =    2.40      SUBAREA RUNOFF(CFS) =   12.42
  EFFECTIVE AREA(ACRES) =      5.60   AREA-AVERAGED Fm(INCH/HR) =  0.10
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.50
  TOTAL AREA(ACRES) =      5.60       PEAK FLOW RATE(CFS) =      28.97

******************************************************************************
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 FLOW PROCESS FROM NODE    854.00 TO NODE    855.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    510.00  DOWNSTREAM(FEET) =    468.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   167.00   CHANNEL SLOPE =  0.2515
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     28.97
 FLOW VELOCITY(FEET/SEC.) =  12.36   FLOW DEPTH(FEET) =   0.83
 TRAVEL TIME(MIN.) =   0.23   Tc(MIN.) =   5.89
 LONGEST FLOWPATH FROM NODE    850.00 TO NODE    855.00 =   854.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    854.00 TO NODE    855.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =   5.89
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.733
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"        D        2.80      0.20       0.50    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.50
 SUBAREA AREA(ACRES) =    2.80      SUBAREA RUNOFF(CFS) =   14.19
 EFFECTIVE AREA(ACRES) =      8.40   AREA-AVERAGED Fm(INCH/HR) =  0.10
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.50
 TOTAL AREA(ACRES) =      8.40       PEAK FLOW RATE(CFS) =      42.58

****************************************************************************
 FLOW PROCESS FROM NODE    855.00 TO NODE    856.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    468.00  DOWNSTREAM(FEET) =    445.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   115.00   CHANNEL SLOPE =  0.2000
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     42.58
 FLOW VELOCITY(FEET/SEC.) =  12.67   FLOW DEPTH(FEET) =   1.09
 TRAVEL TIME(MIN.) =   0.15   Tc(MIN.) =   6.04
 LONGEST FLOWPATH FROM NODE    850.00 TO NODE    856.00 =   969.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    855.00 TO NODE    856.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =   6.04
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.655
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL POOR COVER
 "FALLOW"                    D        0.40      0.20       1.00    94
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"        D        3.10      0.20       0.50    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.56
 SUBAREA AREA(ACRES) =    3.50      SUBAREA RUNOFF(CFS) =   17.46
 EFFECTIVE AREA(ACRES) =     11.90   AREA-AVERAGED Fm(INCH/HR) =  0.10
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.52
 TOTAL AREA(ACRES) =     11.90       PEAK FLOW RATE(CFS) =      59.45

****************************************************************************
 FLOW PROCESS FROM NODE    856.00 TO NODE    857.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    445.00  DOWNSTREAM(FEET) =    366.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   423.00   CHANNEL SLOPE =  0.1868
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     59.45
 FLOW VELOCITY(FEET/SEC.) =  13.42   FLOW DEPTH(FEET) =   1.33
 TRAVEL TIME(MIN.) =   0.53   Tc(MIN.) =   6.56
 LONGEST FLOWPATH FROM NODE    850.00 TO NODE    857.00 =  1392.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    856.00 TO NODE    857.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =   6.56
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.384
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL POOR COVER
 "FALLOW"                    D        2.30      0.20       1.00    94
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"        D        1.00      0.20       0.50    75
 NATURAL FAIR COVER
 "GRASS"                     D        1.30      0.20       1.00    84
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.89
 SUBAREA AREA(ACRES) =    4.60      SUBAREA RUNOFF(CFS) =   21.55
 EFFECTIVE AREA(ACRES) =     16.50   AREA-AVERAGED Fm(INCH/HR) =  0.12
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.62
 TOTAL AREA(ACRES) =     16.50       PEAK FLOW RATE(CFS) =      78.10

****************************************************************************
 FLOW PROCESS FROM NODE    857.00 TO NODE    858.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    366.00  DOWNSTREAM(FEET) =    300.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   574.00   CHANNEL SLOPE =  0.1150
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     78.10
 FLOW VELOCITY(FEET/SEC.) =  12.05   FLOW DEPTH(FEET) =   1.73
 TRAVEL TIME(MIN.) =   0.79   Tc(MIN.) =   7.36
 LONGEST FLOWPATH FROM NODE    850.00 TO NODE    858.00 =  1966.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    857.00 TO NODE    858.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =   7.36
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.974
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                     B        0.20      0.30       1.00    69
```

```
  AGRICULTURAL POOR COVER
  "FALLOW"                    D        0.50      0.20      1.00    94
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D        0.10      0.20      0.50    75
  NATURAL FAIR COVER
  "GRASS"                     D        2.80      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =    3.60      SUBAREA RUNOFF(CFS) =   15.46
  EFFECTIVE AREA(ACRES) =     20.10   AREA-AVERAGED Fm(INCH/HR) =  0.14
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.69
  TOTAL AREA(ACRES) =     20.10       PEAK FLOW RATE(CFS) =      87.48

****************************************************************************
  FLOW PROCESS FROM NODE    858.00 TO NODE    859.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    300.00  DOWNSTREAM(FEET) =    276.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   341.00   CHANNEL SLOPE =  0.0704
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     87.48
  FLOW VELOCITY(FEET/SEC.) =  10.26   FLOW DEPTH(FEET) =   1.78
  TRAVEL TIME(MIN.) =   0.55   Tc(MIN.) =   7.91
  LONGEST FLOWPATH FROM NODE    850.00 TO NODE    859.00 =  2307.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    858.00 TO NODE    859.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   7.91
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.779
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     B        1.10      0.30      1.00    69
  AGRICULTURAL POOR COVER
  "FALLOW"                    D        1.10      0.20      1.00    94
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D        9.10      0.20      0.50    75
  NATURAL FAIR COVER
  "GRASS"                     D        4.00      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.70
  SUBAREA AREA(ACRES) =   15.30      SUBAREA RUNOFF(CFS) =   63.77
  EFFECTIVE AREA(ACRES) =     35.40   AREA-AVERAGED Fm(INCH/HR) =  0.14
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  0.69
  TOTAL AREA(ACRES) =     35.40       PEAK FLOW RATE(CFS) =     147.71

****************************************************************************
  FLOW PROCESS FROM NODE    859.00 TO NODE    860.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    276.00  DOWNSTREAM(FEET) =    240.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   795.00   CHANNEL SLOPE =  0.0453
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    147.71
  FLOW VELOCITY(FEET/SEC.) =   9.98   FLOW DEPTH(FEET) =   2.63
  TRAVEL TIME(MIN.) =   1.33   Tc(MIN.) =   9.24
  LONGEST FLOWPATH FROM NODE    850.00 TO NODE    860.00 =  3102.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    859.00 TO NODE    860.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.24
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.386
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                    B        3.00      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                     B        3.20      0.30      1.00    69
  AGRICULTURAL POOR COVER
  "FALLOW"                    D        3.60      0.20      1.00    94
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D        3.40      0.20      0.50    75
  NATURAL FAIR COVER
  "GRASS"                     D       12.60      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
  SUBAREA AREA(ACRES) =   25.80      SUBAREA RUNOFF(CFS) =   96.94
  EFFECTIVE AREA(ACRES) =     61.20   AREA-AVERAGED Fm(INCH/HR) =  0.17
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.79
  TOTAL AREA(ACRES) =     61.20       PEAK FLOW RATE(CFS) =     232.13

****************************************************************************
  FLOW PROCESS FROM NODE    860.00 TO NODE    861.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    240.00  DOWNSTREAM(FEET) =    206.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   777.00   CHANNEL SLOPE =  0.0438
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    232.13
  FLOW VELOCITY(FEET/SEC.) =  11.01   FLOW DEPTH(FEET) =   3.01
  TRAVEL TIME(MIN.) =   1.18   Tc(MIN.) =  10.41
  LONGEST FLOWPATH FROM NODE    850.00 TO NODE    861.00 =  3879.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    860.00 TO NODE    861.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.41
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.077
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                    B        3.50      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                     B        0.50      0.30      1.00    69
  AGRICULTURAL POOR COVER
  "FALLOW"                    D        1.40      0.20      1.00    94
  NATURAL FAIR COVER
  "GRASS"                     D        0.70      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    6.10      SUBAREA RUNOFF(CFS) =   20.93
  EFFECTIVE AREA(ACRES) =     67.30   AREA-AVERAGED Fm(INCH/HR) =  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.81
  TOTAL AREA(ACRES) =     67.30       PEAK FLOW RATE(CFS) =     236.06
```

```
****************************************************************************
  FLOW PROCESS FROM NODE    861.00 TO NODE    862.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    206.00  DOWNSTREAM(FEET) =    193.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   579.00   CHANNEL SLOPE =  0.0225
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    236.06
  FLOW VELOCITY(FEET/SEC.) =   8.63   FLOW DEPTH(FEET) =   3.60
  TRAVEL TIME(MIN.) =   1.12   Tc(MIN.) =  11.53
  LONGEST FLOWPATH FROM NODE    850.00 TO NODE    862.00 =  4458.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    861.00 TO NODE    862.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.53
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.854
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                    B        4.70      0.30       1.00    86
  NATURAL FAIR COVER
  "GRASS"                     B        1.20      0.30       1.00    69
  AGRICULTURAL POOR COVER
  "FALLOW"                    D       57.90      0.20       1.00    94
  NATURAL FAIR COVER
  "GRASS"                     D        0.10      0.20       1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   63.90      SUBAREA RUNOFF(CFS) =  209.59
  EFFECTIVE AREA(ACRES) =    131.20   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  0.90
  TOTAL AREA(ACRES) =    131.20       PEAK FLOW RATE(CFS) =     432.11

****************************************************************************
  FLOW PROCESS FROM NODE    862.00 TO NODE    863.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    193.00  DOWNSTREAM(FEET) =    174.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1469.00   CHANNEL SLOPE =  0.0129
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    432.11
  FLOW VELOCITY(FEET/SEC.) =   8.16   FLOW DEPTH(FEET) =   4.87
  TRAVEL TIME(MIN.) =   3.00   Tc(MIN.) =  14.53
  LONGEST FLOWPATH FROM NODE    850.00 TO NODE    863.00 =  5927.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    862.00 TO NODE    863.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  14.53
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.367
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           A        1.00      0.40       1.00    49
  AGRICULTURAL POOR COVER
  "FALLOW"                    B        6.60      0.30       1.00    86
  NATURAL FAIR COVER
  "GRASS"                     B        1.70      0.30       1.00    69
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B       37.80      0.30       1.00    69
  AGRICULTURAL POOR COVER
  "FALLOW"                    D       14.20      0.20       1.00    94
  NATURAL FAIR COVER
  "GRASS"                     D        5.60      0.20       1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   66.90      SUBAREA RUNOFF(CFS) =  186.37
  EFFECTIVE AREA(ACRES) =    198.10   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.94
  TOTAL AREA(ACRES) =    198.10       PEAK FLOW RATE(CFS) =     561.04

****************************************************************************
  FLOW PROCESS FROM NODE    862.00 TO NODE    863.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  14.53
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.367
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  URBAN FAIR COVER
  "TURF"                      D        0.30      0.20       1.00    82
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        4.80      0.20       1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    5.10      SUBAREA RUNOFF(CFS) =   14.54
  EFFECTIVE AREA(ACRES) =    203.20   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.94
  TOTAL AREA(ACRES) =    203.20       PEAK FLOW RATE(CFS) =     575.58

****************************************************************************
  FLOW PROCESS FROM NODE    863.00 TO NODE    864.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    174.00  DOWNSTREAM(FEET) =    165.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   774.00   CHANNEL SLOPE =  0.0116
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    575.58
  FLOW VELOCITY(FEET/SEC.) =   8.42   FLOW DEPTH(FEET) =   5.79
  TRAVEL TIME(MIN.) =   1.53   Tc(MIN.) =  16.06
  LONGEST FLOWPATH FROM NODE    850.00 TO NODE    864.00 =  6701.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    863.00 TO NODE    864.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.06
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.181
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        A        0.20      0.40       0.50    32
  NATURAL FAIR COVER
```

```
"GRASS"                    A        2.00      0.40      1.00    50
AGRICULTURAL FAIR COVER
"PASTURE,DRYLAND"          A        2.60      0.40      1.00    49
RESIDENTIAL
"5-7 DWELLINGS/ACRE"       B        2.40      0.30      0.50    56
NATURAL FAIR COVER
"GRASS"                    B        6.50      0.30      1.00    69
URBAN FAIR COVER
"TURF"                     B        0.60      0.30      1.00    65
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.34
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.91
SUBAREA AREA(ACRES) =   14.30      SUBAREA RUNOFF(CFS) =   37.00
EFFECTIVE AREA(ACRES) =    217.50   AREA-AVERAGED Fm(INCH/HR) =  0.23
AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  0.94
TOTAL AREA(ACRES) =    217.50       PEAK FLOW RATE(CFS) =     578.48

****************************************************************************
 FLOW PROCESS FROM NODE    863.00 TO NODE    864.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  16.06
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.181
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          B        4.10      0.30      1.00    69
 NATURAL FAIR COVER
 "WOODLAND"                 B        1.00      0.30      1.00    60
 AGRICULTURAL POOR COVER
 "FALLOW"                   D        1.20      0.20      1.00    94
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"       D       85.70      0.20      0.50    75
 NATURAL FAIR COVER
 "GRASS"                    D       50.20      0.20      1.00    84
 AGRICULTURAL FAIR COVER
 "ORCHARDS"                 D        1.60      0.20      1.00    82
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.70
 SUBAREA AREA(ACRES) =  143.80      SUBAREA RUNOFF(CFS) =  393.02
 EFFECTIVE AREA(ACRES) =    361.30   AREA-AVERAGED Fm(INCH/HR) =  0.19
 AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.84
 TOTAL AREA(ACRES) =    361.30       PEAK FLOW RATE(CFS) =     971.50

****************************************************************************
 FLOW PROCESS FROM NODE    863.00 TO NODE    864.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  16.06
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.181
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 URBAN FAIR COVER
 "TURF"                     D        0.20      0.20      1.00    82
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          D        1.20      0.20      1.00    84
 NATURAL FAIR COVER
 "WOODLAND"                 D        1.80      0.20      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    3.20      SUBAREA RUNOFF(CFS) =    8.58
 EFFECTIVE AREA(ACRES) =    364.50   AREA-AVERAGED Fm(INCH/HR) =  0.19
 AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.84
 TOTAL AREA(ACRES) =    364.50       PEAK FLOW RATE(CFS) =     980.09
```

```
****************************************************************************
 FLOW PROCESS FROM NODE    864.00 TO NODE    865.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    165.00  DOWNSTREAM(FEET) =    154.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1172.00   CHANNEL SLOPE =  0.0094
 CHANNEL BASE(FEET) =    8.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   8.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    980.09
 FLOW VELOCITY(FEET/SEC.) =   8.88   FLOW DEPTH(FEET) =   7.24
 TRAVEL TIME(MIN.) =   2.20   Tc(MIN.) =  18.27
 LONGEST FLOWPATH FROM NODE    850.00 TO NODE    865.00 =  7873.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    864.00 TO NODE    865.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  18.27
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.953
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 COMMERCIAL                 B        0.40      0.30      0.10    56
 NATURAL FAIR COVER
 "WOODLAND"                 B        0.30      0.30      1.00    60
 NATURAL FAIR COVER
 "GRASS"                    D        0.10      0.20      1.00    84
 AGRICULTURAL FAIR COVER
 "ORCHARDS"                 D        0.20      0.20      1.00    82
 URBAN FAIR COVER
 "TURF"                     D        5.80      0.20      1.00    82
 NATURAL FAIR COVER
 "OPEN BRUSH"               D        0.20      0.20      1.00    83
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.95
 SUBAREA AREA(ACRES) =    7.00      SUBAREA RUNOFF(CFS) =   17.38
 EFFECTIVE AREA(ACRES) =    371.50   AREA-AVERAGED Fm(INCH/HR) =  0.19
 AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.85
 TOTAL AREA(ACRES) =    371.50       PEAK FLOW RATE(CFS) =     980.09
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE    864.00 TO NODE    865.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  18.27
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.953
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 COMMERCIAL                 D        0.10      0.20      0.10    75
 NATURAL FAIR COVER
 "WOODLAND"                 D        5.90      0.20      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
 SUBAREA AREA(ACRES) =    6.00      SUBAREA RUNOFF(CFS) =   14.88
 EFFECTIVE AREA(ACRES) =    377.50   AREA-AVERAGED Fm(INCH/HR) =  0.19
 AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.85
 TOTAL AREA(ACRES) =    377.50       PEAK FLOW RATE(CFS) =     980.09
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
```

```
 FLOW PROCESS FROM NODE    865.00 TO NODE    865.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  18.27
 RAINFALL INTENSITY(INCH/HR) =   2.95
 AREA-AVERAGED Fm(INCH/HR) =  0.19
 AREA-AVERAGED Fp(INCH/HR) =  0.23
 AREA-AVERAGED Ap =  0.85
 EFFECTIVE STREAM AREA(ACRES) =   377.50
 TOTAL STREAM AREA(ACRES) =   377.50
 PEAK FLOW RATE(CFS) AT CONFLUENCE =    980.09
 ** CONFLUENCE DATA **
 STREAM      Q        Tc      AREA      HEADWATER
 NUMBER    (CFS)    (MIN.)   (ACRES)      NODE
    1      4723.72   75.59     5516.00     3100.00
    2       980.09   18.27      377.50      850.00

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 UNIT-HYDROGRAPH DATA:
 RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
 S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 22.0%
          MOUNTAIN= 62.0%;FOOTHILL= 14.0%;DESERT(UNDEV.)=  0.0%
 Tc(HR) = 1.26; LAG(HR) = 1.01; Fm(INCH/HR) = 0.24; Ybar = 0.40
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.76; 30M = 0.76; 1HR = 0.76;
 3HR = 0.96; 6HR = 0.98; 24HR= 0.99
 UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =   5893.50
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    865.00 = 47356.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0309; Lca/L=0.4,n=.0277; Lca/L=0.5,n=.0255;Lca/L=0.6,n=.0238
 TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1762.64
 PEAK FLOW RATE(CFS) =   3997.19
   (UPSTREAM NODE PEAK FLOW RATE(CFS) =   4723.72)
 PEAK FLOW RATE(CFS) USED =   4723.72

****************************************************************************
 FLOW PROCESS FROM NODE    865.00 TO NODE    884.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    154.00  DOWNSTREAM(FEET) =    135.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  6117.00   CHANNEL SLOPE =  0.0031
 CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
 MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
 CHANNEL FLOW THRU SUBAREA(CFS) =   4723.72
 FLOW VELOCITY(FEET/SEC.) =   8.23   FLOW DEPTH(FEET) =   5.93
 TRAVEL TIME(MIN.) =  12.39   Tc(MIN.) =  87.98
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    884.00 = 53473.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    865.00 TO NODE    884.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  87.98
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.196
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      A        2.20      0.40      1.00    40
 AGRICULTURAL POOR COVER
```

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 "FALLOW"                   A        4.80      0.40      1.00    77
 NATURAL FAIR COVER
 "GRASS"                    A        0.80      0.40      1.00    50
 AGRICULTURAL FAIR COVER
 "ORCHARDS"                 A        0.10      0.40      1.00    44
 COMMERCIAL                 A        0.50      0.40      0.10    32
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          A        1.20      0.40      1.00    49
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.95
 SUBAREA AREA(ACRES) =    9.60
 UNIT-HYDROGRAPH DATA:
 RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
 S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 22.0%
          MOUNTAIN= 62.0%;FOOTHILL= 14.0%;DESERT(UNDEV.)=  0.0%
 Tc(HR) = 1.47; LAG(HR) = 1.17; Fm(INCH/HR) = 0.24; Ybar = 0.40
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.76; 30M = 0.76; 1HR = 0.76;
 3HR = 0.96; 6HR = 0.98; 24HR= 0.99
 UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =   5903.10
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    884.00 = 53473.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0322; Lca/L=0.4,n=.0288; Lca/L=0.5,n=.0265;Lca/L=0.6,n=.0247
 TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1764.52
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3758.65
 TOTAL AREA(ACRES) =   5903.10       PEAK FLOW RATE(CFS) =    4723.72
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE    865.00 TO NODE    884.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  87.98
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.196
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "WOODLAND"                 A        3.00      0.40      1.00    36
 AGRICULTURAL POOR COVER
 "FALLOW"                   B        1.70      0.30      1.00    86
 NATURAL FAIR COVER
 "GRASS"                    B        2.40      0.30      1.00    69
 AGRICULTURAL FAIR COVER
 "ORCHARDS"                 B        6.40      0.30      1.00    65
 COMMERCIAL                 B        1.10      0.30      0.10    56
 AGRICULTURAL POOR COVER
 "FALLOW"                   D        0.10      0.20      1.00    94
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.32
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
 SUBAREA AREA(ACRES) =   14.70
 UNIT-HYDROGRAPH DATA:
 RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
 S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 22.0%
          MOUNTAIN= 62.0%;FOOTHILL= 14.0%;DESERT(UNDEV.)=  0.0%
 Tc(HR) = 1.47; LAG(HR) = 1.17; Fm(INCH/HR) = 0.24; Ybar = 0.40
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.76; 30M = 0.76; 1HR = 0.76;
 3HR = 0.96; 6HR = 0.98; 24HR= 0.99
 UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =   5917.80
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    884.00 = 53473.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0322; Lca/L=0.4,n=.0288; Lca/L=0.5,n=.0265;Lca/L=0.6,n=.0247
 TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1767.63
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3765.51
 TOTAL AREA(ACRES) =   5917.80       PEAK FLOW RATE(CFS) =    4723.72
```

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  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE    865.00 TO NODE    884.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  87.98
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.196
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     D        1.10      0.20      1.00    84
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                  D        0.40      0.20      1.00    82
  COMMERCIAL                  D        0.40      0.20      0.10    75
  NATURAL FAIR COVER
  "WOODLAND"                  D        3.90      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.94
  SUBAREA AREA(ACRES) =    5.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 22.0%
           MOUNTAIN= 62.0%;FOOTHILL= 14.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.47; LAG(HR) = 1.17; Fm(INCH/HR) = 0.24; Ybar = 0.40
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.76; 30M = 0.76; 1HR = 0.76;
  3HR = 0.96; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =   5923.60
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    884.00 = 53473.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0322; Lca/L=0.4,n=.0288; Lca/L=0.5,n=.0265;Lca/L=0.6,n=.0247
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1769.42
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3768.84
  TOTAL AREA(ACRES) =   5923.60       PEAK FLOW RATE(CFS) =    4723.72
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE    884.00 TO NODE    884.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  PEAK FLOW RATE(CFS) =    4723.72    Tc(MIN.) =  87.98
  AREA-AVERAGED Fm(INCH/HR) =  0.24   Ybar = 0.40
  TOTAL AREA(ACRES) =    5923.60

****************************************************************************
  FLOW PROCESS FROM NODE    870.00 TO NODE    871.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   326.00
  ELEVATION DATA: UPSTREAM(FEET) =   1123.00  DOWNSTREAM(FEET) =   1050.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    9.640
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.267
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS   Tc
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "GRASS"                     C        0.20      0.25      1.00    79    9.64
  NATURAL FAIR COVER
  "GRASS"                     D        0.30      0.20      1.00    84    9.64
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      1.82
  TOTAL AREA(ACRES) =      0.50   PEAK FLOW RATE(CFS) =      1.82

****************************************************************************
  FLOW PROCESS FROM NODE    871.00 TO NODE    872.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1050.00  DOWNSTREAM(FEET) =   1010.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   238.00   CHANNEL SLOPE =  0.1681
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      1.82
  FLOW VELOCITY(FEET/SEC.) =   5.14   FLOW DEPTH(FEET) =   0.28
  TRAVEL TIME(MIN.) =   0.77   Tc(MIN.) =  10.41
  LONGEST FLOWPATH FROM NODE    870.00 TO NODE    872.00 =   564.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    871.00 TO NODE    872.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.41
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.078
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     C        0.10      0.25      1.00    79
  NATURAL FAIR COVER
  "GRASS"                     D        0.80      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.90      SUBAREA RUNOFF(CFS) =    3.14
  EFFECTIVE AREA(ACRES) =      1.40   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.40       PEAK FLOW RATE(CFS) =       4.87

****************************************************************************
  FLOW PROCESS FROM NODE    872.00 TO NODE    873.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1010.00  DOWNSTREAM(FEET) =    975.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   408.00   CHANNEL SLOPE =  0.0858
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      4.87
  FLOW VELOCITY(FEET/SEC.) =   5.35   FLOW DEPTH(FEET) =   0.58
  TRAVEL TIME(MIN.) =   1.27   Tc(MIN.) =  11.68
  LONGEST FLOWPATH FROM NODE    870.00 TO NODE    873.00 =   972.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    872.00 TO NODE    873.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.68
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.824
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
```

```
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                   C        0.60      0.25       1.00    79
  NATURAL FAIR COVER
  "GRASS"                   D        1.80      0.20       1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    2.40      SUBAREA RUNOFF(CFS) =    7.80
  EFFECTIVE AREA(ACRES) =      3.80   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      3.80       PEAK FLOW RATE(CFS) =      12.35

****************************************************************************
  FLOW PROCESS FROM NODE    873.00 TO NODE    874.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    975.00  DOWNSTREAM(FEET) =    941.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   369.00   CHANNEL SLOPE =  0.0921
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     12.35
  FLOW VELOCITY(FEET/SEC.) =   7.01   FLOW DEPTH(FEET) =   0.92
  TRAVEL TIME(MIN.) =   0.88   Tc(MIN.) =  12.56
  LONGEST FLOWPATH FROM NODE    870.00 TO NODE    874.00 =  1341.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    873.00 TO NODE    874.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.56
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.651
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                   C        0.50      0.25       1.00    79
  NATURAL FAIR COVER
  "GRASS"                   D        2.70      0.20       1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.20      SUBAREA RUNOFF(CFS) =    9.92
  EFFECTIVE AREA(ACRES) =      7.00   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      7.00       PEAK FLOW RATE(CFS) =      21.68

****************************************************************************
  FLOW PROCESS FROM NODE    874.00 TO NODE    875.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    941.00  DOWNSTREAM(FEET) =    932.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    82.00   CHANNEL SLOPE =  0.1098
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     21.68
  FLOW VELOCITY(FEET/SEC.) =   8.46   FLOW DEPTH(FEET) =   0.89
  TRAVEL TIME(MIN.) =   0.16   Tc(MIN.) =  12.72
  LONGEST FLOWPATH FROM NODE    870.00 TO NODE    875.00 =  1423.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    874.00 TO NODE    875.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.72
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.628
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                   C        0.40      0.25       1.00    79
  NATURAL FAIR COVER
  "GRASS"                   D        4.30      0.20       1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    4.70      SUBAREA RUNOFF(CFS) =   14.48
  EFFECTIVE AREA(ACRES) =     11.70   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     11.70       PEAK FLOW RATE(CFS) =      36.02

****************************************************************************
  FLOW PROCESS FROM NODE    875.00 TO NODE    876.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    941.00  DOWNSTREAM(FEET) =    932.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    82.00   CHANNEL SLOPE =  0.1098
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     36.02
  FLOW VELOCITY(FEET/SEC.) =   9.69   FLOW DEPTH(FEET) =   1.17
  TRAVEL TIME(MIN.) =   0.14   Tc(MIN.) =  12.86
  LONGEST FLOWPATH FROM NODE    870.00 TO NODE    876.00 =  1505.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    875.00 TO NODE    876.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.86
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.608
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                   D        3.20      0.20       1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.20      SUBAREA RUNOFF(CFS) =    9.81
  EFFECTIVE AREA(ACRES) =     14.90   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     14.90       PEAK FLOW RATE(CFS) =      45.62

****************************************************************************
  FLOW PROCESS FROM NODE    876.00 TO NODE    877.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    932.00  DOWNSTREAM(FEET) =    905.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   340.00   CHANNEL SLOPE =  0.0794
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     45.62
  FLOW VELOCITY(FEET/SEC.) =   9.17   FLOW DEPTH(FEET) =   1.44
  TRAVEL TIME(MIN.) =   0.62   Tc(MIN.) =  13.48
  LONGEST FLOWPATH FROM NODE    870.00 TO NODE    877.00 =  1845.00 FEET.

****************************************************************************
```

```
 FLOW PROCESS FROM NODE    876.00 TO NODE    877.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  13.48
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.519
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                     D        7.70      0.20      1.00    84
 NATURAL FAIR COVER
 "OPEN BRUSH"                D        3.70      0.20      1.00    83
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   11.40      SUBAREA RUNOFF(CFS) =   34.05
 EFFECTIVE AREA(ACRES) =     26.30   AREA-AVERAGED Fm(INCH/HR) =  0.20
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     26.30       PEAK FLOW RATE(CFS) =      78.48

****************************************************************************
 FLOW PROCESS FROM NODE    877.00 TO NODE    878.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    905.00  DOWNSTREAM(FEET) =    860.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   803.00   CHANNEL SLOPE =  0.0560
 CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     78.48
 FLOW VELOCITY(FEET/SEC.) =   9.17   FLOW DEPTH(FEET) =   1.79
 TRAVEL TIME(MIN.) =   1.46   Tc(MIN.) =  14.94
 LONGEST FLOWPATH FROM NODE    870.00 TO NODE    878.00 =  2648.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    877.00 TO NODE    878.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  14.94
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.309
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                     D        8.90      0.20      1.00    84
 NATURAL FAIR COVER
 "OPEN BRUSH"                D        8.00      0.20      1.00    83
 NATURAL FAIR COVER
 "WOODLAND"                  D        0.40      0.20      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   17.30      SUBAREA RUNOFF(CFS) =   48.40
 EFFECTIVE AREA(ACRES) =     43.60   AREA-AVERAGED Fm(INCH/HR) =  0.20
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     43.60       PEAK FLOW RATE(CFS) =     121.90

****************************************************************************
 FLOW PROCESS FROM NODE    878.00 TO NODE    879.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    860.00  DOWNSTREAM(FEET) =    755.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1104.00   CHANNEL SLOPE =  0.0951
 CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    121.90
 FLOW VELOCITY(FEET/SEC.) =  12.51   FLOW DEPTH(FEET) =   1.96
 TRAVEL TIME(MIN.) =   1.47   Tc(MIN.) =  16.41
 LONGEST FLOWPATH FROM NODE    870.00 TO NODE    879.00 =  3752.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    878.00 TO NODE    879.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  16.41
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.142
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                     D       17.30      0.20      1.00    84
 NATURAL FAIR COVER
 "OPEN BRUSH"                D       24.40      0.20      1.00    83
 NATURAL FAIR COVER
 "WOODLAND"                  D        3.60      0.20      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   45.30      SUBAREA RUNOFF(CFS) =  119.94
 EFFECTIVE AREA(ACRES) =     88.90   AREA-AVERAGED Fm(INCH/HR) =  0.20
 AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     88.90       PEAK FLOW RATE(CFS) =     235.30

****************************************************************************
 FLOW PROCESS FROM NODE    879.00 TO NODE    880.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    755.00  DOWNSTREAM(FEET) =    533.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1578.00   CHANNEL SLOPE =  0.1407
 CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    235.30
 FLOW VELOCITY(FEET/SEC.) =  17.14   FLOW DEPTH(FEET) =   2.50
 TRAVEL TIME(MIN.) =   1.53   Tc(MIN.) =  17.95
 LONGEST FLOWPATH FROM NODE    870.00 TO NODE    880.00 =  5330.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    879.00 TO NODE    880.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  17.95
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.981
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                     C        9.80      0.25      1.00    79
 NATURAL FAIR COVER
 "OPEN BRUSH"                C       11.40      0.25      1.00    77
 NATURAL FAIR COVER
 "WOODLAND"                  C        1.10      0.25      1.00    73
 NATURAL FAIR COVER
 "GRASS"                     D        8.30      0.20      1.00    84
 NATURAL FAIR COVER
 "OPEN BRUSH"                D       38.20      0.20      1.00    83
 NATURAL FAIR COVER
 "WOODLAND"                  D        8.70      0.20      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
```

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  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   77.50      SUBAREA RUNOFF(CFS) =  192.95
  EFFECTIVE AREA(ACRES) =    166.40   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    166.40       PEAK FLOW RATE(CFS) =     415.36

****************************************************************************
  FLOW PROCESS FROM NODE    880.00 TO NODE    881.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    533.00  DOWNSTREAM(FEET) =    415.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1236.00   CHANNEL SLOPE =  0.0955
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    415.36
  FLOW VELOCITY(FEET/SEC.) =  17.08   FLOW DEPTH(FEET) =   3.32
  TRAVEL TIME(MIN.) =   1.21   Tc(MIN.) =  19.15
  LONGEST FLOWPATH FROM NODE    870.00 TO NODE    881.00 =  6566.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    880.00 TO NODE    881.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.15
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.875
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C       30.10      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       15.30      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        2.00      0.25      1.00    73
  NATURAL FAIR COVER
  "GRASS"                    D       11.30      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        5.10      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D        1.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   64.90      SUBAREA RUNOFF(CFS) =  154.09
  EFFECTIVE AREA(ACRES) =    231.30   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    231.30       PEAK FLOW RATE(CFS) =     553.55

****************************************************************************
  FLOW PROCESS FROM NODE    881.00 TO NODE    882.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    415.00  DOWNSTREAM(FEET) =    190.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2805.00   CHANNEL SLOPE =  0.0802
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    553.55
  FLOW VELOCITY(FEET/SEC.) =  17.16   FLOW DEPTH(FEET) =   3.71
  TRAVEL TIME(MIN.) =   2.72   Tc(MIN.) =  21.88
  LONGEST FLOWPATH FROM NODE    870.00 TO NODE    882.00 =  9371.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    881.00 TO NODE    882.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  21.88
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.657
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B        0.50      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.20      0.30      1.00    60
  NATURAL FAIR COVER
  "GRASS"                    C       18.20      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       10.80      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        1.20      0.25      1.00    73
  NATURAL FAIR COVER
  "GRASS"                    D       36.30      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   67.20      SUBAREA RUNOFF(CFS) =  147.20
  EFFECTIVE AREA(ACRES) =    298.50   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    298.50       PEAK FLOW RATE(CFS) =     655.54

****************************************************************************
  FLOW PROCESS FROM NODE    881.00 TO NODE    882.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  21.88
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.657
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 D        7.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    7.10      SUBAREA RUNOFF(CFS) =   15.70
  EFFECTIVE AREA(ACRES) =    305.60   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    305.60       PEAK FLOW RATE(CFS) =     671.24

****************************************************************************
  FLOW PROCESS FROM NODE    882.00 TO NODE    883.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    190.00  DOWNSTREAM(FEET) =    184.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    86.00   CHANNEL SLOPE =  0.0698
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    671.24
  FLOW VELOCITY(FEET/SEC.) =  17.14   FLOW DEPTH(FEET) =   4.24
  TRAVEL TIME(MIN.) =   0.08   Tc(MIN.) =  21.96
  LONGEST FLOWPATH FROM NODE    870.00 TO NODE    883.00 =  9457.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    882.00 TO NODE    883.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  21.96
```

```
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.651
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                     B        1.70      0.30       1.00    69
 COMMERCIAL                  B        0.30      0.30       0.10    56
 NATURAL FAIR COVER
 "GRASS"                     C       46.00      0.25       1.00    79
 NATURAL FAIR COVER
 "OPEN BRUSH"                C       20.20      0.25       1.00    77
 NATURAL FAIR COVER
 "WOODLAND"                  C        4.40      0.25       1.00    73
 NATURAL POOR COVER
 "BARREN"                    D        0.40      0.20       1.00    93
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   73.00      SUBAREA RUNOFF(CFS) =  157.75
 EFFECTIVE AREA(ACRES) =    378.60   AREA-AVERAGED Fm(INCH/HR) =  0.22
 AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    378.60       PEAK FLOW RATE(CFS) =     827.25

****************************************************************************
 FLOW PROCESS FROM NODE    882.00 TO NODE    883.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  21.96
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.651
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                     D      187.70      0.20       1.00    84
 NATURAL FAIR COVER
 "OPEN BRUSH"                D       94.40      0.20       1.00    83
 COMMERCIAL                  D        7.70      0.20       0.10    75
 NATURAL FAIR COVER
 "WOODLAND"                  D        7.90      0.20       1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
 SUBAREA AREA(ACRES) =  297.70      SUBAREA RUNOFF(CFS) =  657.96
 EFFECTIVE AREA(ACRES) =    676.30   AREA-AVERAGED Fm(INCH/HR) =  0.21
 AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  0.99
 TOTAL AREA(ACRES) =    676.30       PEAK FLOW RATE(CFS) =    1485.20

****************************************************************************
 FLOW PROCESS FROM NODE    883.00 TO NODE    884.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    184.00  DOWNSTREAM(FEET) =    135.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  2701.00   CHANNEL SLOPE =  0.0181
 CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =   7.00
 CHANNEL FLOW THRU SUBAREA(CFS) =   1485.20
 FLOW VELOCITY(FEET/SEC.) =  15.66   FLOW DEPTH(FEET) =   6.85
 TRAVEL TIME(MIN.) =   2.87   Tc(MIN.) =  24.83
 LONGEST FLOWPATH FROM NODE    870.00 TO NODE    884.00 = 12158.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    883.00 TO NODE    884.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  24.83
```

```
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.470
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                     A        1.60      0.40       1.00    50
 AGRICULTURAL FAIR COVER
 "ORCHARDS"                  A        0.20      0.40       1.00    44
 COMMERCIAL                  A        3.90      0.40       0.10    32
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           A       26.80      0.40       1.00    49
 NATURAL FAIR COVER
 "WOODLAND"                  A        2.60      0.40       1.00    36
 NATURAL POOR COVER
 "BARREN"                    B        2.00      0.30       1.00    86
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.39
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.91
 SUBAREA AREA(ACRES) =   37.10      SUBAREA RUNOFF(CFS) =   70.56
 EFFECTIVE AREA(ACRES) =    713.40   AREA-AVERAGED Fm(INCH/HR) =  0.22
 AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.98
 TOTAL AREA(ACRES) =    713.40       PEAK FLOW RATE(CFS) =    1485.20
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE    883.00 TO NODE    884.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  24.83
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.470
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL FAIR COVER
 "ORCHARDS"                  B        2.40      0.30       1.00    65
 COMMERCIAL                  B        5.30      0.30       0.10    56
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           B       11.60      0.30       1.00    69
 NATURAL FAIR COVER
 "WOODLAND"                  B        5.80      0.30       1.00    60
 NATURAL FAIR COVER
 "GRASS"                     C       24.90      0.25       1.00    79
 AGRICULTURAL FAIR COVER
 "ORCHARDS"                  C        0.90      0.25       1.00    77
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.91
 SUBAREA AREA(ACRES) =   50.90      SUBAREA RUNOFF(CFS) =  101.85
 EFFECTIVE AREA(ACRES) =    764.30   AREA-AVERAGED Fm(INCH/HR) =  0.22
 AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.98
 TOTAL AREA(ACRES) =    764.30       PEAK FLOW RATE(CFS) =    1547.38

****************************************************************************
 FLOW PROCESS FROM NODE    883.00 TO NODE    884.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  24.83
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.470
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        8.00      0.25       1.00    77
 COMMERCIAL                  C        0.90      0.25       0.10    69
 NATURAL FAIR COVER
 "WOODLAND"                  C        3.20      0.25       1.00    73
 NATURAL POOR COVER
```

```
  "BARREN"                  D        0.20      0.20      1.00    93
  NATURAL FAIR COVER
  "GRASS"                   D       29.30      0.20      1.00    84
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                D       13.50      0.20      1.00    82
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   55.10      SUBAREA RUNOFF(CFS) =  112.20
  EFFECTIVE AREA(ACRES) =    819.40   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =    819.40       PEAK FLOW RATE(CFS) =    1659.58

****************************************************************************
  FLOW PROCESS FROM NODE    883.00 TO NODE    884.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  24.83
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.470
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"              D        1.60      0.20      1.00    83
  COMMERCIAL                D       28.20      0.20      0.10    75
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"         D        0.40      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                D        2.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.21
  SUBAREA AREA(ACRES) =   32.30      SUBAREA RUNOFF(CFS) =   70.56
  EFFECTIVE AREA(ACRES) =    851.70   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.95
  TOTAL AREA(ACRES) =    851.70       PEAK FLOW RATE(CFS) =    1730.13

****************************************************************************
  FLOW PROCESS FROM NODE    884.00 TO NODE    884.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  24.83
  RAINFALL INTENSITY(INCH/HR) =   2.47
  AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.22
  AREA-AVERAGED Ap =  0.95
  EFFECTIVE STREAM AREA(ACRES) =   851.70
  TOTAL STREAM AREA(ACRES) =   851.70
  PEAK FLOW RATE(CFS) AT CONFLUENCE =   1730.13
  ** CONFLUENCE DATA **
  STREAM      Q        Tc      AREA      HEADWATER
  NUMBER    (CFS)    (MIN.)   (ACRES)      NODE
     1      4723.72   87.98     5923.60     3100.00
     2      1730.13   24.83      851.70      870.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 22.0%
           MOUNTAIN= 62.0%;FOOTHILL= 14.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.47; LAG(HR) = 1.17; Fm(INCH/HR) = 0.24; Ybar = 0.39
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.74; 30M = 0.74; 1HR = 0.74;
  3HR = 0.96; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =   6775.30
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    884.00 = 53473.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0322; Lca/L=0.4,n=.0288; Lca/L=0.5,n=.0265;Lca/L=0.6,n=.0247
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    2027.33
  PEAK FLOW RATE(CFS) =   4234.63
    (UPSTREAM NODE PEAK FLOW RATE(CFS) =   4723.72)
  PEAK FLOW RATE(CFS) USED =   4723.72

****************************************************************************
  FLOW PROCESS FROM NODE    884.00 TO NODE    885.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    135.00  DOWNSTREAM(FEET) =    132.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   207.00   CHANNEL SLOPE =  0.0145
  CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   4723.72
  FLOW VELOCITY(FEET/SEC.) =  13.56   FLOW DEPTH(FEET) =   3.77
  TRAVEL TIME(MIN.) =   0.25   Tc(MIN.) =  88.23
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    885.00 = 53680.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    884.00 TO NODE    885.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  88.23
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.194
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       A        0.10      0.40      1.00    40
  AGRICULTURAL POOR COVER
  "FALLOW"                    A        0.40      0.40      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                  A        1.30      0.40      1.00    36
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.80
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
  S-GRAPH: VALLEY(DEV.)=  2.0%;VALLEY(UNDEV.)/DESERT= 22.0%
           MOUNTAIN= 62.0%;FOOTHILL= 14.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.47; LAG(HR) = 1.18; Fm(INCH/HR) = 0.24; Ybar = 0.39
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.74; 30M = 0.74; 1HR = 0.74;
  3HR = 0.96; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =   6777.10
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    885.00 = 53680.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0322; Lca/L=0.4,n=.0288; Lca/L=0.5,n=.0265;Lca/L=0.6,n=.0247
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    2027.55
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4227.80
  TOTAL AREA(ACRES) =   6777.10       PEAK FLOW RATE(CFS) =    4723.72
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =   6777.10  TC(MIN.) =     88.23
  AREA-AVERAGED Fm(INCH/HR)=  0.24   Ybar =  0.39
  PEAK FLOW RATE(CFS)   =   4723.72
============================================================================
============================================================================
  END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANAL
```

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

TECHNICAL APPENDIX V-B
HYDROLOGIC ANALYSIS
PROPOSED CONDITION
100-YEAR HIGH CONFIDENCE

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 ************************************************************************
             RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
            (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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              Ver. 8.0  Release Date: 01/01/2003  License ID 1202

                           Analysis prepared by:

                           Huitt - Zollars, Inc.
                          430 Exchange, Suite 200
                           Irvine, CA. 92602-1309
                              714 - 734 - 5100

 ------------------------------------------------------------------------
   FILE NAME: CP31100H.DAT
   TIME/DATE OF STUDY: 07:31 04/01/2004
 ========================================================================
   USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
 ========================================================================
                     --*TIME-OF-CONCENTRATION MODEL*--

   USER SPECIFIED STORM EVENT(YEAR) =  100.00
   SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
   SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
   *DATA BANK RAINFALL USED*
   *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

   *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
      HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
      WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
 NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
 ===  =====  =========  ================  ======  =====  ====  =====  =======
   1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

   GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
     1. Relative Flow-Depth =  0.00 FEET
        as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
     2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
   *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
    OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
   *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

   UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
     WATERSHED LAG = 0.80 * Tc
           S-GRAPH TYPE                  PERCENTAGE(DECIMAL)
         VALLEY(DEVELOPED)                    0.160
         FOOTHILL                             0.140
         MOUNTAIN                             0.620
         VALLEY(UNDEVELOPED)/DESERT           0.080
         DESERT(UNDEVELOPED)                  0.000
     SIERRA MADRE DEPTH-AREA FACTORS USED.
                       AREA-AVERAGED
         DURATION    RAINFALL(INCH)
         5-MINUTES         0.52
        30-MINUTES         1.09
         1-HOUR            1.45
         3-HOUR            2.43
         6-HOUR            3.36
        24-HOUR            5.63
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*


 ************************************************************************
   FLOW PROCESS FROM NODE   3100.00 TO NODE   3101.00 IS CODE =  21
 ------------------------------------------------------------------------
   >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
   >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
 ========================================================================
   INITIAL SUBAREA FLOW-LENGTH(FEET) =   329.00
   ELEVATION DATA: UPSTREAM(FEET) =   1195.00  DOWNSTREAM(FEET) =   1090.00

   Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
   SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    9.013
   * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.414
   SUBAREA Tc AND LOSS RATE DATA(AMC  II):
    DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS   Tc
        LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
   NATURAL FAIR COVER
   "OPEN BRUSH"                C        1.20      0.25      1.00    77    9.01
   SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
   SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
   SUBAREA RUNOFF(CFS) =      4.50
   TOTAL AREA(ACRES) =      1.20   PEAK FLOW RATE(CFS) =      4.50

 ************************************************************************
   FLOW PROCESS FROM NODE   3101.00 TO NODE   3102.00 IS CODE =  51
 ------------------------------------------------------------------------
   >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
   >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
 ========================================================================
   ELEVATION DATA: UPSTREAM(FEET) =   1090.00  DOWNSTREAM(FEET) =   1060.00
   CHANNEL LENGTH THRU SUBAREA(FEET) =   246.00   CHANNEL SLOPE =  0.1220
   CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
   MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
   CHANNEL FLOW THRU SUBAREA(CFS) =      4.50
   FLOW VELOCITY(FEET/SEC.) =   5.99   FLOW DEPTH(FEET) =   0.50
   TRAVEL TIME(MIN.) =   0.68   Tc(MIN.) =   9.70
   LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3102.00 =   575.00 FEET.

 ************************************************************************
   FLOW PROCESS FROM NODE   3101.00 TO NODE   3102.00 IS CODE =  81
 ------------------------------------------------------------------------
   >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ========================================================================
   MAINLINE Tc(MIN) =   9.70
   * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.249
   SUBAREA LOSS RATE DATA(AMC  II):
    DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
        LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
   AGRICULTURAL FAIR COVER
   "PASTURE,DRYLAND"           B        0.20      0.30      1.00    69
   NATURAL FAIR COVER
   "OPEN BRUSH"                C        0.70      0.25      1.00    77
   AGRICULTURAL FAIR COVER
   "PASTURE,DRYLAND"           C        0.10      0.25      1.00    79
   SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
   SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
   SUBAREA AREA(ACRES) =    1.00      SUBAREA RUNOFF(CFS) =    3.59
   EFFECTIVE AREA(ACRES) =      2.20   AREA-AVERAGED Fm(INCH/HR) =  0.25
   AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
   TOTAL AREA(ACRES) =      2.20       PEAK FLOW RATE(CFS) =       7.91

 ************************************************************************
   FLOW PROCESS FROM NODE   3102.00 TO NODE   3103.00 IS CODE =  51
 ------------------------------------------------------------------------
   >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
   >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
 ========================================================================
   ELEVATION DATA: UPSTREAM(FEET) =   1060.00  DOWNSTREAM(FEET) =   1050.00
   CHANNEL LENGTH THRU SUBAREA(FEET) =   131.00   CHANNEL SLOPE =  0.0763
   CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
   MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
   CHANNEL FLOW THRU SUBAREA(CFS) =      7.91
```

```
 FLOW VELOCITY(FEET/SEC.) =   5.83   FLOW DEPTH(FEET) =   0.77
 TRAVEL TIME(MIN.) =   0.37   Tc(MIN.) =  10.07
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3103.00 =   706.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3102.00 TO NODE   3103.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  10.07
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.145
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"                B        0.80      0.30       1.00    66
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        2.60      0.25       1.00    77
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           C        0.10      0.25       1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    3.50      SUBAREA RUNOFF(CFS) =   12.23
 EFFECTIVE AREA(ACRES) =      5.70   AREA-AVERAGED Fm(INCH/HR) =  0.26
 AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =      5.70       PEAK FLOW RATE(CFS) =      19.94

****************************************************************************
 FLOW PROCESS FROM NODE   3103.00 TO NODE   3104.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   1050.00  DOWNSTREAM(FEET) =   1040.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   141.00   CHANNEL SLOPE =  0.0709
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     19.94
 FLOW VELOCITY(FEET/SEC.) =   7.05   FLOW DEPTH(FEET) =   0.96
 TRAVEL TIME(MIN.) =   0.33   Tc(MIN.) =  10.41
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3104.00 =   847.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3103.00 TO NODE   3104.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  10.41
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.079
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"                B        0.80      0.30       1.00    66
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           B        0.60      0.30       1.00    69
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        2.70      0.25       1.00    77
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    4.10      SUBAREA RUNOFF(CFS) =   14.07
 EFFECTIVE AREA(ACRES) =      9.80   AREA-AVERAGED Fm(INCH/HR) =  0.26
 AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =      9.80       PEAK FLOW RATE(CFS) =      33.66

****************************************************************************
 FLOW PROCESS FROM NODE   3104.00 TO NODE   3105.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   1040.00  DOWNSTREAM(FEET) =   1030.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   156.00   CHANNEL SLOPE =  0.0641
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     33.66
 FLOW VELOCITY(FEET/SEC.) =   7.83   FLOW DEPTH(FEET) =   1.30
 TRAVEL TIME(MIN.) =   0.33   Tc(MIN.) =  10.74
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3105.00 =  1003.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3104.00 TO NODE   3105.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  10.74
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.012
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"                B        1.50      0.30       1.00    66
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           B        0.90      0.30       1.00    69
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        3.50      0.25       1.00    77
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    5.90      SUBAREA RUNOFF(CFS) =   19.87
 EFFECTIVE AREA(ACRES) =     15.70   AREA-AVERAGED Fm(INCH/HR) =  0.27
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     15.70       PEAK FLOW RATE(CFS) =      52.95

****************************************************************************
 FLOW PROCESS FROM NODE   3105.00 TO NODE   3106.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   1030.00  DOWNSTREAM(FEET) =   1010.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   462.00   CHANNEL SLOPE =  0.0433
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     52.95
 FLOW VELOCITY(FEET/SEC.) =   7.61   FLOW DEPTH(FEET) =   1.82
 TRAVEL TIME(MIN.) =   1.01   Tc(MIN.) =  11.75
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3106.00 =  1465.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3105.00 TO NODE   3106.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  11.75
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.810
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"                B        0.90      0.30       1.00    66
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           B        3.10      0.30       1.00    69
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        6.20      0.25       1.00    77
```

```
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        0.10      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   10.30      SUBAREA RUNOFF(CFS) =   32.82
  EFFECTIVE AREA(ACRES) =     26.00   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     26.00       PEAK FLOW RATE(CFS) =      82.91

****************************************************************************
  FLOW PROCESS FROM NODE   3106.00 TO NODE   3107.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1010.00  DOWNSTREAM(FEET) =    980.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   589.00   CHANNEL SLOPE =  0.0509
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     82.91
  FLOW VELOCITY(FEET/SEC.) =   8.98   FLOW DEPTH(FEET) =   1.89
  TRAVEL TIME(MIN.) =   1.09   Tc(MIN.) =  12.84
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3107.00 =  2054.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3106.00 TO NODE   3107.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.84
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.611
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        1.30      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        2.70      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        4.30      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        1.50      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    9.80      SUBAREA RUNOFF(CFS) =   29.46
  EFFECTIVE AREA(ACRES) =     35.80   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     35.80       PEAK FLOW RATE(CFS) =     107.70

****************************************************************************
  FLOW PROCESS FROM NODE   3107.00 TO NODE   3108.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    980.00  DOWNSTREAM(FEET) =    970.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   322.00   CHANNEL SLOPE =  0.0311
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    107.70
  FLOW VELOCITY(FEET/SEC.) =   8.01   FLOW DEPTH(FEET) =   2.46
  TRAVEL TIME(MIN.) =   0.67   Tc(MIN.) =  13.51
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3108.00 =  2376.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3107.00 TO NODE   3108.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  13.51
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.514
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        1.20      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        3.90      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        8.60      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        2.40      0.25      1.00    79
  NATURAL FAIR COVER
  "WOODLAND"                  C        2.20      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   18.30      SUBAREA RUNOFF(CFS) =   53.53
  EFFECTIVE AREA(ACRES) =     54.10   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     54.10       PEAK FLOW RATE(CFS) =     158.12

****************************************************************************
  FLOW PROCESS FROM NODE   3108.00 TO NODE   3109.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    970.00  DOWNSTREAM(FEET) =    950.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   654.00   CHANNEL SLOPE =  0.0306
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    158.12
  FLOW VELOCITY(FEET/SEC.) =   8.72   FLOW DEPTH(FEET) =   2.70
  TRAVEL TIME(MIN.) =   1.25   Tc(MIN.) =  14.76
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3109.00 =  3030.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3108.00 TO NODE   3109.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  14.76
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.334
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        1.30      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        6.30      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.20      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.90      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       10.40      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        6.00      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   25.10      SUBAREA RUNOFF(CFS) =   69.32
  EFFECTIVE AREA(ACRES) =     79.20   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     79.20       PEAK FLOW RATE(CFS) =     218.68
```

```
****************************************************************************
  FLOW PROCESS FROM NODE   3108.00 TO NODE   3109.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  14.76
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.334
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  C        0.30      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.30      SUBAREA RUNOFF(CFS) =    0.83
  EFFECTIVE AREA(ACRES) =     79.50   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     79.50       PEAK FLOW RATE(CFS) =     219.52

****************************************************************************
  FLOW PROCESS FROM NODE   3109.00 TO NODE   3110.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    950.00  DOWNSTREAM(FEET) =    890.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1548.00   CHANNEL SLOPE =  0.0388
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    219.52
  FLOW VELOCITY(FEET/SEC.) =  10.37   FLOW DEPTH(FEET) =   3.02
  TRAVEL TIME(MIN.) =   2.49   Tc(MIN.) =  17.25
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3110.00 =  4578.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3109.00 TO NODE   3110.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.25
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.048
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        5.50      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B       10.40      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B        2.20      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        3.80      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       22.10      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        1.80      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   45.80      SUBAREA RUNOFF(CFS) =  114.52
  EFFECTIVE AREA(ACRES) =    125.30   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    125.30       PEAK FLOW RATE(CFS) =     313.56

****************************************************************************
  FLOW PROCESS FROM NODE   3110.00 TO NODE   3111.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    890.00  DOWNSTREAM(FEET) =    850.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1572.00   CHANNEL SLOPE =  0.0254
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    313.56
  FLOW VELOCITY(FEET/SEC.) =   9.67   FLOW DEPTH(FEET) =   3.72
  TRAVEL TIME(MIN.) =   2.71   Tc(MIN.) =  19.96
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3111.00 =  6150.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3110.00 TO NODE   3111.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.96
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.804
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        0.40      0.30      1.00    63
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.80      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        9.40      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B        1.60      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        3.50      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       23.40      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   39.10      SUBAREA RUNOFF(CFS) =   89.31
  EFFECTIVE AREA(ACRES) =    164.40   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    164.40       PEAK FLOW RATE(CFS) =     375.31

****************************************************************************
  FLOW PROCESS FROM NODE   3110.00 TO NODE   3111.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.96
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.804
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        4.70      0.25      1.00    79
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        0.80      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                  D        1.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    6.60      SUBAREA RUNOFF(CFS) =   15.25
  EFFECTIVE AREA(ACRES) =    171.00   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    171.00       PEAK FLOW RATE(CFS) =     390.57

****************************************************************************
  FLOW PROCESS FROM NODE   3111.00 TO NODE   3112.00 IS CODE =  51
----------------------------------------------------------------------------
```

```
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    850.00  DOWNSTREAM(FEET) =    810.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1623.00   CHANNEL SLOPE =  0.0246
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    390.57
  FLOW VELOCITY(FEET/SEC.) =  10.13   FLOW DEPTH(FEET) =   4.19
  TRAVEL TIME(MIN.) =   2.67   Tc(MIN.) =  22.63
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3112.00 =  7773.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3111.00 TO NODE   3112.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  22.63
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.602
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        B        1.50      0.30       0.50    56
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        3.10      0.30       1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B       10.70      0.30       1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.40      0.30       1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.50      0.25       1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       16.70      0.25       1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =   32.90      SUBAREA RUNOFF(CFS) =   69.15
  EFFECTIVE AREA(ACRES) =    203.90   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    203.90       PEAK FLOW RATE(CFS) =     428.73

****************************************************************************
  FLOW PROCESS FROM NODE   3111.00 TO NODE   3112.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  22.63
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.602
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        2.30      0.25       1.00    79
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D        5.10      0.20       0.50    75
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           D        0.90      0.20       1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.40      0.20       1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.71
  SUBAREA AREA(ACRES) =    8.70      SUBAREA RUNOFF(CFS) =   19.17
  EFFECTIVE AREA(ACRES) =    212.60   AREA-AVERAGED Fm(INCH/HR) =  0.26
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =    212.60       PEAK FLOW RATE(CFS) =     447.89

****************************************************************************
  FLOW PROCESS FROM NODE   3112.00 TO NODE   3113.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    810.00  DOWNSTREAM(FEET) =    770.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1754.00   CHANNEL SLOPE =  0.0228
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    447.89
  FLOW VELOCITY(FEET/SEC.) =  10.18   FLOW DEPTH(FEET) =   4.59
  TRAVEL TIME(MIN.) =   2.87   Tc(MIN.) =  25.50
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3113.00 =  9527.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3112.00 TO NODE   3113.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  25.50
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.434
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        B       11.20      0.30       0.50    56
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        2.90      0.30       1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B       10.30      0.30       1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.40      0.30       1.00    60
  NATURAL FAIR COVER
  "GRASS"                     C        1.10      0.25       1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       19.10      0.25       1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.88
  SUBAREA AREA(ACRES) =   45.00      SUBAREA RUNOFF(CFS) =   88.85
  EFFECTIVE AREA(ACRES) =    257.60   AREA-AVERAGED Fm(INCH/HR) =  0.26
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =    257.60       PEAK FLOW RATE(CFS) =     504.54

****************************************************************************
  FLOW PROCESS FROM NODE   3112.00 TO NODE   3113.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  MAINLINE Tc(MIN) =  25.50
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.434
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        4.00      0.25       1.00    79
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D       16.30      0.20       0.50    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.60
  SUBAREA AREA(ACRES) =   20.30      SUBAREA RUNOFF(CFS) =   42.10
  EFFECTIVE AREA(ACRES) =    277.90   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.94
  TOTAL AREA(ACRES) =    277.90       PEAK FLOW RATE(CFS) =     546.64

****************************************************************************
  FLOW PROCESS FROM NODE   3113.00 TO NODE   3114.00 IS CODE =  51
----------------------------------------------------------------------------
```

```
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    770.00  DOWNSTREAM(FEET) =    740.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1443.00   CHANNEL SLOPE =  0.0208
 CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    546.64
 FLOW VELOCITY(FEET/SEC.) =  10.33   FLOW DEPTH(FEET) =   4.87
 TRAVEL TIME(MIN.) =   2.33   Tc(MIN.) =  27.83
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3114.00 = 10970.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3113.00 TO NODE   3114.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
 MAINLINE Tc(MIN) =  27.83
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.316
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"       B        8.10      0.30       0.50    56
 NATURAL FAIR COVER
 "OPEN BRUSH"               B        1.20      0.30       1.00    66
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          B       17.80      0.30       1.00    69
 NATURAL FAIR COVER
 "WOODLAND"                 B        2.00      0.30       1.00    60
 NATURAL FAIR COVER
 "GRASS"                    C        0.20      0.25       1.00    79
 NATURAL FAIR COVER
 "OPEN BRUSH"               C        7.00      0.25       1.00    77
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.89
 SUBAREA AREA(ACRES) =   36.30      SUBAREA RUNOFF(CFS) =   67.26
 EFFECTIVE AREA(ACRES) =    314.20   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.93
 TOTAL AREA(ACRES) =    314.20       PEAK FLOW RATE(CFS) =     584.27

****************************************************************************
 FLOW PROCESS FROM NODE   3113.00 TO NODE   3114.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
 MAINLINE Tc(MIN) =  27.83
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.316
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          C        8.60      0.25       1.00    79
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"       D       10.50      0.20       0.50    75
 NATURAL FAIR COVER
 "OPEN BRUSH"               D        0.60      0.20       1.00    83
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.73
 SUBAREA AREA(ACRES) =   19.70      SUBAREA RUNOFF(CFS) =   38.07
 EFFECTIVE AREA(ACRES) =    333.90   AREA-AVERAGED Fm(INCH/HR) =  0.24
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.92
 TOTAL AREA(ACRES) =    333.90       PEAK FLOW RATE(CFS) =     622.34

****************************************************************************
 FLOW PROCESS FROM NODE   3114.00 TO NODE   3135.00 IS CODE =  51
----------------------------------------------------------------------------
```

```
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    740.00  DOWNSTREAM(FEET) =    710.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1534.00   CHANNEL SLOPE =  0.0196
 CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    622.34
 FLOW VELOCITY(FEET/SEC.) =  10.44   FLOW DEPTH(FEET) =   5.28
 TRAVEL TIME(MIN.) =   2.45   Tc(MIN.) =  30.28
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3135.00 = 12504.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3114.00 TO NODE   3135.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
 MAINLINE Tc(MIN) =  30.28
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.209
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"       B        4.30      0.30       0.50    56
 NATURAL FAIR COVER
 "OPEN BRUSH"               B        2.20      0.30       1.00    66
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          B       16.30      0.30       1.00    69
 NATURAL FAIR COVER
 "OPEN BRUSH"               C        2.30      0.25       1.00    77
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          C        0.40      0.25       1.00    79
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"       D        5.00      0.20       0.50    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.85
 SUBAREA AREA(ACRES) =   30.50      SUBAREA RUNOFF(CFS) =   54.01
 EFFECTIVE AREA(ACRES) =    364.40   AREA-AVERAGED Fm(INCH/HR) =  0.24
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.91
 TOTAL AREA(ACRES) =    364.40       PEAK FLOW RATE(CFS) =     644.47

****************************************************************************
 FLOW PROCESS FROM NODE   3114.00 TO NODE   3135.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
 MAINLINE Tc(MIN) =  30.28
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.209
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"               D        9.70      0.20       1.00    83
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          D        1.80      0.20       1.00    84
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   11.50      SUBAREA RUNOFF(CFS) =   20.80
 EFFECTIVE AREA(ACRES) =    375.90   AREA-AVERAGED Fm(INCH/HR) =  0.24
 AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.92
 TOTAL AREA(ACRES) =    375.90       PEAK FLOW RATE(CFS) =     665.26

****************************************************************************
 FLOW PROCESS FROM NODE   3135.00 TO NODE   3135.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
================================================================================
```

```
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  30.28
 RAINFALL INTENSITY(INCH/HR) =   2.21
 AREA-AVERAGED Fm(INCH/HR) =  0.24
 AREA-AVERAGED Fp(INCH/HR) =  0.26
 AREA-AVERAGED Ap =  0.92
 EFFECTIVE STREAM AREA(ACRES) =   375.90
 TOTAL STREAM AREA(ACRES) =   375.90
 PEAK FLOW RATE(CFS) AT CONFLUENCE =    665.26

****************************************************************************
 FLOW PROCESS FROM NODE   3120.00 TO NODE   3121.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
 >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   313.00
 ELEVATION DATA: UPSTREAM(FEET) =   1215.00  DOWNSTREAM(FEET) =   1100.00

 Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
 SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    8.590
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.577
 SUBAREA Tc AND LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS   Tc
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        0.70      0.25      1.00    77    8.59
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA RUNOFF(CFS) =      2.73
 TOTAL AREA(ACRES) =      0.70   PEAK FLOW RATE(CFS) =      2.73

****************************************************************************
 FLOW PROCESS FROM NODE   3121.00 TO NODE   3122.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   1100.00  DOWNSTREAM(FEET) =   1060.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   261.00   CHANNEL SLOPE =  0.1533
 CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
 CHANNEL FLOW THRU SUBAREA(CFS) =      2.73
 FLOW VELOCITY(FEET/SEC.) =   5.65   FLOW DEPTH(FEET) =   0.36
 TRAVEL TIME(MIN.) =   0.77   Tc(MIN.) =   9.36
 LONGEST FLOWPATH FROM NODE   3120.00 TO NODE   3122.00 =   574.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3121.00 TO NODE   3122.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =   9.36
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.350
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                     B        0.10      0.30      1.00    69
 NATURAL FAIR COVER
 "OPEN BRUSH"                B        0.70      0.30      1.00    66
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        0.60      0.25      1.00    77
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    1.40      SUBAREA RUNOFF(CFS) =    5.13
 EFFECTIVE AREA(ACRES) =      2.10   AREA-AVERAGED Fm(INCH/HR) =  0.27
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =      2.10       PEAK FLOW RATE(CFS) =       7.71

****************************************************************************
 FLOW PROCESS FROM NODE   3122.00 TO NODE   3123.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   1060.00  DOWNSTREAM(FEET) =   1040.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   137.00   CHANNEL SLOPE =  0.1460
 CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
 CHANNEL FLOW THRU SUBAREA(CFS) =      7.71
 FLOW VELOCITY(FEET/SEC.) =   7.38   FLOW DEPTH(FEET) =   0.64
 TRAVEL TIME(MIN.) =   0.31   Tc(MIN.) =   9.67
 LONGEST FLOWPATH FROM NODE   3120.00 TO NODE   3123.00 =   711.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3122.00 TO NODE   3123.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =   9.67
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.258
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                     B        0.20      0.30      1.00    69
 NATURAL FAIR COVER
 "OPEN BRUSH"                B        0.50      0.30      1.00    66
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        1.20      0.25      1.00    77
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    1.90      SUBAREA RUNOFF(CFS) =    6.82
 EFFECTIVE AREA(ACRES) =      4.00   AREA-AVERAGED Fm(INCH/HR) =  0.27
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =      4.00       PEAK FLOW RATE(CFS) =      14.36

****************************************************************************
 FLOW PROCESS FROM NODE   3123.00 TO NODE   3124.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   1040.00  DOWNSTREAM(FEET) =    990.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   450.00   CHANNEL SLOPE =  0.1111
 CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     14.36
 FLOW VELOCITY(FEET/SEC.) =   7.84   FLOW DEPTH(FEET) =   0.94
 TRAVEL TIME(MIN.) =   0.96   Tc(MIN.) =  10.63
 LONGEST FLOWPATH FROM NODE   3120.00 TO NODE   3124.00 =  1161.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3123.00 TO NODE   3124.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  10.63
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.035
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
```

```
  NATURAL FAIR COVER
  "GRASS"                    B        0.90      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.50      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.20      0.30      1.00    60
  NATURAL FAIR COVER
  "GRASS"                    C        0.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        1.90      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    4.90      SUBAREA RUNOFF(CFS) =   16.57
  EFFECTIVE AREA(ACRES) =      8.90   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      8.90       PEAK FLOW RATE(CFS) =      30.13

****************************************************************************
  FLOW PROCESS FROM NODE   3124.00 TO NODE   3125.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    990.00  DOWNSTREAM(FEET) =    975.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   258.00   CHANNEL SLOPE =  0.0581
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     30.13
  FLOW VELOCITY(FEET/SEC.) =   7.32   FLOW DEPTH(FEET) =   1.26
  TRAVEL TIME(MIN.) =   0.59   Tc(MIN.) =  11.21
  LONGEST FLOWPATH FROM NODE   3120.00 TO NODE   3125.00 =  1419.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3124.00 TO NODE   3125.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.21
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.917
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B        0.90      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.20      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        0.80      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                    C        0.10      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        1.80      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.10      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.90      SUBAREA RUNOFF(CFS) =   12.82
  EFFECTIVE AREA(ACRES) =     12.80   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     12.80       PEAK FLOW RATE(CFS) =      42.01

****************************************************************************
  FLOW PROCESS FROM NODE   3125.00 TO NODE   3126.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    975.00  DOWNSTREAM(FEET) =    970.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   109.00   CHANNEL SLOPE =  0.0459
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     42.01
  FLOW VELOCITY(FEET/SEC.) =   7.31   FLOW DEPTH(FEET) =   1.60
  TRAVEL TIME(MIN.) =   0.25   Tc(MIN.) =  11.46
  LONGEST FLOWPATH FROM NODE   3120.00 TO NODE   3126.00 =  1528.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3125.00 TO NODE   3126.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.46
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.868
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.10      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                    B        1.30      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        0.90      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B        0.10      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B        1.10      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        0.60      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    4.10      SUBAREA RUNOFF(CFS) =   13.19
  EFFECTIVE AREA(ACRES) =     16.90   AREA-AVERAGED Fm(INCH/HR) =  0.28
  AREA-AVERAGED Fp(INCH/HR) =  0.28  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     16.90       PEAK FLOW RATE(CFS) =      54.63

****************************************************************************
  FLOW PROCESS FROM NODE   3125.00 TO NODE   3126.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  11.46
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.868
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        0.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        4.00      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.30      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    4.70      SUBAREA RUNOFF(CFS) =   15.30
  EFFECTIVE AREA(ACRES) =     21.60   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     21.60       PEAK FLOW RATE(CFS) =      69.94

****************************************************************************
  FLOW PROCESS FROM NODE   3126.00 TO NODE   3127.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
```

```
 ELEVATION DATA: UPSTREAM(FEET) =    970.00  DOWNSTREAM(FEET) =    940.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   696.00   CHANNEL SLOPE =  0.0431
 CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     69.94
 FLOW VELOCITY(FEET/SEC.) =   8.06   FLOW DEPTH(FEET) =   1.81
 TRAVEL TIME(MIN.) =   1.44   Tc(MIN.) =  12.90
 LONGEST FLOWPATH FROM NODE   3120.00 TO NODE   3127.00 =  2224.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3126.00 TO NODE   3127.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  12.90
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.602
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       B         2.70      0.30      1.00    63
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           B         1.50      0.30      1.00    69
 NATURAL FAIR COVER
 "WOODLAND"                  B         0.50      0.30      1.00    60
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       C         2.60      0.25      1.00    75
 NATURAL FAIR COVER
 "OPEN BRUSH"                C         1.80      0.25      1.00    77
 NATURAL FAIR COVER
 "WOODLAND"                  C         0.20      0.25      1.00    73
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =     9.30      SUBAREA RUNOFF(CFS) =   27.85
 EFFECTIVE AREA(ACRES) =     30.90   AREA-AVERAGED Fm(INCH/HR) =  0.27
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     30.90       PEAK FLOW RATE(CFS) =      92.62

****************************************************************************
 FLOW PROCESS FROM NODE   3127.00 TO NODE   3128.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    940.00  DOWNSTREAM(FEET) =    920.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   511.00   CHANNEL SLOPE =  0.0391
 CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
 CHANNEL FLOW THRU SUBAREA(CFS) =     92.62
 FLOW VELOCITY(FEET/SEC.) =   8.38   FLOW DEPTH(FEET) =   2.15
 TRAVEL TIME(MIN.) =   1.02   Tc(MIN.) =  13.92
 LONGEST FLOWPATH FROM NODE   3120.00 TO NODE   3128.00 =  2735.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3127.00 TO NODE   3128.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  13.92
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.456
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       B         3.00      0.30      1.00    63
 NATURAL FAIR COVER
 "OPEN BRUSH"                B         1.40      0.30      1.00    66
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           B         8.40      0.30      1.00    69
 NATURAL FAIR COVER
 "WOODLAND"                  B         0.20      0.30      1.00    60
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       C         8.00      0.25      1.00    75
 NATURAL FAIR COVER
 "OPEN BRUSH"                C         5.20      0.25      1.00    77
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   26.20      SUBAREA RUNOFF(CFS) =   75.01
 EFFECTIVE AREA(ACRES) =     57.10   AREA-AVERAGED Fm(INCH/HR) =  0.27
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     57.10       PEAK FLOW RATE(CFS) =     163.57

****************************************************************************
 FLOW PROCESS FROM NODE   3127.00 TO NODE   3128.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  13.92
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.456
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           C         1.00      0.25      1.00    79
 NATURAL FAIR COVER
 "WOODLAND"                  C         0.50      0.25      1.00    73
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    1.50      SUBAREA RUNOFF(CFS) =    4.33
 EFFECTIVE AREA(ACRES) =     58.60   AREA-AVERAGED Fm(INCH/HR) =  0.27
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     58.60       PEAK FLOW RATE(CFS) =     167.90

****************************************************************************
 FLOW PROCESS FROM NODE   3128.00 TO NODE   3129.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    920.00  DOWNSTREAM(FEET) =    870.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   980.00   CHANNEL SLOPE =  0.0510
 CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    167.90
 FLOW VELOCITY(FEET/SEC.) =  10.79   FLOW DEPTH(FEET) =   2.72
 TRAVEL TIME(MIN.) =   1.51   Tc(MIN.) =  15.43
 LONGEST FLOWPATH FROM NODE   3120.00 TO NODE   3129.00 =  3715.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3128.00 TO NODE   3129.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  15.43
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.252
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       B         0.90      0.30      1.00    63
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           B        11.50      0.30      1.00    69
 NATURAL FAIR COVER
 "WOODLAND"                  B         0.90      0.30      1.00    60
```

```
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        2.10      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        7.30      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        6.10      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   28.80      SUBAREA RUNOFF(CFS) =   77.21
  EFFECTIVE AREA(ACRES) =     87.40   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     87.40       PEAK FLOW RATE(CFS) =     234.33

****************************************************************************
  FLOW PROCESS FROM NODE   3128.00 TO NODE   3129.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  15.43
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.252
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 C        3.30      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    3.30      SUBAREA RUNOFF(CFS) =    8.92
  EFFECTIVE AREA(ACRES) =     90.70   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     90.70       PEAK FLOW RATE(CFS) =     243.25

****************************************************************************
  FLOW PROCESS FROM NODE   3129.00 TO NODE   3130.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    870.00  DOWNSTREAM(FEET) =    840.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   918.00   CHANNEL SLOPE =  0.0327
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    243.25
  FLOW VELOCITY(FEET/SEC.) =   9.99   FLOW DEPTH(FEET) =   3.32
  TRAVEL TIME(MIN.) =   1.53   Tc(MIN.) =  16.96
  LONGEST FLOWPATH FROM NODE   3120.00 TO NODE   3130.00 =  4633.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3129.00 TO NODE   3130.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.96
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.080
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.90      0.30      1.00    63
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.80      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B       26.80      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B        1.40      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        9.90      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       14.60      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   55.40      SUBAREA RUNOFF(CFS) =  139.73
  EFFECTIVE AREA(ACRES) =    146.10   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    146.10       PEAK FLOW RATE(CFS) =     368.98

****************************************************************************
  FLOW PROCESS FROM NODE   3129.00 TO NODE   3130.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  16.96
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.080
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        7.00      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    7.00      SUBAREA RUNOFF(CFS) =   17.83
  EFFECTIVE AREA(ACRES) =    153.10   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    153.10       PEAK FLOW RATE(CFS) =     386.81

****************************************************************************
  FLOW PROCESS FROM NODE   3130.00 TO NODE   3131.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    840.00  DOWNSTREAM(FEET) =    820.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   882.00   CHANNEL SLOPE =  0.0227
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    386.81
  FLOW VELOCITY(FEET/SEC.) =   9.80   FLOW DEPTH(FEET) =   4.26
  TRAVEL TIME(MIN.) =   1.50   Tc(MIN.) =  18.46
  LONGEST FLOWPATH FROM NODE   3120.00 TO NODE   3131.00 =  5515.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3130.00 TO NODE   3131.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.46
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.935
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        2.80      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B       22.40      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B        2.00      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        4.90      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       20.20      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        9.80      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
```

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 SUBAREA AREA(ACRES) =   62.10      SUBAREA RUNOFF(CFS) =  148.86
 EFFECTIVE AREA(ACRES) =    215.20   AREA-AVERAGED Fm(INCH/HR) =  0.27
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    215.20       PEAK FLOW RATE(CFS) =     515.70

****************************************************************************
 FLOW PROCESS FROM NODE   3130.00 TO NODE   3131.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  18.46
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.935
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "WOODLAND"                  C        1.80      0.25      1.00    73
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    1.80      SUBAREA RUNOFF(CFS) =    4.35
 EFFECTIVE AREA(ACRES) =    217.00   AREA-AVERAGED Fm(INCH/HR) =  0.27
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    217.00       PEAK FLOW RATE(CFS) =     520.05

****************************************************************************
 FLOW PROCESS FROM NODE   3131.00 TO NODE   3132.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    820.00  DOWNSTREAM(FEET) =    800.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   901.00   CHANNEL SLOPE =  0.0222
 CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    520.05
 FLOW VELOCITY(FEET/SEC.) =  10.47   FLOW DEPTH(FEET) =   4.98
 TRAVEL TIME(MIN.) =   1.43   Tc(MIN.) =  19.90
 LONGEST FLOWPATH FROM NODE   3120.00 TO NODE   3132.00 =  6416.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3131.00 TO NODE   3132.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  19.90
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.809
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       B        0.90      0.30      1.00    63
 NATURAL FAIR COVER
 "OPEN BRUSH"                B        4.00      0.30      1.00    66
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           B       25.00      0.30      1.00    69
 NATURAL FAIR COVER
 "WOODLAND"                  B        1.80      0.30      1.00    60
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       C        3.90      0.25      1.00    75
 NATURAL FAIR COVER
 "OPEN BRUSH"                C       24.80      0.25      1.00    77
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   60.40      SUBAREA RUNOFF(CFS) =  137.69
 EFFECTIVE AREA(ACRES) =    277.40   AREA-AVERAGED Fm(INCH/HR) =  0.27
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    277.40       PEAK FLOW RATE(CFS) =     633.09

****************************************************************************
 FLOW PROCESS FROM NODE   3131.00 TO NODE   3132.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  19.90
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.809
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           C       11.10      0.25      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   11.10      SUBAREA RUNOFF(CFS) =   25.57
 EFFECTIVE AREA(ACRES) =    288.50   AREA-AVERAGED Fm(INCH/HR) =  0.27
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    288.50       PEAK FLOW RATE(CFS) =     658.66

****************************************************************************
 FLOW PROCESS FROM NODE   3132.00 TO NODE   3133.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    800.00  DOWNSTREAM(FEET) =    780.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   940.00   CHANNEL SLOPE =  0.0213
 CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    658.66
 FLOW VELOCITY(FEET/SEC.) =  10.93   FLOW DEPTH(FEET) =   5.32
 TRAVEL TIME(MIN.) =   1.43   Tc(MIN.) =  21.33
 LONGEST FLOWPATH FROM NODE   3120.00 TO NODE   3133.00 =  7356.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3132.00 TO NODE   3133.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  21.33
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.699
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"                B        2.50      0.30      1.00    66
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           B       22.20      0.30      1.00    69
 NATURAL FAIR COVER
 "GRASS"                     C        0.40      0.25      1.00    79
 NATURAL FAIR COVER
 "OPEN BRUSH"                C       20.10      0.25      1.00    77
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           C        6.60      0.25      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   51.80      SUBAREA RUNOFF(CFS) =  113.06
 EFFECTIVE AREA(ACRES) =    340.30   AREA-AVERAGED Fm(INCH/HR) =  0.27
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    340.30       PEAK FLOW RATE(CFS) =     743.11

****************************************************************************
 FLOW PROCESS FROM NODE   3133.00 TO NODE   3134.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
```

```
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    780.00  DOWNSTREAM(FEET) =    765.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   596.00   CHANNEL SLOPE =  0.0252
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    743.11
  FLOW VELOCITY(FEET/SEC.) =  12.00   FLOW DEPTH(FEET) =   5.42
  TRAVEL TIME(MIN.) =   0.83   Tc(MIN.) =  22.16
  LONGEST FLOWPATH FROM NODE   3120.00 TO NODE   3134.00 =  7952.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3133.00 TO NODE   3134.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  22.16
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.636
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                B       15.60      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B       55.20      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B        3.60      0.30      1.00    60
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.10      0.25      1.00    75
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       75.10      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C       28.10      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  177.70      SUBAREA RUNOFF(CFS) =  378.26
  EFFECTIVE AREA(ACRES) =    518.00   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    518.00       PEAK FLOW RATE(CFS) =    1102.10

****************************************************************************
  FLOW PROCESS FROM NODE   3133.00 TO NODE   3134.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  22.16
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.636
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  C        1.50      0.25      1.00    73
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.50      SUBAREA RUNOFF(CFS) =    3.22
  EFFECTIVE AREA(ACRES) =    519.50   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    519.50       PEAK FLOW RATE(CFS) =    1105.32

****************************************************************************
  FLOW PROCESS FROM NODE   3134.00 TO NODE   3135.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    765.00  DOWNSTREAM(FEET) =    710.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2076.00   CHANNEL SLOPE =  0.0265
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1105.32
  FLOW VELOCITY(FEET/SEC.) =  13.51   FLOW DEPTH(FEET) =   6.20
  TRAVEL TIME(MIN.) =   2.56   Tc(MIN.) =  24.72
  LONGEST FLOWPATH FROM NODE   3120.00 TO NODE   3135.00 = 10028.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3134.00 TO NODE   3135.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  24.72
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.477
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        4.10      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B       39.20      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.40      0.30      1.00    60
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       26.40      0.25      1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C        7.10      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   77.20      SUBAREA RUNOFF(CFS) =  152.76
  EFFECTIVE AREA(ACRES) =    596.70   AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    596.70       PEAK FLOW RATE(CFS) =    1183.64

****************************************************************************
  FLOW PROCESS FROM NODE   3135.00 TO NODE   3135.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  24.72
  RAINFALL INTENSITY(INCH/HR) =   2.48
  AREA-AVERAGED Fm(INCH/HR) =  0.27
  AREA-AVERAGED Fp(INCH/HR) =  0.27
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =   596.70
  TOTAL STREAM AREA(ACRES) =   596.70
  PEAK FLOW RATE(CFS) AT CONFLUENCE =   1183.64

  ** CONFLUENCE DATA **
   STREAM     Q      Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1    665.26  30.28    2.209  0.26( 0.24) 0.92   375.9    3100.00
      2   1183.64  24.72    2.477  0.27( 0.27) 1.00   596.7    3120.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
   STREAM     Q      Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)       (ACRES)    NODE
      1   1800.61  24.72    2.477  0.27( 0.26) 0.97   903.6    3120.00
      2   1705.26  30.28    2.209  0.27( 0.26) 0.97   972.6    3100.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =   1800.61    Tc(MIN.) =    24.72
```

```
 EFFECTIVE AREA(ACRES) =   903.57   AREA-AVERAGED Fm(INCH/HR) =  0.26
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.97
 TOTAL AREA(ACRES) =    972.60
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3135.00 = 12504.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3135.00 TO NODE   3136.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    710.00  DOWNSTREAM(FEET) =    690.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1157.00   CHANNEL SLOPE =  0.0173
 CHANNEL BASE(FEET) =    9.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   9.00
 CHANNEL FLOW THRU SUBAREA(CFS) =   1800.61
 FLOW VELOCITY(FEET/SEC.) =  13.00   FLOW DEPTH(FEET) =   8.10
 TRAVEL TIME(MIN.) =   1.48   Tc(MIN.) =  26.20
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3136.00 = 13661.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3135.00 TO NODE   3136.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  26.20
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.397
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"       B        6.80      0.30       0.50    56
 NATURAL FAIR COVER
 "OPEN BRUSH"               B        3.20      0.30       1.00    66
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          B       28.90      0.30       1.00    69
 NATURAL FAIR COVER
 "WOODLAND"                 B        0.40      0.30       1.00    60
 NATURAL FAIR COVER
 "OPEN BRUSH"               C        4.50      0.25       1.00    77
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"       D        2.90      0.20       0.50    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.90
 SUBAREA AREA(ACRES) =   46.70      SUBAREA RUNOFF(CFS) =   89.80
 EFFECTIVE AREA(ACRES) =    950.27   AREA-AVERAGED Fm(INCH/HR) =  0.26
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.97
 TOTAL AREA(ACRES) =   1019.30       PEAK FLOW RATE(CFS) =    1825.86

****************************************************************************
 FLOW PROCESS FROM NODE   3135.00 TO NODE   3136.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  26.20
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.397
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"               D       11.70      0.20       1.00    83
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          D        9.10      0.20       1.00    84
 NATURAL FAIR COVER
 "WOODLAND"                 D        0.20      0.20       1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   21.00      SUBAREA RUNOFF(CFS) =   41.53
 EFFECTIVE AREA(ACRES) =    971.27   AREA-AVERAGED Fm(INCH/HR) =  0.26
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.97
 TOTAL AREA(ACRES) =   1040.30       PEAK FLOW RATE(CFS) =    1867.40

****************************************************************************
 FLOW PROCESS FROM NODE   3136.00 TO NODE   3137.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    690.00  DOWNSTREAM(FEET) =    685.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   609.00   CHANNEL SLOPE =  0.0082
 CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
 CHANNEL FLOW THRU SUBAREA(CFS) =   1867.40
 FLOW VELOCITY(FEET/SEC.) =   9.92   FLOW DEPTH(FEET) =   9.60
 TRAVEL TIME(MIN.) =   1.02   Tc(MIN.) =  27.22
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3137.00 = 14270.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3136.00 TO NODE   3137.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  27.22
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.344
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"       B        5.80      0.30       0.50    56
 NATURAL FAIR COVER
 "GRASS"                    B        0.40      0.30       1.00    69
 NATURAL FAIR COVER
 "OPEN BRUSH"               B        3.80      0.30       1.00    66
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          B       32.50      0.30       1.00    69
 NATURAL FAIR COVER
 "OPEN BRUSH"               C       29.80      0.25       1.00    77
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          C        3.60      0.25       1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.96
 SUBAREA AREA(ACRES) =   75.90      SUBAREA RUNOFF(CFS) =  141.93
 EFFECTIVE AREA(ACRES) =   1047.17   AREA-AVERAGED Fm(INCH/HR) =  0.26
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.97
 TOTAL AREA(ACRES) =   1116.20       PEAK FLOW RATE(CFS) =    1962.84

****************************************************************************
 FLOW PROCESS FROM NODE   3136.00 TO NODE   3137.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  27.22
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.344
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"       D        0.40      0.20       0.50    75
 NATURAL FAIR COVER
 "GRASS"                    D        0.40      0.20       1.00    84
 NATURAL FAIR COVER
 "OPEN BRUSH"               D       10.30      0.20       1.00    83
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          D       11.00      0.20       1.00    84
```

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 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
 SUBAREA AREA(ACRES) =   22.10      SUBAREA RUNOFF(CFS) =   42.69
 EFFECTIVE AREA(ACRES) =   1069.27   AREA-AVERAGED Fm(INCH/HR) =  0.26
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.97
 TOTAL AREA(ACRES) =   1138.30       PEAK FLOW RATE(CFS) =    2005.52

****************************************************************************
 FLOW PROCESS FROM NODE   3137.00 TO NODE   3138.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    685.00  DOWNSTREAM(FEET) =    675.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   740.00   CHANNEL SLOPE =  0.0135
 CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
 CHANNEL FLOW THRU SUBAREA(CFS) =   2005.52
 FLOW VELOCITY(FEET/SEC.) =  12.17   FLOW DEPTH(FEET) =   8.78
 TRAVEL TIME(MIN.) =   1.01   Tc(MIN.) =  28.24
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3138.00 = 15010.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3137.00 TO NODE   3138.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  28.24
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.298
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"       B       20.70      0.30      0.50    56
 NATURAL FAIR COVER
 "OPEN BRUSH"               B        1.50      0.30      1.00    66
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          B        6.20      0.30      1.00    69
 NATURAL FAIR COVER
 "OPEN BRUSH"               C        0.40      0.25      1.00    77
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"       D       11.70      0.20      0.50    75
 NATURAL FAIR COVER
 "GRASS"                    D        2.10      0.20      1.00    84
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.62
 SUBAREA AREA(ACRES) =   42.60      SUBAREA RUNOFF(CFS) =   81.69
 EFFECTIVE AREA(ACRES) =   1111.87   AREA-AVERAGED Fm(INCH/HR) =  0.26
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.96
 TOTAL AREA(ACRES) =   1180.90       PEAK FLOW RATE(CFS) =    2042.18

****************************************************************************
 FLOW PROCESS FROM NODE   3137.00 TO NODE   3138.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  28.24
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.298
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"               D       12.40      0.20      1.00    83
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          D        3.30      0.20      1.00    84
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   15.70      SUBAREA RUNOFF(CFS) =   29.64
 EFFECTIVE AREA(ACRES) =   1127.57   AREA-AVERAGED Fm(INCH/HR) =  0.26
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.96
 TOTAL AREA(ACRES) =   1196.60       PEAK FLOW RATE(CFS) =    2071.82

****************************************************************************
 FLOW PROCESS FROM NODE   3138.00 TO NODE   3139.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    675.00  DOWNSTREAM(FEET) =    655.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   977.00   CHANNEL SLOPE =  0.0205
 CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
 CHANNEL FLOW THRU SUBAREA(CFS) =   2071.82
 FLOW VELOCITY(FEET/SEC.) =  14.33   FLOW DEPTH(FEET) =   8.02
 TRAVEL TIME(MIN.) =   1.14   Tc(MIN.) =  29.37
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3139.00 = 15987.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3138.00 TO NODE   3139.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  29.37
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.248
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      B        0.40      0.30      1.00    63
 AGRICULTURAL POOR COVER
 "FALLOW"                   B        8.60      0.30      1.00    86
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"       B        1.00      0.30      0.50    56
 NATURAL FAIR COVER
 "OPEN BRUSH"               B        9.70      0.30      1.00    66
 COMMERCIAL                 B        5.60      0.30      0.10    56
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          B       12.10      0.30      1.00    69
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.85
 SUBAREA AREA(ACRES) =   37.40      SUBAREA RUNOFF(CFS) =   67.05
 EFFECTIVE AREA(ACRES) =   1164.97   AREA-AVERAGED Fm(INCH/HR) =  0.26
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.95
 TOTAL AREA(ACRES) =   1234.00       PEAK FLOW RATE(CFS) =    2088.12

****************************************************************************
 FLOW PROCESS FROM NODE   3138.00 TO NODE   3139.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  29.37
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.248
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "WOODLAND"                 B        0.20      0.30      1.00    60
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      C        5.40      0.25      1.00    75
 AGRICULTURAL POOR COVER
 "FALLOW"                   C        1.30      0.25      1.00    91
 NATURAL POOR COVER
 "BARREN"                   C        4.00      0.25      1.00    91
 NATURAL FAIR COVER
```

```
"OPEN BRUSH"                C       20.10      0.25      1.00    77
COMMERCIAL                  C        2.70      0.25      0.10    69
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
SUBAREA AREA(ACRES) =   33.70      SUBAREA RUNOFF(CFS) =   61.12
EFFECTIVE AREA(ACRES) =   1198.67   AREA-AVERAGED Fm(INCH/HR) =  0.26
AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.95
TOTAL AREA(ACRES) =   1267.70       PEAK FLOW RATE(CFS) =    2149.24

****************************************************************************
FLOW PROCESS FROM NODE   3138.00 TO NODE   3139.00 IS CODE =  81
----------------------------------------------------------------------------
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
MAINLINE Tc(MIN) =  29.37
* 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.248
SUBAREA LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
     LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
AGRICULTURAL FAIR COVER
"PASTURE,DRYLAND"           C        1.10      0.25      1.00    79
NATURAL FAIR COVER
"WOODLAND"                  C        2.80      0.25      1.00    73
AGRICULTURAL POOR COVER
"FALLOW"                    D        2.20      0.20      1.00    94
NATURAL FAIR COVER
"GRASS"                     D        1.90      0.20      1.00    84
NATURAL FAIR COVER
"OPEN BRUSH"                D       17.50      0.20      1.00    83
COMMERCIAL                  D        2.00      0.20      0.10    75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
SUBAREA AREA(ACRES) =   27.50      SUBAREA RUNOFF(CFS) =   50.82
EFFECTIVE AREA(ACRES) =   1226.17   AREA-AVERAGED Fm(INCH/HR) =  0.25
AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.95
TOTAL AREA(ACRES) =   1295.20       PEAK FLOW RATE(CFS) =    2200.07

****************************************************************************
FLOW PROCESS FROM NODE   3138.00 TO NODE   3139.00 IS CODE =  81
----------------------------------------------------------------------------
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
MAINLINE Tc(MIN) =  29.37
* 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.248
SUBAREA LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
     LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
AGRICULTURAL FAIR COVER
"PASTURE,DRYLAND"           D        1.40      0.20      1.00    84
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
SUBAREA AREA(ACRES) =    1.40      SUBAREA RUNOFF(CFS) =    2.58
EFFECTIVE AREA(ACRES) =   1227.57   AREA-AVERAGED Fm(INCH/HR) =  0.25
AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.95
TOTAL AREA(ACRES) =   1296.60       PEAK FLOW RATE(CFS) =    2202.65

****************************************************************************
FLOW PROCESS FROM NODE   3139.00 TO NODE   3140.00 IS CODE =  51
----------------------------------------------------------------------------
>>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
ELEVATION DATA: UPSTREAM(FEET) =    655.00  DOWNSTREAM(FEET) =    640.00
CHANNEL LENGTH THRU SUBAREA(FEET) =   701.00   CHANNEL SLOPE =  0.0214
CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
CHANNEL FLOW THRU SUBAREA(CFS) =   2202.65
FLOW VELOCITY(FEET/SEC.) =  14.79   FLOW DEPTH(FEET) =   8.19
TRAVEL TIME(MIN.) =   0.79   Tc(MIN.) =  30.16
LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3140.00 = 16688.00 FEET.

****************************************************************************
FLOW PROCESS FROM NODE   3139.00 TO NODE   3140.00 IS CODE =  81
----------------------------------------------------------------------------
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
MAINLINE Tc(MIN) =  30.16
* 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.214
SUBAREA LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
     LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
AGRICULTURAL POOR COVER
"FALLOW"                    B       26.00      0.30      1.00    86
NATURAL FAIR COVER
"OPEN BRUSH"                B        5.80      0.30      1.00    66
NATURAL GOOD COVER
"MEADOWS"                   B        0.90      0.30      1.00    58
AGRICULTURAL FAIR COVER
"PASTURE,DRYLAND"           B        1.00      0.30      1.00    69
NATURAL FAIR COVER
"WOODLAND"                  B        2.80      0.30      1.00    60
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF"       C        1.80      0.25      1.00    75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
SUBAREA AREA(ACRES) =   38.30      SUBAREA RUNOFF(CFS) =   66.05
EFFECTIVE AREA(ACRES) =   1265.87   AREA-AVERAGED Fm(INCH/HR) =  0.26
AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.95
TOTAL AREA(ACRES) =   1334.90       PEAK FLOW RATE(CFS) =    2231.38

****************************************************************************
FLOW PROCESS FROM NODE   3139.00 TO NODE   3140.00 IS CODE =  81
----------------------------------------------------------------------------
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
MAINLINE Tc(MIN) =  30.16
* 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.214
SUBAREA LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
     LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
AGRICULTURAL POOR COVER
"FALLOW"                    C        5.60      0.25      1.00    91
NATURAL FAIR COVER
"OPEN BRUSH"                C       28.50      0.25      1.00    77
NATURAL GOOD COVER
"MEADOWS"                   C        0.20      0.25      1.00    71
NATURAL FAIR COVER
"WOODLAND"                  C        1.80      0.25      1.00    73
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF"       D        0.10      0.20      1.00    81
AGRICULTURAL FAIR COVER
"PASTURE,DRYLAND"           D        0.20      0.20      1.00    84
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
SUBAREA AREA(ACRES) =   36.40      SUBAREA RUNOFF(CFS) =   64.35
EFFECTIVE AREA(ACRES) =   1302.27   AREA-AVERAGED Fm(INCH/HR) =  0.25
AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.95
TOTAL AREA(ACRES) =   1371.30       PEAK FLOW RATE(CFS) =    2295.73

****************************************************************************
FLOW PROCESS FROM NODE   3140.00 TO NODE   3141.00 IS CODE =  51
----------------------------------------------------------------------------
>>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
```

```
 ELEVATION DATA: UPSTREAM(FEET) =    640.00  DOWNSTREAM(FEET) =    620.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   903.00   CHANNEL SLOPE =  0.0221
 CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
 CHANNEL FLOW THRU SUBAREA(CFS) =   2295.73
 FLOW VELOCITY(FEET/SEC.) =  15.15   FLOW DEPTH(FEET) =   8.29
 TRAVEL TIME(MIN.) =   0.99   Tc(MIN.) =  31.16
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3141.00 = 17591.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3140.00 TO NODE   3141.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  31.16
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.176
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL POOR COVER
 "FALLOW"                    B       38.40      0.30       1.00    86
 NATURAL FAIR COVER
 "GRASS"                     B        0.20      0.30       1.00    69
 NATURAL FAIR COVER
 "OPEN BRUSH"                B        3.70      0.30       1.00    66
 COMMERCIAL                  B        0.60      0.30       0.10    56
 NATURAL FAIR COVER
 "WOODLAND"                  B        0.90      0.30       1.00    60
 AGRICULTURAL POOR COVER
 "FALLOW"                    C        0.80      0.25       1.00    91
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
 SUBAREA AREA(ACRES) =   44.60      SUBAREA RUNOFF(CFS) =   75.48
 EFFECTIVE AREA(ACRES) =   1346.87   AREA-AVERAGED Fm(INCH/HR) =  0.26
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.96
 TOTAL AREA(ACRES) =   1415.90       PEAK FLOW RATE(CFS) =    2326.95

****************************************************************************
 FLOW PROCESS FROM NODE   3140.00 TO NODE   3141.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  31.16
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.176
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       D        2.60      0.20       1.00    81
 AGRICULTURAL POOR COVER
 "FALLOW"                    D        8.90      0.20       1.00    94
 NATURAL POOR COVER
 "BARREN"                    D        0.60      0.20       1.00    93
 NATURAL FAIR COVER
 "GRASS"                     D        1.40      0.20       1.00    84
 NATURAL FAIR COVER
 "OPEN BRUSH"                D       16.70      0.20       1.00    83
 COMMERCIAL                  D        0.70      0.20       0.10    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
 SUBAREA AREA(ACRES) =   30.90      SUBAREA RUNOFF(CFS) =   55.07
 EFFECTIVE AREA(ACRES) =   1377.77   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.96
 TOTAL AREA(ACRES) =   1446.80       PEAK FLOW RATE(CFS) =    2382.02

****************************************************************************
```

```
 FLOW PROCESS FROM NODE   3141.00 TO NODE   3142.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    620.00  DOWNSTREAM(FEET) =    590.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1040.00   CHANNEL SLOPE =  0.0288
 CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
 CHANNEL FLOW THRU SUBAREA(CFS) =   2382.02
 FLOW VELOCITY(FEET/SEC.) =  16.86   FLOW DEPTH(FEET) =   7.89
 TRAVEL TIME(MIN.) =   1.03   Tc(MIN.) =  32.19
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3142.00 = 18631.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3141.00 TO NODE   3142.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  32.19
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.137
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL POOR COVER
 "FALLOW"                    B       28.30      0.30       1.00    86
 NATURAL FAIR COVER
 "GRASS"                     B        0.70      0.30       1.00    69
 NATURAL FAIR COVER
 "OPEN BRUSH"                B        4.60      0.30       1.00    66
 NATURAL FAIR COVER
 "WOODLAND"                  B        2.80      0.30       1.00    60
 AGRICULTURAL POOR COVER
 "FALLOW"                    C       24.70      0.25       1.00    91
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       C        2.00      0.25       1.00    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   63.10      SUBAREA RUNOFF(CFS) =  105.52
 EFFECTIVE AREA(ACRES) =   1440.87   AREA-AVERAGED Fm(INCH/HR) =  0.26
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.96
 TOTAL AREA(ACRES) =   1509.90       PEAK FLOW RATE(CFS) =    2439.11

****************************************************************************
 FLOW PROCESS FROM NODE   3141.00 TO NODE   3142.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  32.19
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.137
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"                C       20.50      0.25       1.00    77
 NATURAL FAIR COVER
 "WOODLAND"                  C        2.60      0.25       1.00    73
 AGRICULTURAL POOR COVER
 "FALLOW"                    D        1.80      0.20       1.00    94
 NATURAL FAIR COVER
 "OPEN BRUSH"                D        1.00      0.20       1.00    83
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   25.90      SUBAREA RUNOFF(CFS) =   44.11
 EFFECTIVE AREA(ACRES) =   1466.77   AREA-AVERAGED Fm(INCH/HR) =  0.26
 AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.96
 TOTAL AREA(ACRES) =   1535.80       PEAK FLOW RATE(CFS) =    2483.22
```

```
****************************************************************************
  FLOW PROCESS FROM NODE   3142.00 TO NODE   3143.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    590.00  DOWNSTREAM(FEET) =    560.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1232.00   CHANNEL SLOPE =  0.0244
  CHANNEL BASE(FEET) =   10.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2483.22
  FLOW VELOCITY(FEET/SEC.) =  16.01   FLOW DEPTH(FEET) =   8.42
  TRAVEL TIME(MIN.) =   1.28   Tc(MIN.) =  33.47
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3143.00 = 19863.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3142.00 TO NODE   3143.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  33.47
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.088
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   B       20.00      0.30       1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B        3.10      0.30       1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        4.90      0.30       1.00    66
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B        4.50      0.30       0.60    56
  NATURAL FAIR COVER
  "WOODLAND"                 B        2.40      0.30       1.00    60
  AGRICULTURAL POOR COVER
  "FALLOW"                   C        5.80      0.25       1.00    91
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.96
  SUBAREA AREA(ACRES) =   40.70      SUBAREA RUNOFF(CFS) =   66.25
  EFFECTIVE AREA(ACRES) =   1507.47   AREA-AVERAGED Fm(INCH/HR) =  0.26
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.96
  TOTAL AREA(ACRES) =   1576.50       PEAK FLOW RATE(CFS) =    2485.13

****************************************************************************
  FLOW PROCESS FROM NODE   3142.00 TO NODE   3143.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  33.47
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.088
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        2.60      0.25       1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       11.40      0.25       1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.50      0.25       1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D        1.10      0.20       1.00    81
  AGRICULTURAL POOR COVER
  "FALLOW"                   D        3.20      0.20       1.00    94
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       32.70      0.20       1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   51.50      SUBAREA RUNOFF(CFS) =   86.86
  EFFECTIVE AREA(ACRES) =   1558.97   AREA-AVERAGED Fm(INCH/HR) =  0.26
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.96
  TOTAL AREA(ACRES) =   1628.00       PEAK FLOW RATE(CFS) =    2572.00

****************************************************************************
  FLOW PROCESS FROM NODE   3143.00 TO NODE   3144.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    560.00  DOWNSTREAM(FEET) =    555.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   394.00   CHANNEL SLOPE =  0.0127
  CHANNEL BASE(FEET) =   15.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2572.00
  FLOW VELOCITY(FEET/SEC.) =  12.54   FLOW DEPTH(FEET) =   8.66
  TRAVEL TIME(MIN.) =   0.52   Tc(MIN.) =  33.99
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3144.00 = 20257.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3143.00 TO NODE   3144.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  33.99
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.068
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   B        9.70      0.30       1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B       11.30      0.30       1.00    69
  URBAN FAIR COVER
  "TURF"                     B        0.40      0.30       1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        2.20      0.30       1.00    66
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       B        8.40      0.30       0.60    56
  AGRICULTURAL POOR COVER
  "FALLOW"                   C        1.20      0.25       1.00    91
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.90
  SUBAREA AREA(ACRES) =   33.20      SUBAREA RUNOFF(CFS) =   53.80
  EFFECTIVE AREA(ACRES) =   1592.17   AREA-AVERAGED Fm(INCH/HR) =  0.26
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.96
  TOTAL AREA(ACRES) =   1661.20       PEAK FLOW RATE(CFS) =    2597.89

****************************************************************************
  FLOW PROCESS FROM NODE   3143.00 TO NODE   3144.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  33.99
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.068
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        0.80      0.25       1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        6.00      0.25       1.00    77
  AGRICULTURAL POOR COVER
  "FALLOW"                   D        2.00      0.20       1.00    94
```

```
  NATURAL FAIR COVER
  "GRASS"                  D        1.30      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"             D        6.00      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   16.10      SUBAREA RUNOFF(CFS) =   26.77
  EFFECTIVE AREA(ACRES) =   1608.27   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.96
  TOTAL AREA(ACRES) =   1677.30       PEAK FLOW RATE(CFS) =    2624.65

****************************************************************************
  FLOW PROCESS FROM NODE   3144.00 TO NODE   3145.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    555.00  DOWNSTREAM(FEET) =    540.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   504.00   CHANNEL SLOPE =  0.0298
  CHANNEL BASE(FEET) =   15.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2624.65
  FLOW VELOCITY(FEET/SEC.) =  17.21   FLOW DEPTH(FEET) =   6.95
  TRAVEL TIME(MIN.) =   0.49   Tc(MIN.) =  34.48
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3145.00 = 20761.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3144.00 TO NODE   3145.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  34.48
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.050
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        0.40      0.30      1.00    63
  AGRICULTURAL POOR COVER
  "FALLOW"                    B        5.80      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                     B        3.50      0.30      1.00    69
  URBAN FAIR COVER
  "TURF"                      B        3.30      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        4.90      0.30      1.00    66
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"        B        5.40      0.30      0.60    56
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.91
  SUBAREA AREA(ACRES) =   23.30      SUBAREA RUNOFF(CFS) =   37.28
  EFFECTIVE AREA(ACRES) =   1631.57   AREA-AVERAGED Fm(INCH/HR) =  0.26
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.96
  TOTAL AREA(ACRES) =   1700.60       PEAK FLOW RATE(CFS) =    2635.08

****************************************************************************
  FLOW PROCESS FROM NODE   3144.00 TO NODE   3145.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  34.48
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.050
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  B        1.80      0.30      1.00    60
  AGRICULTURAL POOR COVER
  "FALLOW"                    C        1.30      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                     C        0.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        7.40      0.25      1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        2.70      0.20      1.00    81
  AGRICULTURAL POOR COVER
  "FALLOW"                    D        2.90      0.20      1.00    94
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   16.50      SUBAREA RUNOFF(CFS) =   26.90
  EFFECTIVE AREA(ACRES) =   1648.07   AREA-AVERAGED Fm(INCH/HR) =  0.26
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.96
  TOTAL AREA(ACRES) =   1717.10       PEAK FLOW RATE(CFS) =    2661.98

****************************************************************************
  FLOW PROCESS FROM NODE   3144.00 TO NODE   3145.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  34.48
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.050
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     D        2.40      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D       44.40      0.20      1.00    83
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"        D        0.60      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.70      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   48.10      SUBAREA RUNOFF(CFS) =   80.12
  EFFECTIVE AREA(ACRES) =   1696.17   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.96
  TOTAL AREA(ACRES) =   1765.20       PEAK FLOW RATE(CFS) =    2742.10

****************************************************************************
  FLOW PROCESS FROM NODE   3145.00 TO NODE   3146.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    540.00  DOWNSTREAM(FEET) =    500.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1156.00   CHANNEL SLOPE =  0.0346
  CHANNEL BASE(FEET) =   15.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2742.10
  FLOW VELOCITY(FEET/SEC.) =  18.41   FLOW DEPTH(FEET) =   6.83
  TRAVEL TIME(MIN.) =   1.05   Tc(MIN.) =  35.53
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3146.00 = 21917.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3145.00 TO NODE   3146.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  35.53
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.014
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
```

```
  AGRICULTURAL POOR COVER
  "FALLOW"                    B        2.20      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                     B        6.90      0.30      1.00    69
  URBAN FAIR COVER
  "TURF"                      B        6.60      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.70      0.30      1.00    66
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"        B       11.70      0.30      0.60    56
  AGRICULTURAL POOR COVER
  "FALLOW"                    C        4.70      0.25      1.00    91
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.86
  SUBAREA AREA(ACRES) =   32.80      SUBAREA RUNOFF(CFS) =   52.08
  EFFECTIVE AREA(ACRES) =   1728.97   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.96
  TOTAL AREA(ACRES) =   1798.00       PEAK FLOW RATE(CFS) =    2742.10
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   3145.00 TO NODE   3146.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  35.53
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.014
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        3.50      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C        2.30      0.25      1.00    79
  URBAN FAIR COVER
  "TURF"                      C        0.20      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       12.90      0.25      1.00    77
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"        C        8.00      0.25      0.60    69
  AGRICULTURAL POOR COVER
  "FALLOW"                    D        4.40      0.20      1.00    94
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.90
  SUBAREA AREA(ACRES) =   31.30      SUBAREA RUNOFF(CFS) =   50.62
  EFFECTIVE AREA(ACRES) =   1760.27   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.96
  TOTAL AREA(ACRES) =   1829.30       PEAK FLOW RATE(CFS) =    2790.51

****************************************************************************
  FLOW PROCESS FROM NODE   3145.00 TO NODE   3146.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  35.53
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.014
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     D        8.80      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                      D        2.10      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        4.30      0.20      1.00    83
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"        D        6.00      0.20      0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.89
  SUBAREA AREA(ACRES) =   21.20      SUBAREA RUNOFF(CFS) =   35.05
  EFFECTIVE AREA(ACRES) =   1781.47   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.96
  TOTAL AREA(ACRES) =   1850.50       PEAK FLOW RATE(CFS) =    2825.56

****************************************************************************
  FLOW PROCESS FROM NODE   3146.00 TO NODE   3147.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    500.00  DOWNSTREAM(FEET) =    484.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   399.00   CHANNEL SLOPE =  0.0401
  CHANNEL BASE(FEET) =   15.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2825.56
  FLOW VELOCITY(FEET/SEC.) =  19.57   FLOW DEPTH(FEET) =   6.67
  TRAVEL TIME(MIN.) =   0.34   Tc(MIN.) =  35.87
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3147.00 = 22316.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3146.00 TO NODE   3147.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  35.87
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.004
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                    B        0.90      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                     B       11.10      0.30      1.00    69
  URBAN FAIR COVER
  "TURF"                      B        2.00      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        3.10      0.30      1.00    66
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"        B        3.80      0.30      0.60    56
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.70      0.30      1.00    60
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.93
  SUBAREA AREA(ACRES) =   21.60      SUBAREA RUNOFF(CFS) =   33.54
  EFFECTIVE AREA(ACRES) =   1803.07   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.96
  TOTAL AREA(ACRES) =   1872.10       PEAK FLOW RATE(CFS) =    2842.75

****************************************************************************
  FLOW PROCESS FROM NODE   3146.00 TO NODE   3147.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  35.87
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.004
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                    C        0.70      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                     C        5.80      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.40      0.25      1.00    77
```

```
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        3.90      0.25      0.60    69
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       10.50      0.20      1.00    81
  AGRICULTURAL POOR COVER
  "FALLOW"                   D        3.30      0.20      1.00    94
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.94
  SUBAREA AREA(ACRES) =   24.60      SUBAREA RUNOFF(CFS) =   39.81
  EFFECTIVE AREA(ACRES) =   1827.67   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.96
  TOTAL AREA(ACRES) =   1896.70       PEAK FLOW RATE(CFS) =    2882.55

****************************************************************************
  FLOW PROCESS FROM NODE   3146.00 TO NODE   3147.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  35.87
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.004
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D        6.60      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                     D        0.30      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       42.40      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D        4.20      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   53.50      SUBAREA RUNOFF(CFS) =   86.86
  EFFECTIVE AREA(ACRES) =   1881.17   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.96
  TOTAL AREA(ACRES) =   1950.20       PEAK FLOW RATE(CFS) =    2969.42

****************************************************************************
  FLOW PROCESS FROM NODE   3147.00 TO NODE   3148.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    484.00  DOWNSTREAM(FEET) =    460.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1058.00   CHANNEL SLOPE =  0.0227
  CHANNEL BASE(FEET) =   15.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2969.42
  FLOW VELOCITY(FEET/SEC.) =  16.12   FLOW DEPTH(FEET) =   8.01
  TRAVEL TIME(MIN.) =   1.09   Tc(MIN.) =  36.96
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3148.00 = 23374.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3147.00 TO NODE   3148.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  36.96
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.971
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B        3.40      0.30      1.00    69
  URBAN FAIR COVER
  "TURF"                     B        1.70      0.30      1.00    65
  NATURAL FAIR COVER
  "GRASS"                    C        3.30      0.25      1.00    79
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        3.10      0.25      0.60    69
  NATURAL FAIR COVER
  "GRASS"                    D        4.20      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.92
  SUBAREA AREA(ACRES) =   15.70      SUBAREA RUNOFF(CFS) =   24.56
  EFFECTIVE AREA(ACRES) =   1896.87   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.96
  TOTAL AREA(ACRES) =   1965.90       PEAK FLOW RATE(CFS) =    2969.42
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   3148.00 TO NODE   3149.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    460.00  DOWNSTREAM(FEET) =    440.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1137.00   CHANNEL SLOPE =  0.0176
  CHANNEL BASE(FEET) =   15.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   2969.42
  FLOW VELOCITY(FEET/SEC.) =  14.69   FLOW DEPTH(FEET) =   8.57
  TRAVEL TIME(MIN.) =   1.29   Tc(MIN.) =  38.25
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3149.00 = 24511.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3148.00 TO NODE   3149.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  38.25
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.932
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   B        0.20      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B       34.10      0.30      1.00    69
  URBAN FAIR COVER
  "TURF"                     B        6.20      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.10      0.30      1.00    66
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"     B        0.40      0.30      1.00    72
  NATURAL FAIR COVER
  "GRASS"                    C        9.60      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   51.60      SUBAREA RUNOFF(CFS) =   76.24
  EFFECTIVE AREA(ACRES) =   1948.47   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.96
  TOTAL AREA(ACRES) =   2017.50       PEAK FLOW RATE(CFS) =    2969.42
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   3148.00 TO NODE   3149.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  38.25
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.932
  SUBAREA LOSS RATE DATA(AMC  II):
```

```
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  URBAN FAIR COVER
  "TURF"                      C        1.10      0.25       1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.10      0.25       1.00    77
  AGRICULTURAL POOR COVER
  "FALLOW"                    D        1.80      0.20       1.00    94
  NATURAL FAIR COVER
  "GRASS"                     D       45.10      0.20       1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D       33.70      0.20       1.00    83
  NATURAL FAIR COVER
  "CHAPARRAL,NARROWLEAF"      D        7.80      0.20       1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   89.60      SUBAREA RUNOFF(CFS) =  139.65
  EFFECTIVE AREA(ACRES) =   2038.07   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.96
  TOTAL AREA(ACRES) =   2107.10       PEAK FLOW RATE(CFS) =    3088.27

****************************************************************************
  FLOW PROCESS FROM NODE   3148.00 TO NODE   3149.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  38.25
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.932
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  D        1.10      0.20       1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.10      SUBAREA RUNOFF(CFS) =    1.72
  EFFECTIVE AREA(ACRES) =   2039.17   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.96
  TOTAL AREA(ACRES) =   2108.20       PEAK FLOW RATE(CFS) =    3089.99

****************************************************************************
  FLOW PROCESS FROM NODE   3149.00 TO NODE   3150.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    440.00  DOWNSTREAM(FEET) =    420.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   579.00   CHANNEL SLOPE =  0.0345
  CHANNEL BASE(FEET) =   15.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3089.99
  FLOW VELOCITY(FEET/SEC.) =  18.99   FLOW DEPTH(FEET) =   7.30
  TRAVEL TIME(MIN.) =   0.51   Tc(MIN.) =  38.76
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3150.00 = 25090.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3149.00 TO NODE   3150.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  38.76
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.917
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                    B        0.90      0.30       1.00    86
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        1.40      0.30       1.00    63
  NATURAL FAIR COVER
  "GRASS"                     B       18.50      0.30       1.00    69
  URBAN FAIR COVER
  "TURF"                      B        4.10      0.30       1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.20      0.30       1.00    66
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"        B        0.40      0.30       0.60    56
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   25.50      SUBAREA RUNOFF(CFS) =   37.16
  EFFECTIVE AREA(ACRES) =   2064.67   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.96
  TOTAL AREA(ACRES) =   2133.70       PEAK FLOW RATE(CFS) =    3099.17

****************************************************************************
  FLOW PROCESS FROM NODE   3149.00 TO NODE   3150.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  38.76
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.917
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.90      0.30       1.00    60
  AGRICULTURAL POOR COVER
  "FALLOW"                    C        0.70      0.25       1.00    91
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C       24.90      0.25       1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C       21.70      0.25       1.00    79
  URBAN FAIR COVER
  "TURF"                      C        0.90      0.25       1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       81.80      0.25       1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =  130.90      SUBAREA RUNOFF(CFS) =  196.38
  EFFECTIVE AREA(ACRES) =   2195.57   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.96
  TOTAL AREA(ACRES) =   2264.60       PEAK FLOW RATE(CFS) =    3295.55

****************************************************************************
  FLOW PROCESS FROM NODE   3149.00 TO NODE   3150.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  38.76
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.917
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"        C        2.30      0.25       0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                  C        5.10      0.25       1.00    73
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        6.20      0.20       1.00    81
  NATURAL FAIR COVER
  "GRASS"                     D        6.00      0.20       1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        5.30      0.20       1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
```

```
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.96
  SUBAREA AREA(ACRES) =   24.90      SUBAREA RUNOFF(CFS) =   38.36
  EFFECTIVE AREA(ACRES) =   2220.47   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.96
  TOTAL AREA(ACRES) =   2289.50       PEAK FLOW RATE(CFS) =    3333.91

****************************************************************************
  FLOW PROCESS FROM NODE   3150.00 TO NODE   3151.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    420.00  DOWNSTREAM(FEET) =    400.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1410.00   CHANNEL SLOPE =  0.0142
  CHANNEL BASE(FEET) =   15.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3333.91
  FLOW VELOCITY(FEET/SEC.) =  14.00   FLOW DEPTH(FEET) =   9.66
  TRAVEL TIME(MIN.) =   1.68   Tc(MIN.) =  40.44
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3151.00 = 26500.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3150.00 TO NODE   3151.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  40.44
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.870
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   B        0.60      0.30      1.00    86
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.20      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                    B       17.10      0.30      1.00    69
  URBAN FAIR COVER
  "TURF"                     B        5.10      0.30      1.00    65
  AGRICULTURAL POOR COVER
  "FALLOW"                   C        4.20      0.25      1.00    91
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        5.90      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   33.10      SUBAREA RUNOFF(CFS) =   47.22
  EFFECTIVE AREA(ACRES) =   2253.57   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.96
  TOTAL AREA(ACRES) =   2322.60       PEAK FLOW RATE(CFS) =    3333.91
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   3150.00 TO NODE   3151.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  40.44
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.870
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C       13.10      0.25      1.00    79
  URBAN FAIR COVER
  "TURF"                     C        1.00      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       36.30      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        5.40      0.25      1.00    73
  NATURAL FAIR COVER
  "GRASS"                    D        1.30      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        3.30      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   60.40      SUBAREA RUNOFF(CFS) =   88.27
  EFFECTIVE AREA(ACRES) =   2313.97   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.96
  TOTAL AREA(ACRES) =   2383.00       PEAK FLOW RATE(CFS) =    3374.90

****************************************************************************
  FLOW PROCESS FROM NODE   3151.00 TO NODE   3152.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    400.00  DOWNSTREAM(FEET) =    398.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   191.00   CHANNEL SLOPE =  0.0105
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3374.90
  FLOW VELOCITY(FEET/SEC.) =  12.39   FLOW DEPTH(FEET) =   9.30
  TRAVEL TIME(MIN.) =   0.26   Tc(MIN.) =  40.69
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3152.00 = 26691.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3151.00 TO NODE   3152.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  40.69
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.864
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B       14.60      0.30      1.00    69
  URBAN FAIR COVER
  "TURF"                     B        0.80      0.30      1.00    65
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        2.40      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                    C       16.80      0.25      1.00    79
  AGRICULTURAL GOOD COVER
  "SMALL GRAIN,CONTOURED"    C        0.20      0.25      1.00    81
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.70      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   35.50      SUBAREA RUNOFF(CFS) =   50.77
  EFFECTIVE AREA(ACRES) =   2349.47   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.96
  TOTAL AREA(ACRES) =   2418.50       PEAK FLOW RATE(CFS) =    3413.36

****************************************************************************
  FLOW PROCESS FROM NODE   3151.00 TO NODE   3152.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  40.69
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.864
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
```

```
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C       15.80      0.25      1.00    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   15.80      SUBAREA RUNOFF(CFS) =   22.95
  EFFECTIVE AREA(ACRES) =   2365.27   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.96
  TOTAL AREA(ACRES) =   2434.30       PEAK FLOW RATE(CFS) =    3436.31

****************************************************************************
  FLOW PROCESS FROM NODE   3152.00 TO NODE   3153.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    398.00  DOWNSTREAM(FEET) =    396.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   231.00   CHANNEL SLOPE =  0.0087
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3436.31
  FLOW VELOCITY(FEET/SEC.) =  11.62   FLOW DEPTH(FEET) =   9.89
  TRAVEL TIME(MIN.) =   0.33   Tc(MIN.) =  41.02
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3153.00 = 26922.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3152.00 TO NODE   3153.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  41.02
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.856
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   B        2.60      0.30      1.00    86
  URBAN FAIR COVER
  "TURF"                     B        1.40      0.30      1.00    65
  AGRICULTURAL POOR COVER
  "FALLOW"                   C       44.50      0.25      1.00    91
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      C        3.30      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                    C        8.30      0.25      1.00    79
  URBAN FAIR COVER
  "TURF"                     C        0.10      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   60.20      SUBAREA RUNOFF(CFS) =   86.86
  EFFECTIVE AREA(ACRES) =   2425.47   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =   2494.50       PEAK FLOW RATE(CFS) =    3506.94

****************************************************************************
  FLOW PROCESS FROM NODE   3152.00 TO NODE   3153.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  41.02
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.856
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       11.30      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        0.40      0.25      1.00    73
```

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  AGRICULTURAL POOR COVER
  "FALLOW"                   D        5.70      0.20      1.00    94
  NATURAL FAIR COVER
  "GRASS"                    D        2.70      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        1.30      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D        0.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   21.80      SUBAREA RUNOFF(CFS) =   31.97
  EFFECTIVE AREA(ACRES) =   2447.27   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =   2516.30       PEAK FLOW RATE(CFS) =    3538.92

****************************************************************************
  FLOW PROCESS FROM NODE   3153.00 TO NODE   3154.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    396.00  DOWNSTREAM(FEET) =    385.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   894.00   CHANNEL SLOPE =  0.0123
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3538.92
  FLOW VELOCITY(FEET/SEC.) =  13.31   FLOW DEPTH(FEET) =   9.13
  TRAVEL TIME(MIN.) =   1.12   Tc(MIN.) =  42.14
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3154.00 = 27816.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3153.00 TO NODE   3154.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  42.14
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.831
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   B        0.20      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B       11.10      0.30      1.00    69
  URBAN FAIR COVER
  "TURF"                     B        7.50      0.30      1.00    65
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.20      0.30      1.00    63
  AGRICULTURAL POOR COVER
  "FALLOW"                   C        0.10      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C        0.20      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   19.30      SUBAREA RUNOFF(CFS) =   26.60
  EFFECTIVE AREA(ACRES) =   2466.57   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =   2535.60       PEAK FLOW RATE(CFS) =    3538.92
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   3153.00 TO NODE   3154.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  42.14
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.831
```

```
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  URBAN FAIR COVER
  "TURF"                      C        0.50      0.25       1.00    77
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        3.70      0.25       1.00    75
  AGRICULTURAL POOR COVER
  "FALLOW"                    D        2.70      0.20       1.00    94
  NATURAL FAIR COVER
  "GRASS"                     D        6.30      0.20       1.00    84
  URBAN FAIR COVER
  "TURF"                      D        0.20      0.20       1.00    82
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   13.40      SUBAREA RUNOFF(CFS) =   19.48
  EFFECTIVE AREA(ACRES) =   2479.97   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =   2549.00       PEAK FLOW RATE(CFS) =    3538.92
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE   3154.00 TO NODE   3155.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    385.00  DOWNSTREAM(FEET) =    380.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   712.00   CHANNEL SLOPE =  0.0070
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3538.92
  FLOW VELOCITY(FEET/SEC.) =  10.69   FLOW DEPTH(FEET) =   9.58
  TRAVEL TIME(MIN.) =   1.11   Tc(MIN.) =  43.25
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3155.00 = 28528.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3154.00 TO NODE   3155.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  43.25
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.805
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                    B        0.50      0.30       1.00    86
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        8.30      0.30       1.00    63
  NATURAL FAIR COVER
  "GRASS"                     B       23.90      0.30       1.00    69
  URBAN FAIR COVER
  "TURF"                      B       19.70      0.30       1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        2.20      0.30       1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        0.40      0.30       1.00    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   55.00      SUBAREA RUNOFF(CFS) =   74.50
  EFFECTIVE AREA(ACRES) =   2534.97   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =   2604.00       PEAK FLOW RATE(CFS) =    3545.77

****************************************************************************
  FLOW PROCESS FROM NODE   3154.00 TO NODE   3155.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  43.25
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.805
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.20      0.30       1.00    60
  AGRICULTURAL POOR COVER
  "FALLOW"                    C        6.60      0.25       1.00    91
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C       48.20      0.25       1.00    75
  NATURAL POOR COVER
  "BARREN"                    C        3.50      0.25       1.00    91
  NATURAL FAIR COVER
  "GRASS"                     C       25.70      0.25       1.00    79
  URBAN FAIR COVER
  "TURF"                      C        0.20      0.25       1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   84.40      SUBAREA RUNOFF(CFS) =  118.12
  EFFECTIVE AREA(ACRES) =   2619.37   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =   2688.40       PEAK FLOW RATE(CFS) =    3663.89

****************************************************************************
  FLOW PROCESS FROM NODE   3154.00 TO NODE   3155.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  43.25
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.805
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       78.70      0.25       1.00    77
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           C       11.40      0.25       1.00    79
  NATURAL FAIR COVER
  "WOODLAND"                  C        1.10      0.25       1.00    73
  AGRICULTURAL POOR COVER
  "FALLOW"                    D        0.90      0.20       1.00    94
  NATURAL FAIR COVER
  "GRASS"                     D        6.40      0.20       1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        1.00      0.20       1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   99.50      SUBAREA RUNOFF(CFS) =  139.64
  EFFECTIVE AREA(ACRES) =   2718.87   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =   2787.90       PEAK FLOW RATE(CFS) =    3803.53

****************************************************************************
  FLOW PROCESS FROM NODE   3154.00 TO NODE   3155.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  43.25
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.805
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
```

```
  "PASTURE,DRYLAND"          D       12.60      0.20      1.00    84
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       20.90      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   33.50      SUBAREA RUNOFF(CFS) =   48.39
  EFFECTIVE AREA(ACRES) =   2752.37   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =   2821.40       PEAK FLOW RATE(CFS) =    3851.92

****************************************************************************
  FLOW PROCESS FROM NODE   3155.00 TO NODE   3156.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    380.00  DOWNSTREAM(FEET) =    360.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   424.00   CHANNEL SLOPE =  0.0472
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3851.92
  FLOW VELOCITY(FEET/SEC.) =  21.45   FLOW DEPTH(FEET) =   5.83
  TRAVEL TIME(MIN.) =   0.33   Tc(MIN.) =  43.58
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3156.00 = 28952.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3155.00 TO NODE   3156.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  43.58
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.798
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   B        0.40      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B       15.00      0.30      1.00    69
  URBAN FAIR COVER
  "TURF"                     B       13.10      0.30      1.00    65
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      B        0.60      0.30      1.00    63
  NATURAL FAIR COVER
  "GRASS"                    C        3.10      0.25      1.00    79
  URBAN FAIR COVER
  "TURF"                     C        0.20      0.25      1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.29
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   32.40      SUBAREA RUNOFF(CFS) =   43.82
  EFFECTIVE AREA(ACRES) =   2784.77   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =   2853.80       PEAK FLOW RATE(CFS) =    3876.97

****************************************************************************
  FLOW PROCESS FROM NODE   3155.00 TO NODE   3156.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  43.58
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.798
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.50      0.25      1.00    77
  NATURAL FAIR COVER
```

```
  "CHAPARRAL,BROADLEAF"      C        2.40      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                    D       11.40      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                     D        1.10      0.20      1.00    82
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"      D       13.50      0.20      1.00    81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   28.90      SUBAREA RUNOFF(CFS) =   41.42
  EFFECTIVE AREA(ACRES) =   2813.67   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =   2882.70       PEAK FLOW RATE(CFS) =    3918.39

****************************************************************************
  FLOW PROCESS FROM NODE   3156.00 TO NODE   3157.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    360.00  DOWNSTREAM(FEET) =    352.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   647.00   CHANNEL SLOPE =  0.0124
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   3918.39
  FLOW VELOCITY(FEET/SEC.) =  13.46   FLOW DEPTH(FEET) =   8.65
  TRAVEL TIME(MIN.) =   0.80   Tc(MIN.) =  44.39
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3157.00 = 29599.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE   3156.00 TO NODE   3157.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  44.39
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.779
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B       11.50      0.30      1.00    69
  URBAN FAIR COVER
  "TURF"                     B        9.30      0.30      1.00    65
  NATURAL FAIR COVER
  "GRASS"                    C        0.40      0.25      1.00    79
  AGRICULTURAL POOR COVER
  "FALLOW"                   D        0.20      0.20      1.00    94
  NATURAL FAIR COVER
  "GRASS"                    D       13.80      0.20      1.00    84
  URBAN FAIR COVER
  "TURF"                     D        0.70      0.20      1.00    82
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   35.90      SUBAREA RUNOFF(CFS) =   49.13
  EFFECTIVE AREA(ACRES) =   2849.57   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =   2918.60       PEAK FLOW RATE(CFS) =    3920.87

****************************************************************************
  FLOW PROCESS FROM NODE   3156.00 TO NODE   3157.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  44.39
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.779
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
```

```
       LAND USE             GROUP   (ACRES)   (INCH/HR)   (DECIMAL)   CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D       25.10      0.20       1.00     81
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   25.10      SUBAREA RUNOFF(CFS) =   35.67
  EFFECTIVE AREA(ACRES) =   2874.67   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =   2943.70       PEAK FLOW RATE(CFS) =    3956.55
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)      =   2943.70  TC(MIN.) =     44.39
  EFFECTIVE AREA(ACRES) =   2874.67  AREA-AVERAGED Fm(INCH/HR)=  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  PEAK FLOW RATE(CFS)   =   3956.55

  ** PEAK FLOW RATE TABLE **
   STREAM     Q      Tc   Intensity   Fp(Fm)     Ap   Ae     HEADWATER
   NUMBER   (CFS) (MIN.) (INCH/HR) (INCH/HR)        (ACRES)    NODE
      1   3956.55  44.39    1.779  0.26( 0.25) 0.97  2874.7    3120.00
      2   3698.90  50.26    1.646  0.26( 0.25) 0.97  2943.7    3100.00
================================================================================
================================================================================
  END OF RATIONAL METHOD ANALYSIS
```

```
 ************************************************************************
             RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
            (Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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                           Analysis prepared by:

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  ************************** DESCRIPTION OF STUDY **************************
 * AREA 08 (PROPOSED CONDITION)                                           *
 * 100-YEAR HIGH CONFIDENCE STORM EVENT                                   *
 * CHIQUITA                                                               *
  ************************************************************************

   FILE NAME: CP08100H.DAT
   TIME/DATE OF STUDY: 07:33 04/01/2004
 ========================================================================
   USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
 ========================================================================
                      --*TIME-OF-CONCENTRATION MODEL*--

   USER SPECIFIED STORM EVENT(YEAR) =  100.00
   SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
   SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
   *DATA BANK RAINFALL USED*
   *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

   *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
      HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
      WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.    (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0312 0.167 0.0150

   GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
     1. Relative Flow-Depth =  0.00 FEET
        as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
     2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
   *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
    OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
   *USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

   UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
     WATERSHED LAG = 0.80 * Tc
           S-GRAPH TYPE                  PERCENTAGE(DECIMAL)
         VALLEY(DEVELOPED)                    0.160
         FOOTHILL                             0.140
         MOUNTAIN                             0.620
         VALLEY(UNDEVELOPED)/DESERT           0.080
         DESERT(UNDEVELOPED)                  0.000
     SIERRA MADRE DEPTH-AREA FACTORS USED.
                     AREA-AVERAGED
         DURATION    RAINFALL(INCH)
         5-MINUTES         0.52
        30-MINUTES         1.09
         1-HOUR            1.45
         3-HOUR            2.43
         6-HOUR            3.36
        24-HOUR            5.63
  *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*

 ************************************************************************
   FLOW PROCESS FROM NODE    800.00 TO NODE    801.00 IS CODE =  21
 ------------------------------------------------------------------------
   >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
   >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
 ========================================================================
   INITIAL SUBAREA FLOW-LENGTH(FEET) =   325.00
   ELEVATION DATA: UPSTREAM(FEET) =    445.00  DOWNSTREAM(FEET) =    420.00

   Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
   SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    6.957
   * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.120
   SUBAREA Tc AND LOSS RATE DATA(AMC  II):
    DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap      SCS   Tc
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
   RESIDENTIAL
   "3-4 DWELLINGS/ACRE"       C        0.20      0.25       0.60    69    6.96
   RESIDENTIAL
   "3-4 DWELLINGS/ACRE"       D        1.10      0.20       0.60    75    6.96
   SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
   SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.60
   SUBAREA RUNOFF(CFS) =      5.84
   TOTAL AREA(ACRES) =      1.30   PEAK FLOW RATE(CFS) =      5.84

 ************************************************************************
   FLOW PROCESS FROM NODE    801.00 TO NODE    802.00 IS CODE =  31
 ------------------------------------------------------------------------
   >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
   >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
 ========================================================================
   ELEVATION DATA: UPSTREAM(FEET) =   420.00  DOWNSTREAM(FEET) =   390.00
   FLOW LENGTH(FEET) =   505.00   MANNING'S N =  0.013
   ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 18.000
   DEPTH OF FLOW IN  18.0 INCH PIPE IS   6.0 INCHES
   PIPE-FLOW VELOCITY(FEET/SEC.) =  11.31
   ESTIMATED PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
   PIPE-FLOW(CFS) =      5.84
   PIPE TRAVEL TIME(MIN.) =   0.74    Tc(MIN.) =   7.70
   LONGEST FLOWPATH FROM NODE    800.00 TO NODE    802.00 =   830.00 FEET.

 ************************************************************************
   FLOW PROCESS FROM NODE    801.00 TO NODE    802.00 IS CODE =  81
 ------------------------------------------------------------------------
   >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 ========================================================================
   MAINLINE Tc(MIN) =   7.70
   * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.840
   SUBAREA LOSS RATE DATA(AMC  II):
    DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap      SCS
        LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
   RESIDENTIAL
   "3-4 DWELLINGS/ACRE"       C        0.40      0.25       0.60    69
   RESIDENTIAL
   "3-4 DWELLINGS/ACRE"       D        1.10      0.20       0.60    75
   SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
   SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.60
   SUBAREA AREA(ACRES) =    1.50      SUBAREA RUNOFF(CFS) =    6.36
   EFFECTIVE AREA(ACRES) =      2.80   AREA-AVERAGED Fm(INCH/HR) =  0.13
   AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  0.60
   TOTAL AREA(ACRES) =      2.80       PEAK FLOW RATE(CFS) =      11.88

 ************************************************************************
   FLOW PROCESS FROM NODE    802.00 TO NODE    803.00 IS CODE =  31
 ------------------------------------------------------------------------
   >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
   >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
```

```
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   390.00  DOWNSTREAM(FEET) =   360.00
  FLOW LENGTH(FEET) =   501.00   MANNING'S N =  0.013
  ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 18.000
  DEPTH OF FLOW IN  18.0 INCH PIPE IS   8.9 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  13.71
  ESTIMATED PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =     11.88
  PIPE TRAVEL TIME(MIN.) =   0.61    Tc(MIN.) =   8.31
  LONGEST FLOWPATH FROM NODE    800.00 TO NODE    803.00 =  1331.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    802.00 TO NODE    803.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   8.31
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.660
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        1.80      0.25      0.60    69
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D        1.10      0.20      0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.60
  SUBAREA AREA(ACRES) =    2.90      SUBAREA RUNOFF(CFS) =   11.80
  EFFECTIVE AREA(ACRES) =      5.70   AREA-AVERAGED Fm(INCH/HR) =  0.13
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.60
  TOTAL AREA(ACRES) =      5.70       PEAK FLOW RATE(CFS) =      23.23

****************************************************************************
  FLOW PROCESS FROM NODE    803.00 TO NODE    804.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   360.00  DOWNSTREAM(FEET) =   340.00
  FLOW LENGTH(FEET) =   323.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  18.0 INCH PIPE IS  13.8 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  15.95
  ESTIMATED PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =     23.23
  PIPE TRAVEL TIME(MIN.) =   0.34    Tc(MIN.) =   8.65
  LONGEST FLOWPATH FROM NODE    800.00 TO NODE    804.00 =  1654.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    803.00 TO NODE    804.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   8.65
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.560
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        2.00      0.25      0.60    69
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D        2.20      0.20      0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.60
  SUBAREA AREA(ACRES) =    4.20      SUBAREA RUNOFF(CFS) =   16.73
  EFFECTIVE AREA(ACRES) =      9.90   AREA-AVERAGED Fm(INCH/HR) =  0.13
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.60
  TOTAL AREA(ACRES) =      9.90       PEAK FLOW RATE(CFS) =      39.44

****************************************************************************
  FLOW PROCESS FROM NODE    804.00 TO NODE    805.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   340.00  DOWNSTREAM(FEET) =   320.00
  FLOW LENGTH(FEET) =   349.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  24.0 INCH PIPE IS  15.8 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  18.03
  ESTIMATED PIPE DIAMETER(INCH) =  24.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =     39.44
  PIPE TRAVEL TIME(MIN.) =   0.32    Tc(MIN.) =   8.97
  LONGEST FLOWPATH FROM NODE    800.00 TO NODE    805.00 =  2003.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    804.00 TO NODE    805.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   8.97
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.465
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        0.40      0.25      0.60    69
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D        3.10      0.20      0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.60
  SUBAREA AREA(ACRES) =    3.50      SUBAREA RUNOFF(CFS) =   13.67
  EFFECTIVE AREA(ACRES) =     13.40   AREA-AVERAGED Fm(INCH/HR) =  0.13
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.60
  TOTAL AREA(ACRES) =     13.40       PEAK FLOW RATE(CFS) =      52.27

****************************************************************************
  FLOW PROCESS FROM NODE    805.00 TO NODE    806.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   320.00  DOWNSTREAM(FEET) =   300.00
  FLOW LENGTH(FEET) =   422.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  27.0 INCH PIPE IS  18.6 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  17.94
  ESTIMATED PIPE DIAMETER(INCH) =  27.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =     52.27
  PIPE TRAVEL TIME(MIN.) =   0.39    Tc(MIN.) =   9.36
  LONGEST FLOWPATH FROM NODE    800.00 TO NODE    806.00 =  2425.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    805.00 TO NODE    806.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.36
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.349
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        0.70      0.25      0.60    69
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D        1.10      0.20      0.60    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
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 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.60
 SUBAREA AREA(ACRES) =    1.80      SUBAREA RUNOFF(CFS) =    6.83
 EFFECTIVE AREA(ACRES) =     15.20   AREA-AVERAGED Fm(INCH/HR) =  0.13
 AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.60
 TOTAL AREA(ACRES) =     15.20       PEAK FLOW RATE(CFS) =      57.70

****************************************************************************
 FLOW PROCESS FROM NODE    806.00 TO NODE    807.00 IS CODE =  31
----------------------------------------------------------------------------
 >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   300.00  DOWNSTREAM(FEET) =   290.00
 FLOW LENGTH(FEET) =   290.00   MANNING'S N =  0.013
 DEPTH OF FLOW IN  30.0 INCH PIPE IS  20.3 INCHES
 PIPE-FLOW VELOCITY(FEET/SEC.) =  16.35
 ESTIMATED PIPE DIAMETER(INCH) =  30.00    NUMBER OF PIPES =   1
 PIPE-FLOW(CFS) =     57.70
 PIPE TRAVEL TIME(MIN.) =   0.30    Tc(MIN.) =   9.66
 LONGEST FLOWPATH FROM NODE    800.00 TO NODE    807.00 =  2715.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    806.00 TO NODE    807.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =   9.66
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.261
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"        C        3.20      0.25      0.60    69
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"        D       10.10      0.20      0.60    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.60
 SUBAREA AREA(ACRES) =   13.30      SUBAREA RUNOFF(CFS) =   49.48
 EFFECTIVE AREA(ACRES) =     28.50   AREA-AVERAGED Fm(INCH/HR) =  0.13
 AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.60
 TOTAL AREA(ACRES) =     28.50       PEAK FLOW RATE(CFS) =     105.98

****************************************************************************
 FLOW PROCESS FROM NODE    807.00 TO NODE    808.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    290.00  DOWNSTREAM(FEET) =    250.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   323.00   CHANNEL SLOPE =  0.1238
 CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    105.98
 FLOW VELOCITY(FEET/SEC.) =  13.38   FLOW DEPTH(FEET) =   1.99
 TRAVEL TIME(MIN.) =   0.40   Tc(MIN.) =  10.06
 LONGEST FLOWPATH FROM NODE    800.00 TO NODE    808.00 =  3038.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    807.00 TO NODE    808.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  10.06
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.148
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        0.20      0.25      1.00    77
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           C        0.20      0.25      1.00    79
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"        C        2.80      0.25      0.60    69
 NATURAL FAIR COVER
 "WOODLAND"                  C        0.40      0.25      1.00    73
 NATURAL FAIR COVER
 "GRASS"                     D        0.20      0.20      1.00    84
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           D        0.40      0.20      1.00    84
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.73
 SUBAREA AREA(ACRES) =    4.20      SUBAREA RUNOFF(CFS) =   15.01
 EFFECTIVE AREA(ACRES) =     32.70   AREA-AVERAGED Fm(INCH/HR) =  0.14
 AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.62
 TOTAL AREA(ACRES) =     32.70       PEAK FLOW RATE(CFS) =     118.09

****************************************************************************
 FLOW PROCESS FROM NODE    807.00 TO NODE    808.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  10.06
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.148
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"        D        8.20      0.20      0.60    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.60
 SUBAREA AREA(ACRES) =    8.20      SUBAREA RUNOFF(CFS) =   29.73
 EFFECTIVE AREA(ACRES) =     40.90   AREA-AVERAGED Fm(INCH/HR) =  0.13
 AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.61
 TOTAL AREA(ACRES) =     40.90       PEAK FLOW RATE(CFS) =     147.82

****************************************************************************
 FLOW PROCESS FROM NODE    808.00 TO NODE    809.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    250.00  DOWNSTREAM(FEET) =    195.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   615.00   CHANNEL SLOPE =  0.0894
 CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    147.82
 FLOW VELOCITY(FEET/SEC.) =  12.86   FLOW DEPTH(FEET) =   2.21
 TRAVEL TIME(MIN.) =   0.80   Tc(MIN.) =  10.86
 LONGEST FLOWPATH FROM NODE    800.00 TO NODE    809.00 =  3653.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    808.00 TO NODE    809.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  10.86
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.988
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                     A        0.40      0.40      1.00    50
 NATURAL FAIR COVER
 "OPEN BRUSH"                A        6.90      0.40      1.00    46
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  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A        4.40      0.40      1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A       12.00      0.40      1.00    36
  NATURAL FAIR COVER
  "GRASS"                    B        4.00      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.40      0.30      1.00    66
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.38
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   29.10      SUBAREA RUNOFF(CFS) =   94.47
  EFFECTIVE AREA(ACRES) =     70.00   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.30  AREA-AVERAGED Ap =  0.77
  TOTAL AREA(ACRES) =     70.00       PEAK FLOW RATE(CFS) =     236.41

****************************************************************************
  FLOW PROCESS FROM NODE    808.00 TO NODE    809.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.86
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.988
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B       16.90      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B        6.20      0.30      1.00    60
  NATURAL POOR COVER
  "BARREN"                   C        0.10      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C       67.20      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       10.00      0.25      1.00    77
  COMMERCIAL                 C        5.20      0.25      0.10    69
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.96
  SUBAREA AREA(ACRES) =  105.60      SUBAREA RUNOFF(CFS) =  355.31
  EFFECTIVE AREA(ACRES) =    175.60   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.28  AREA-AVERAGED Ap =  0.88
  TOTAL AREA(ACRES) =    175.60       PEAK FLOW RATE(CFS) =     591.72

****************************************************************************
  FLOW PROCESS FROM NODE    808.00 TO NODE    809.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.86
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.988
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          C        1.50      0.25      1.00    79
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       C       17.90      0.25      0.20    69
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C        1.30      0.25      0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                 C       46.80      0.25      1.00    73
  NATURAL FAIR COVER
  "GRASS"                    D        2.70      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       11.10      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.82
  SUBAREA AREA(ACRES) =   81.30      SUBAREA RUNOFF(CFS) =  277.50
  EFFECTIVE AREA(ACRES) =    256.90   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.27  AREA-AVERAGED Ap =  0.86
  TOTAL AREA(ACRES) =    256.90       PEAK FLOW RATE(CFS) =     869.22

****************************************************************************
  FLOW PROCESS FROM NODE    808.00 TO NODE    809.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.86
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.988
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  PUBLIC PARK                D        0.10      0.20      0.85    75
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D        0.30      0.20      0.20    75
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D        0.60      0.20      1.00    84
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D       19.50      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D       12.20      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.75
  SUBAREA AREA(ACRES) =   32.70      SUBAREA RUNOFF(CFS) =  112.94
  EFFECTIVE AREA(ACRES) =    289.60   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.85
  TOTAL AREA(ACRES) =    289.60       PEAK FLOW RATE(CFS) =     982.16

****************************************************************************
  FLOW PROCESS FROM NODE    809.00 TO NODE    826.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    195.00  DOWNSTREAM(FEET) =    176.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  6031.00   CHANNEL SLOPE =  0.0032
  CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    982.16
  FLOW VELOCITY(FEET/SEC.) =   4.70   FLOW DEPTH(FEET) =   2.33
  TRAVEL TIME(MIN.) =  21.40   Tc(MIN.) =  32.25
  LONGEST FLOWPATH FROM NODE    800.00 TO NODE    826.00 =  9684.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    809.00 TO NODE    826.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  32.25
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.134
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        0.90      0.40      1.00    46
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A        0.10      0.40      1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A        5.20      0.40      1.00    36
  NATURAL FAIR COVER
  "GRASS"                    B        6.60      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        1.70      0.30      1.00    66
  AGRICULTURAL FAIR COVER
```

```
"PASTURE,DRYLAND"          B        0.40      0.30      1.00    69
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.34
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
SUBAREA AREA(ACRES) =   14.90      SUBAREA RUNOFF(CFS) =   24.04
EFFECTIVE AREA(ACRES) =    304.50   AREA-AVERAGED Fm(INCH/HR) =  0.23
AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.86
TOTAL AREA(ACRES) =    304.50       PEAK FLOW RATE(CFS) =     982.16
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
FLOW PROCESS FROM NODE    809.00 TO NODE    826.00 IS CODE =  81
----------------------------------------------------------------------------
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
MAINLINE Tc(MIN) =  32.25
* 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.134
SUBAREA LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
     LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
NATURAL FAIR COVER
"WOODLAND"                 B       10.30      0.30      1.00    60
NATURAL FAIR COVER
"GRASS"                    C      143.90      0.25      1.00    79
NATURAL FAIR COVER
"OPEN BRUSH"               C       11.30      0.25      1.00    77
COMMERCIAL                 C        2.90      0.25      0.10    69
AGRICULTURAL FAIR COVER
"PASTURE,DRYLAND"          C        0.20      0.25      1.00    79
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF"      C        0.90      0.25      1.00    75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
SUBAREA AREA(ACRES) =  169.50      SUBAREA RUNOFF(CFS) =  287.58
EFFECTIVE AREA(ACRES) =    474.00   AREA-AVERAGED Fm(INCH/HR) =  0.23
AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.90
TOTAL AREA(ACRES) =    474.00       PEAK FLOW RATE(CFS) =     982.16
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
FLOW PROCESS FROM NODE    809.00 TO NODE    826.00 IS CODE =  81
----------------------------------------------------------------------------
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
MAINLINE Tc(MIN) =  32.25
* 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.134
SUBAREA LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
     LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
NATURAL FAIR COVER
"WOODLAND"                 C        8.30      0.25      1.00    73
NATURAL FAIR COVER
"GRASS"                    D        6.50      0.20      1.00    84
NATURAL FAIR COVER
"OPEN BRUSH"               D       21.60      0.20      1.00    83
RESIDENTIAL
"11+ DWELLINGS/ACRE"       D        3.50      0.20      0.20    75
AGRICULTURAL FAIR COVER
"PASTURE,DRYLAND"          D        2.10      0.20      1.00    84
RESIDENTIAL
"3-4 DWELLINGS/ACRE"       D        5.50      0.20      0.60    75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.89
SUBAREA AREA(ACRES) =   47.50      SUBAREA RUNOFF(CFS) =   83.22
EFFECTIVE AREA(ACRES) =    521.50   AREA-AVERAGED Fm(INCH/HR) =  0.23
AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.90
TOTAL AREA(ACRES) =    521.50       PEAK FLOW RATE(CFS) =     982.16
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
FLOW PROCESS FROM NODE    809.00 TO NODE    826.00 IS CODE =  81
----------------------------------------------------------------------------
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
MAINLINE Tc(MIN) =  32.25
* 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.134
SUBAREA LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
     LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
NATURAL FAIR COVER
"WOODLAND"                 D       19.00      0.20      1.00    79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
SUBAREA AREA(ACRES) =   19.00      SUBAREA RUNOFF(CFS) =   33.08
EFFECTIVE AREA(ACRES) =    540.50   AREA-AVERAGED Fm(INCH/HR) =  0.23
AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.91
TOTAL AREA(ACRES) =    540.50       PEAK FLOW RATE(CFS) =     982.16
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
FLOW PROCESS FROM NODE    826.00 TO NODE    826.00 IS CODE =  10
----------------------------------------------------------------------------
>>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
FLOW PROCESS FROM NODE   3157.00 TO NODE   3157.00 IS CODE = 15.1
----------------------------------------------------------------------------
>>>>>DEFINE MEMORY BANK # 2 <<<<<
============================================================================
PEAK FLOWRATE TABLE FILE NAME: CP31100H.DNA
MEMORY BANK #  2 DEFINED AS FOLLOWS:
 STREAM     Q     Tc      Fp(Fm)     Ap   Ae     HEADWATER
 NUMBER   (CFS) (MIN.)  (INCH/HR)        (ACRES)    NODE
    1   3956.55  44.39  0.26( 0.25) 0.97  2874.7    3120.00
    2   3698.90  50.26  0.26( 0.25) 0.97  2943.7    3100.00
  TOTAL AREA(ACRES) =  2943.70
LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3157.00 = 29599.00 FEET.

****************************************************************************
FLOW PROCESS FROM NODE   3157.00 TO NODE   3157.00 IS CODE = 14.0
----------------------------------------------------------------------------
>>>>>MEMORY BANK #  2 COPIED ONTO MAIN-STREAM MEMORY<<<<<
============================================================================

MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
 STREAM     Q     Tc      Fp(Fm)     Ap   Ae     HEADWATER
 NUMBER   (CFS) (MIN.)  (INCH/HR)        (ACRES)    NODE
    1   3956.55  44.39  0.26( 0.25) 0.97  2874.7    3120.00
    2   3698.90  50.26  0.26( 0.25) 0.97  2943.7    3100.00
  TOTAL AREA(ACRES) =   2943.70
LONGEST FLOWPATH FROM NODE   3100.00 TO NODE   3157.00 = 29599.00 FEET.

****************************************************************************
FLOW PROCESS FROM NODE   3157.00 TO NODE   3157.00 IS CODE =  12
----------------------------------------------------------------------------
>>>>>CLEAR MEMORY BANK # 2 <<<<<
============================================================================

****************************************************************************
FLOW PROCESS FROM NODE   3157.00 TO NODE    820.00 IS CODE =  51
----------------------------------------------------------------------------
>>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
```

```
 ELEVATION DATA: UPSTREAM(FEET) =    352.00  DOWNSTREAM(FEET) =    310.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  2262.00   CHANNEL SLOPE =  0.0186
 CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
 CHANNEL FLOW THRU SUBAREA(CFS) =   3956.55
 FLOW VELOCITY(FEET/SEC.) =  15.60   FLOW DEPTH(FEET) =   7.75
 TRAVEL TIME(MIN.) =   2.42   Tc(MIN.) =  46.80
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    820.00 = 31861.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE   3157.00 TO NODE    820.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  46.80
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.724
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL POOR COVER
 "FALLOW"                   B        0.20      0.30       1.00    86
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      B        0.40      0.30       1.00    63
 NATURAL FAIR COVER
 "GRASS"                    B       30.40      0.30       1.00    69
 URBAN FAIR COVER
 "TURF"                     B        7.80      0.30       1.00    65
 AGRICULTURAL POOR COVER
 "FALLOW"                   C        0.60      0.25       1.00    91
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      C       18.30      0.25       1.00    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   57.70      SUBAREA RUNOFF(CFS) =   74.78
 EFFECTIVE AREA(ACRES) =   2932.37   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
 TOTAL AREA(ACRES) =   3001.40       PEAK FLOW RATE(CFS) =    3956.55
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE   3157.00 TO NODE    820.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  46.80
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.724
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                    C       19.40      0.25       1.00    79
 URBAN FAIR COVER
 "TURF"                     C        0.40      0.25       1.00    77
 NATURAL FAIR COVER
 "OPEN BRUSH"               C       36.50      0.25       1.00    77
 NATURAL FAIR COVER
 "GRASS"                    D       19.60      0.20       1.00    84
 URBAN FAIR COVER
 "TURF"                     D        1.00      0.20       1.00    82
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      D       18.40      0.20       1.00    81
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   95.30      SUBAREA RUNOFF(CFS) =  128.14
 EFFECTIVE AREA(ACRES) =   3027.67   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
 TOTAL AREA(ACRES) =   3096.70       PEAK FLOW RATE(CFS) =    4015.63

****************************************************************************
 FLOW PROCESS FROM NODE    820.00 TO NODE    821.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    310.00  DOWNSTREAM(FEET) =    300.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   754.00   CHANNEL SLOPE =  0.0133
 CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
 CHANNEL FLOW THRU SUBAREA(CFS) =   4015.63
 FLOW VELOCITY(FEET/SEC.) =  13.91   FLOW DEPTH(FEET) =   8.60
 TRAVEL TIME(MIN.) =   0.90   Tc(MIN.) =  47.71
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    821.00 = 32615.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    820.00 TO NODE    821.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  47.71
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.703
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                    B       30.70      0.30       1.00    69
 AGRICULTURAL FAIR COVER
 "ORCHARDS"                 B        0.40      0.30       1.00    65
 URBAN FAIR COVER
 "TURF"                     B       15.80      0.30       1.00    65
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          B        0.20      0.30       1.00    69
 NATURAL FAIR COVER
 "GRASS"                    C        0.40      0.25       1.00    79
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      D       53.00      0.20       1.00    81
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =  100.50      SUBAREA RUNOFF(CFS) =  131.67
 EFFECTIVE AREA(ACRES) =   3128.17   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
 TOTAL AREA(ACRES) =   3197.20       PEAK FLOW RATE(CFS) =    4090.66

****************************************************************************
 FLOW PROCESS FROM NODE    820.00 TO NODE    821.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  47.71
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.703
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"       D        4.10      0.20       0.50    75
 NATURAL FAIR COVER
 "GRASS"                    D       60.70      0.20       1.00    84
 AGRICULTURAL FAIR COVER
 "ORCHARDS"                 D        0.70      0.20       1.00    82
 URBAN FAIR COVER
 "TURF"                     D        2.70      0.20       1.00    82
 NATURAL FAIR COVER
 "OPEN BRUSH"               D        2.50      0.20       1.00    83
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          D        6.20      0.20       1.00    84
```

```
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.97
  SUBAREA AREA(ACRES) =   76.90      SUBAREA RUNOFF(CFS) =  104.37
  EFFECTIVE AREA(ACRES) =   3205.07   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =   3274.10       PEAK FLOW RATE(CFS) =    4195.03

****************************************************************************
  FLOW PROCESS FROM NODE    820.00 TO NODE    821.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  47.71
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.703
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.20      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.20      SUBAREA RUNOFF(CFS) =    0.27
  EFFECTIVE AREA(ACRES) =   3205.27   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =   3274.30       PEAK FLOW RATE(CFS) =    4195.30

****************************************************************************
  FLOW PROCESS FROM NODE    821.00 TO NODE    822.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    300.00  DOWNSTREAM(FEET) =    270.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1631.00   CHANNEL SLOPE =  0.0184
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   4195.30
  FLOW VELOCITY(FEET/SEC.) =  15.82   FLOW DEPTH(FEET) =   8.03
  TRAVEL TIME(MIN.) =   1.72   Tc(MIN.) =  49.42
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    822.00 = 34246.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    821.00 TO NODE    822.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  49.42
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.663
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                    B        9.40      0.30      1.00    86
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       B        0.40      0.30      1.00    63
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        B        0.80      0.30      0.50    56
  NATURAL FAIR COVER
  "GRASS"                     B        5.60      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                  B        5.60      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.90      0.30      1.00    66
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =   22.70      SUBAREA RUNOFF(CFS) =   27.96
  EFFECTIVE AREA(ACRES) =   3227.97   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =   3297.00       PEAK FLOW RATE(CFS) =    4195.30
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE    821.00 TO NODE    822.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  49.42
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.663
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                    C        4.30      0.25      1.00    91
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C       20.20      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C       18.70      0.25      1.00    79
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                  C        0.70      0.25      1.00    77
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       41.60      0.25      1.00    77
  AGRICULTURAL POOR COVER
  "FALLOW"                    D        1.70      0.20      1.00    94
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   87.20      SUBAREA RUNOFF(CFS) =  110.99
  EFFECTIVE AREA(ACRES) =   3315.17   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =   3384.20       PEAK FLOW RATE(CFS) =    4220.21

****************************************************************************
  FLOW PROCESS FROM NODE    821.00 TO NODE    822.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  49.42
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.663
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        1.30      0.20      1.00    81
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D        3.00      0.20      0.50    75
  NATURAL FAIR COVER
  "GRASS"                     D        4.50      0.20      1.00    84
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                  D        0.20      0.20      1.00    82
  URBAN FAIR COVER
  "TURF"                      D        0.10      0.20      1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        5.00      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.89
  SUBAREA AREA(ACRES) =   14.10      SUBAREA RUNOFF(CFS) =   18.84
  EFFECTIVE AREA(ACRES) =   3329.27   AREA-AVERAGED Fm(INCH/HR) =  0.25
  AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =   3398.30       PEAK FLOW RATE(CFS) =    4239.05

****************************************************************************
  FLOW PROCESS FROM NODE    821.00 TO NODE    822.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
 MAINLINE Tc(MIN) =  49.42
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.663
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "WOODLAND"                  D        4.00      0.20      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    4.00      SUBAREA RUNOFF(CFS) =    5.27
 EFFECTIVE AREA(ACRES) =   3333.27   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
 TOTAL AREA(ACRES) =   3402.30       PEAK FLOW RATE(CFS) =    4244.31

****************************************************************************
 FLOW PROCESS FROM NODE    822.00 TO NODE    823.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    270.00  DOWNSTREAM(FEET) =    255.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1203.00   CHANNEL SLOPE =  0.0125
 CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
 CHANNEL FLOW THRU SUBAREA(CFS) =   4244.31
 FLOW VELOCITY(FEET/SEC.) =  13.82   FLOW DEPTH(FEET) =   9.03
 TRAVEL TIME(MIN.) =   1.45   Tc(MIN.) =  50.88
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    823.00 = 35449.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    822.00 TO NODE    823.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  50.88
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.636
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL POOR COVER
 "FALLOW"                    B        1.00      0.30      1.00    86
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"        B       29.50      0.30      0.50    56
 NATURAL FAIR COVER
 "GRASS"                     B        8.70      0.30      1.00    69
 NATURAL FAIR COVER
 "OPEN BRUSH"                B        1.60      0.30      1.00    66
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           B        8.50      0.30      1.00    69
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"        B        0.50      0.30      0.60    56
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.70
 SUBAREA AREA(ACRES) =   49.80      SUBAREA RUNOFF(CFS) =   63.92
 EFFECTIVE AREA(ACRES) =   3383.07   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
 TOTAL AREA(ACRES) =   3452.10       PEAK FLOW RATE(CFS) =    4244.31
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE    822.00 TO NODE    823.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  50.88
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.636
 SUBAREA LOSS RATE DATA(AMC  II):
```

```
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       C        4.10      0.25      1.00    75
 NATURAL FAIR COVER
 "GRASS"                     C       13.20      0.25      1.00    79
 NATURAL FAIR COVER
 "OPEN BRUSH"                C       17.40      0.25      1.00    77
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           C        1.30      0.25      1.00    79
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"        C        7.50      0.25      0.60    69
 NATURAL FAIR COVER
 "WOODLAND"                  C        2.70      0.25      1.00    73
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.94
 SUBAREA AREA(ACRES) =   46.20      SUBAREA RUNOFF(CFS) =   58.30
 EFFECTIVE AREA(ACRES) =   3429.27   AREA-AVERAGED Fm(INCH/HR) =  0.25
 AREA-AVERAGED Fp(INCH/HR) =  0.26  AREA-AVERAGED Ap =  0.97
 TOTAL AREA(ACRES) =   3498.30       PEAK FLOW RATE(CFS) =    4284.79

****************************************************************************
 FLOW PROCESS FROM NODE    822.00 TO NODE    823.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  50.88
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.636
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL POOR COVER
 "FALLOW"                    D        1.40      0.20      1.00    94
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"        D       45.60      0.20      0.50    75
 NATURAL FAIR COVER
 "GRASS"                     D       77.10      0.20      1.00    84
 NATURAL FAIR COVER
 "OPEN BRUSH"                D        1.10      0.20      1.00    83
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           D       10.10      0.20      1.00    84
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       D        3.10      0.20      1.00    81
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.84
 SUBAREA AREA(ACRES) =  138.40      SUBAREA RUNOFF(CFS) =  182.97
 EFFECTIVE AREA(ACRES) =   3567.67   AREA-AVERAGED Fm(INCH/HR) =  0.24
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.96
 TOTAL AREA(ACRES) =   3636.70       PEAK FLOW RATE(CFS) =    4467.76

****************************************************************************
 FLOW PROCESS FROM NODE    822.00 TO NODE    823.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  50.88
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.636
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"        D       32.70      0.20      0.60    75
 NATURAL FAIR COVER
 "WOODLAND"                  D        2.00      0.20      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.62
 SUBAREA AREA(ACRES) =   34.70      SUBAREA RUNOFF(CFS) =   47.20
```

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 EFFECTIVE AREA(ACRES) =   3602.37   AREA-AVERAGED Fm(INCH/HR) =  0.24
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.96
 TOTAL AREA(ACRES) =   3671.40       PEAK FLOW RATE(CFS) =    4514.96

****************************************************************************
 FLOW PROCESS FROM NODE    823.00 TO NODE    824.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    255.00  DOWNSTREAM(FEET) =    235.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1331.00   CHANNEL SLOPE =  0.0150
 CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
 CHANNEL FLOW THRU SUBAREA(CFS) =   4514.96
 FLOW VELOCITY(FEET/SEC.) =  15.03   FLOW DEPTH(FEET) =   8.87
 TRAVEL TIME(MIN.) =   1.48   Tc(MIN.) =  52.35
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    824.00 = 36780.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    823.00 TO NODE    824.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  52.35
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.612
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL POOR COVER
 "FALLOW"                   B        2.50      0.30      1.00    86
 NATURAL FAIR COVER
 "GRASS"                    B       10.30      0.30      1.00    69
 NATURAL FAIR COVER
 "OPEN BRUSH"               B        0.60      0.30      1.00    66
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          B        3.90      0.30      1.00    69
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"       B       15.30      0.30      0.60    56
 NATURAL FAIR COVER
 "WOODLAND"                 B        0.40      0.30      1.00    60
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.81
 SUBAREA AREA(ACRES) =   33.00      SUBAREA RUNOFF(CFS) =   40.63
 EFFECTIVE AREA(ACRES) =   3635.37   AREA-AVERAGED Fm(INCH/HR) =  0.24
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.96
 TOTAL AREA(ACRES) =   3704.40       PEAK FLOW RATE(CFS) =    4514.96
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE    823.00 TO NODE    824.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  52.35
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.612
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL POOR COVER
 "FALLOW"                   C        0.20      0.25      1.00    91
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      C        0.20      0.25      1.00    75
 NATURAL FAIR COVER
 "GRASS"                    C        9.90      0.25      1.00    79
 NATURAL FAIR COVER
 "OPEN BRUSH"               C       24.60      0.25      1.00    77
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"       C       63.30      0.25      0.60    69
 NATURAL FAIR COVER
 "WOODLAND"                 C        5.00      0.25      1.00    73
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.75
 SUBAREA AREA(ACRES) =  103.20      SUBAREA RUNOFF(CFS) =  132.23
 EFFECTIVE AREA(ACRES) =   3738.57   AREA-AVERAGED Fm(INCH/HR) =  0.24
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.95
 TOTAL AREA(ACRES) =   3807.60       PEAK FLOW RATE(CFS) =    4611.28

****************************************************************************
 FLOW PROCESS FROM NODE    823.00 TO NODE    824.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  52.35
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.612
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL POOR COVER
 "FALLOW"                   D        1.00      0.20      1.00    94
 NATURAL FAIR COVER
 "GRASS"                    D        3.60      0.20      1.00    84
 NATURAL FAIR COVER
 "OPEN BRUSH"               D        0.50      0.20      1.00    83
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"       D       23.80      0.20      0.60    75
 NATURAL FAIR COVER
 "WOODLAND"                 D        2.30      0.20      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.69
 SUBAREA AREA(ACRES) =   31.20      SUBAREA RUNOFF(CFS) =   41.37
 EFFECTIVE AREA(ACRES) =   3769.77   AREA-AVERAGED Fm(INCH/HR) =  0.24
 AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.95
 TOTAL AREA(ACRES) =   3838.80       PEAK FLOW RATE(CFS) =    4652.65

****************************************************************************
 FLOW PROCESS FROM NODE    824.00 TO NODE    825.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    235.00  DOWNSTREAM(FEET) =    210.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1566.00   CHANNEL SLOPE =  0.0160
 CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
 CHANNEL FLOW THRU SUBAREA(CFS) =   4652.65
 FLOW VELOCITY(FEET/SEC.) =  15.49   FLOW DEPTH(FEET) =   8.87
 TRAVEL TIME(MIN.) =   1.68   Tc(MIN.) =  54.04
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    825.00 = 38346.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    824.00 TO NODE    825.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  54.04
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.585
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"          A        0.40      0.40      1.00    49
 AGRICULTURAL POOR COVER
 "FALLOW"                   B        6.30      0.30      1.00    86
```

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  NATURAL FAIR COVER
  "GRASS"                  B       24.60      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"             B        0.40      0.30      1.00    66
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"        B        2.50      0.30      1.00    69
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"     B        0.90      0.30      0.60    56
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =   35.10      SUBAREA RUNOFF(CFS) =   40.67
  EFFECTIVE AREA(ACRES) =   3804.87   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.95
  TOTAL AREA(ACRES) =   3873.90       PEAK FLOW RATE(CFS) =    4652.65
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE    824.00 TO NODE    825.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  54.04
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.585
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.50      0.30      1.00    60
  AGRICULTURAL POOR COVER
  "FALLOW"                   C        2.00      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                    C       25.50      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        4.80      0.25      1.00    77
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       C       24.20      0.25      0.60    69
  AGRICULTURAL POOR COVER
  "FALLOW"                   D        0.70      0.20      1.00    94
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.83
  SUBAREA AREA(ACRES) =   57.70      SUBAREA RUNOFF(CFS) =   71.53
  EFFECTIVE AREA(ACRES) =   3862.57   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.95
  TOTAL AREA(ACRES) =   3931.60       PEAK FLOW RATE(CFS) =    4673.39

****************************************************************************
  FLOW PROCESS FROM NODE    824.00 TO NODE    825.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  54.04
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.585
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D       14.00      0.20      1.00    84
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       D       39.90      0.20      0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                 D        3.50      0.20      1.00    79
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          D        0.70      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.73
  SUBAREA AREA(ACRES) =   58.10      SUBAREA RUNOFF(CFS) =   75.32
  EFFECTIVE AREA(ACRES) =   3920.67   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.95
  TOTAL AREA(ACRES) =   3989.70       PEAK FLOW RATE(CFS) =    4748.70

****************************************************************************
  FLOW PROCESS FROM NODE    825.00 TO NODE    826.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    210.00  DOWNSTREAM(FEET) =    176.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2723.00   CHANNEL SLOPE =  0.0125
  CHANNEL BASE(FEET) =   25.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =  10.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   4748.70
  FLOW VELOCITY(FEET/SEC.) =  14.28   FLOW DEPTH(FEET) =   9.61
  TRAVEL TIME(MIN.) =   3.18   Tc(MIN.) =  57.22
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    826.00 = 41069.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    825.00 TO NODE    826.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  57.22
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.535
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   A        0.20      0.40      1.00    77
  NATURAL FAIR COVER
  "GRASS"                    A        0.40      0.40      1.00    50
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        0.90      0.40      1.00    46
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          A        0.60      0.40      1.00    49
  NATURAL FAIR COVER
  "WOODLAND"                 A        0.60      0.40      1.00    36
  AGRICULTURAL POOR COVER
  "FALLOW"                   B        3.60      0.30      1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.34
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    6.30      SUBAREA RUNOFF(CFS) =    6.76
  EFFECTIVE AREA(ACRES) =   3926.97   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.95
  TOTAL AREA(ACRES) =   3996.00       PEAK FLOW RATE(CFS) =    4748.70
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE    825.00 TO NODE    826.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  57.22
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.535
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B        0.90      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"          B        0.20      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.40      0.30      1.00    60
  AGRICULTURAL POOR COVER
  "FALLOW"                   C       11.60      0.25      1.00    91
  NATURAL FAIR COVER
```

```
"GRASS"                    C       19.50      0.25      1.00    79
NATURAL FAIR COVER
"OPEN BRUSH"               C       16.60      0.25      1.00    77
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
SUBAREA AREA(ACRES) =   49.20      SUBAREA RUNOFF(CFS) =   56.81
EFFECTIVE AREA(ACRES) =   3976.17   AREA-AVERAGED Fm(INCH/HR) =  0.24
AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.95
TOTAL AREA(ACRES) =   4045.20       PEAK FLOW RATE(CFS) =    4748.70
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
FLOW PROCESS FROM NODE    825.00 TO NODE    826.00 IS CODE =  81
----------------------------------------------------------------------------
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
MAINLINE Tc(MIN) =  57.22
* 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.535
SUBAREA LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
     LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
NATURAL FAIR COVER
"WOODLAND"                 C        1.00      0.25      1.00    73
AGRICULTURAL POOR COVER
"FALLOW"                   D        2.50      0.20      1.00    94
NATURAL FAIR COVER
"GRASS"                    D        4.50      0.20      1.00    84
NATURAL FAIR COVER
"OPEN BRUSH"               D        6.40      0.20      1.00    83
NATURAL FAIR COVER
"WOODLAND"                 D        2.90      0.20      1.00    79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
SUBAREA AREA(ACRES) =   17.30      SUBAREA RUNOFF(CFS) =   20.73
EFFECTIVE AREA(ACRES) =   3993.47   AREA-AVERAGED Fm(INCH/HR) =  0.24
AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  0.95
TOTAL AREA(ACRES) =   4062.50       PEAK FLOW RATE(CFS) =    4748.70
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
FLOW PROCESS FROM NODE    826.00 TO NODE    826.00 IS CODE =   7
----------------------------------------------------------------------------
>>>>>PEAK FLOW RATE ESTIMATOR CHANGED TO UNIT-HYDROGRAPH METHOD<<<<<
>>>>>USING TIME-OF-CONCENTRATION OF LONGEST FLOWPATH<<<<<
============================================================================
UNIT-HYDROGRAPH DATA:
RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
S-GRAPH: VALLEY(DEV.)= 16.0%;VALLEY(UNDEV.)/DESERT=  8.0%
         MOUNTAIN= 62.0%;FOOTHILL= 14.0%;DESERT(UNDEV.)=  0.0%
Tc(HR) = 1.06; LAG(HR) = 0.84; Fm(INCH/HR) = 0.24; Ybar = 0.43
USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
DEPTH-AREA FACTORS: 5M = 0.82; 30M = 0.82; 1HR = 0.82;
3HR = 0.97; 6HR = 0.99; 24HR= 0.99
UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4062.50
LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    826.00 = 41069.00 FEET.
 EQUIVALENT BASIN FACTOR APPROXIMATIONS:
 Lca/L=0.3,n=.0295; Lca/L=0.4,n=.0265; Lca/L=0.5,n=.0243;Lca/L=0.6,n=.0227
TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    1188.57
UNIT-HYDROGRAPH METHOD PEAK FLOW RATE(CFS) =   3368.48
TOTAL PEAK FLOW RATE(CFS) =   3368.48 (SOURCE FLOW INCLUDED)
RATIONAL METHOD PEAK FLOW RATE(CFS) =   4748.70
 (UPSTREAM NODE PEAK FLOW RATE(CFS) =   4748.70)
PEAK FLOW RATE(CFS) USED =   4748.70

****************************************************************************
FLOW PROCESS FROM NODE    826.00 TO NODE    826.00 IS CODE =  11
----------------------------------------------------------------------------
>>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
============================================================================

** MAIN STREAM CONFLUENCE DATA **
PEAK FLOW RATE(CFS) =     4748.70    Tc(MIN.) =  63.30
AREA-AVERAGED Fm(INCH/HR) =  0.24    Ybar = 0.43
TOTAL AREA(ACRES) =    4062.50
LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    826.00 = 41069.00 FEET.

** MEMORY BANK #  1 CONFLUENCE DATA **
 STREAM     Q      Tc    Intensity   Fp(Fm)      Ap    Ae      HEADWATER
 NUMBER    (CFS) (MIN.) (INCH/HR) (INCH/HR)        (ACRES)     NODE
    1    982.16  32.25     2.134  0.25( 0.23) 0.91   540.5      800.00
LONGEST FLOWPATH FROM NODE    800.00 TO NODE    826.00 =  9684.00 FEET.

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
UNIT-HYDROGRAPH DATA:
RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
S-GRAPH: VALLEY(DEV.)= 16.0%;VALLEY(UNDEV.)/DESERT=  8.0%
         MOUNTAIN= 62.0%;FOOTHILL= 14.0%;DESERT(UNDEV.)=  0.0%
Tc(HR) = 1.06; LAG(HR) = 0.84; Fm(INCH/HR) = 0.24; Ybar = 0.43
USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
DEPTH-AREA FACTORS: 5M = 0.80; 30M = 0.80; 1HR = 0.80;
3HR = 0.97; 6HR = 0.98; 24HR= 0.99
UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4603.00
LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    826.00 = 41069.00 FEET.
 EQUIVALENT BASIN FACTOR APPROXIMATIONS:
 Lca/L=0.3,n=.0295; Lca/L=0.4,n=.0265; Lca/L=0.5,n=.0243;Lca/L=0.6,n=.0227
TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    1341.89
PEAK FLOW RATE(CFS) =    3728.67
  (UPSTREAM NODE PEAK FLOW RATE(CFS) =   4748.70)
PEAK FLOW RATE(CFS) USED =   4748.70

****************************************************************************
FLOW PROCESS FROM NODE    826.00 TO NODE    826.00 IS CODE =  12
----------------------------------------------------------------------------
>>>>>CLEAR MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
FLOW PROCESS FROM NODE    826.00 TO NODE    848.00 IS CODE =  51
----------------------------------------------------------------------------
>>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
ELEVATION DATA: UPSTREAM(FEET) =    176.00  DOWNSTREAM(FEET) =    175.00
CHANNEL LENGTH THRU SUBAREA(FEET) =   170.00   CHANNEL SLOPE =  0.0059
CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
CHANNEL FLOW THRU SUBAREA(CFS) =   4748.70
FLOW VELOCITY(FEET/SEC.) =  10.15   FLOW DEPTH(FEET) =   4.93
TRAVEL TIME(MIN.) =   0.28   Tc(MIN.) =  63.58
LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    848.00 = 41239.00 FEET.

****************************************************************************
FLOW PROCESS FROM NODE    826.00 TO NODE    848.00 IS CODE =  81
----------------------------------------------------------------------------
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
MAINLINE Tc(MIN) =  63.58
* 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.443
SUBAREA LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
     LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
NATURAL FAIR COVER
"OPEN BRUSH"               A        0.20      0.40      1.00    46
NATURAL FAIR COVER
```

```
"WOODLAND"                  A        0.10      0.40      1.00    36
NATURAL FAIR COVER
"OPEN BRUSH"                D        0.30      0.20      1.00    83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
SUBAREA AREA(ACRES) =    0.60
UNIT-HYDROGRAPH DATA:
RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
S-GRAPH: VALLEY(DEV.)= 16.0%;VALLEY(UNDEV.)/DESERT=  8.0%
         MOUNTAIN= 62.0%;FOOTHILL= 14.0%;DESERT(UNDEV.)=  0.0%
Tc(HR) = 1.06; LAG(HR) = 0.85; Fm(INCH/HR) = 0.24; Ybar = 0.43
USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
DEPTH-AREA FACTORS: 5M = 0.80; 30M = 0.80; 1HR = 0.80;
3HR = 0.97; 6HR = 0.98; 24HR= 0.99
UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   4603.60
LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    848.00 = 41239.00 FEET.
 EQUIVALENT BASIN FACTOR APPROXIMATIONS:
 Lca/L=0.3,n=.0295; Lca/L=0.4,n=.0265; Lca/L=0.5,n=.0243;Lca/L=0.6,n=.0227
TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    1342.02
UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3721.64
TOTAL AREA(ACRES) =   4603.60       PEAK FLOW RATE(CFS) =    4748.70
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
FLOW PROCESS FROM NODE    848.00 TO NODE    848.00 IS CODE =   1
----------------------------------------------------------------------------
>>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
TOTAL NUMBER OF STREAMS =  2
CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
PEAK FLOW RATE(CFS) =    4748.70    Tc(MIN.) =  63.58
AREA-AVERAGED Fm(INCH/HR) =  0.24   Ybar = 0.43
TOTAL AREA(ACRES) =    4603.60

****************************************************************************
FLOW PROCESS FROM NODE    830.00 TO NODE    831.00 IS CODE =  21
----------------------------------------------------------------------------
>>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
INITIAL SUBAREA FLOW-LENGTH(FEET) =   327.00
ELEVATION DATA: UPSTREAM(FEET) =    895.00  DOWNSTREAM(FEET) =    820.00

Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    9.606
* 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.277
SUBAREA Tc AND LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS   Tc
     LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
NATURAL FAIR COVER
"GRASS"                     C        0.10      0.25      1.00    79    9.61
NATURAL FAIR COVER
"OPEN BRUSH"                C        0.30      0.25      1.00    77    9.61
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
SUBAREA RUNOFF(CFS) =      1.45
TOTAL AREA(ACRES) =      0.40   PEAK FLOW RATE(CFS) =      1.45

****************************************************************************
FLOW PROCESS FROM NODE    831.00 TO NODE    832.00 IS CODE =  51
----------------------------------------------------------------------------
>>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
ELEVATION DATA: UPSTREAM(FEET) =    820.00  DOWNSTREAM(FEET) =    790.00
CHANNEL LENGTH THRU SUBAREA(FEET) =   150.00   CHANNEL SLOPE =  0.2000
CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
CHANNEL FLOW THRU SUBAREA(CFS) =      1.45
FLOW VELOCITY(FEET/SEC.) =   5.08   FLOW DEPTH(FEET) =   0.23
TRAVEL TIME(MIN.) =   0.49   Tc(MIN.) =  10.10
LONGEST FLOWPATH FROM NODE    830.00 TO NODE    832.00 =   477.00 FEET.

****************************************************************************
FLOW PROCESS FROM NODE    831.00 TO NODE    832.00 IS CODE =  81
----------------------------------------------------------------------------
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
MAINLINE Tc(MIN) =  10.10
* 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.140
SUBAREA LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
     LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
NATURAL FAIR COVER
"GRASS"                     C        0.50      0.25      1.00    79
NATURAL FAIR COVER
"OPEN BRUSH"                C        0.30      0.25      1.00    77
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
SUBAREA AREA(ACRES) =    0.80      SUBAREA RUNOFF(CFS) =    2.80
EFFECTIVE AREA(ACRES) =      1.20   AREA-AVERAGED Fm(INCH/HR) =  0.25
AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
TOTAL AREA(ACRES) =      1.20       PEAK FLOW RATE(CFS) =       4.20

****************************************************************************
FLOW PROCESS FROM NODE    832.00 TO NODE    833.00 IS CODE =  51
----------------------------------------------------------------------------
>>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
ELEVATION DATA: UPSTREAM(FEET) =    790.00  DOWNSTREAM(FEET) =    762.00
CHANNEL LENGTH THRU SUBAREA(FEET) =   200.00   CHANNEL SLOPE =  0.1400
CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
CHANNEL FLOW THRU SUBAREA(CFS) =      4.20
FLOW VELOCITY(FEET/SEC.) =   6.11   FLOW DEPTH(FEET) =   0.47
TRAVEL TIME(MIN.) =   0.55   Tc(MIN.) =  10.64
LONGEST FLOWPATH FROM NODE    830.00 TO NODE    833.00 =   677.00 FEET.

****************************************************************************
FLOW PROCESS FROM NODE    832.00 TO NODE    833.00 IS CODE =  81
----------------------------------------------------------------------------
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
MAINLINE Tc(MIN) =  10.64
* 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.031
SUBAREA LOSS RATE DATA(AMC  II):
 DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
     LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
NATURAL FAIR COVER
"GRASS"                     C        0.40      0.25      1.00    79
NATURAL FAIR COVER
"OPEN BRUSH"                C        0.80      0.25      1.00    77
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
SUBAREA AREA(ACRES) =    1.20      SUBAREA RUNOFF(CFS) =    4.08
EFFECTIVE AREA(ACRES) =      2.40   AREA-AVERAGED Fm(INCH/HR) =  0.25
AREA-AVERAGED Fp(INCH/HR) =  0.25  AREA-AVERAGED Ap =  1.00
TOTAL AREA(ACRES) =      2.40       PEAK FLOW RATE(CFS) =       8.17

****************************************************************************
FLOW PROCESS FROM NODE    833.00 TO NODE    834.00 IS CODE =  51
----------------------------------------------------------------------------
>>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
```

```
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    762.00  DOWNSTREAM(FEET) =    754.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   124.00   CHANNEL SLOPE =  0.0645
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      8.17
  FLOW VELOCITY(FEET/SEC.) =   5.54   FLOW DEPTH(FEET) =   0.81
  TRAVEL TIME(MIN.) =   0.37   Tc(MIN.) =  11.02
  LONGEST FLOWPATH FROM NODE    830.00 TO NODE    834.00 =   801.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    833.00 TO NODE    834.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  11.02
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.957
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        0.70      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        1.10      0.25      1.00    77
  NATURAL FAIR COVER
  "GRASS"                    D        0.10      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.40      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    2.30      SUBAREA RUNOFF(CFS) =    7.70
  EFFECTIVE AREA(ACRES) =      4.70   AREA-AVERAGED Fm(INCH/HR) =  0.24
  AREA-AVERAGED Fp(INCH/HR) =  0.24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      4.70       PEAK FLOW RATE(CFS) =      15.70

****************************************************************************
  FLOW PROCESS FROM NODE    834.00 TO NODE    835.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    754.00  DOWNSTREAM(FEET) =    740.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   550.00   CHANNEL SLOPE =  0.0255
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     15.70
  FLOW VELOCITY(FEET/SEC.) =   4.54   FLOW DEPTH(FEET) =   1.11
  TRAVEL TIME(MIN.) =   2.02   Tc(MIN.) =  13.03
  LONGEST FLOWPATH FROM NODE    830.00 TO NODE    835.00 =  1351.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    834.00 TO NODE    835.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  13.03
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.583
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        3.30      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.60      0.25      1.00    77
  NATURAL FAIR COVER
  "GRASS"                    D        6.00      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.60      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   10.50      SUBAREA RUNOFF(CFS) =   31.79
  EFFECTIVE AREA(ACRES) =     15.20   AREA-AVERAGED Fm(INCH/HR) =  0.23
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     15.20       PEAK FLOW RATE(CFS) =      45.92

****************************************************************************
  FLOW PROCESS FROM NODE    835.00 TO NODE    836.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    740.00  DOWNSTREAM(FEET) =    624.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   929.00   CHANNEL SLOPE =  0.1249
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     45.92
  FLOW VELOCITY(FEET/SEC.) =  10.86   FLOW DEPTH(FEET) =   1.29
  TRAVEL TIME(MIN.) =   1.43   Tc(MIN.) =  14.46
  LONGEST FLOWPATH FROM NODE    830.00 TO NODE    836.00 =  2280.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    835.00 TO NODE    836.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  MAINLINE Tc(MIN) =  14.46
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.378
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        0.10      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C        0.10      0.25      1.00    77
  AGRICULTURAL POOR COVER
  "FALLOW"                   D        4.50      0.20      1.00    94
  NATURAL FAIR COVER
  "GRASS"                    D       10.40      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.40      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   15.50      SUBAREA RUNOFF(CFS) =   44.32
  EFFECTIVE AREA(ACRES) =     30.70   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =     30.70       PEAK FLOW RATE(CFS) =      87.43

****************************************************************************
  FLOW PROCESS FROM NODE    836.00 TO NODE    837.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    624.00  DOWNSTREAM(FEET) =    592.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   417.00   CHANNEL SLOPE =  0.0767
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     87.43
  FLOW VELOCITY(FEET/SEC.) =  10.58   FLOW DEPTH(FEET) =   1.74
  TRAVEL TIME(MIN.) =   0.66   Tc(MIN.) =  15.12
  LONGEST FLOWPATH FROM NODE    830.00 TO NODE    837.00 =  2697.00 FEET.

****************************************************************************
```

```
 FLOW PROCESS FROM NODE    836.00 TO NODE    837.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  15.12
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.287
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                   C        0.20      0.25      1.00    79
 NATURAL FAIR COVER
 "OPEN BRUSH"              C        0.60      0.25      1.00    77
 AGRICULTURAL POOR COVER
 "FALLOW"                  D        2.30      0.20      1.00    94
 NATURAL FAIR COVER
 "GRASS"                   D        5.10      0.20      1.00    84
 NATURAL FAIR COVER
 "OPEN BRUSH"              D        1.10      0.20      1.00    83
 NATURAL FAIR COVER
 "WOODLAND"                D        0.20      0.20      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    9.50      SUBAREA RUNOFF(CFS) =   26.36
 EFFECTIVE AREA(ACRES) =     40.20   AREA-AVERAGED Fm(INCH/HR) =  0.21
 AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     40.20       PEAK FLOW RATE(CFS) =     111.27

****************************************************************************
 FLOW PROCESS FROM NODE    837.00 TO NODE    838.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    592.00  DOWNSTREAM(FEET) =    591.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =    60.00   CHANNEL SLOPE =  0.0167
 CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    111.27
 FLOW VELOCITY(FEET/SEC.) =   6.40   FLOW DEPTH(FEET) =   2.93
 TRAVEL TIME(MIN.) =   0.16   Tc(MIN.) =  15.27
 LONGEST FLOWPATH FROM NODE    830.00 TO NODE    838.00 =  2757.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    837.00 TO NODE    838.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  15.27
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.269
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"     C        0.30      0.25      1.00    75
 NATURAL FAIR COVER
 "GRASS"                   C        1.10      0.25      1.00    79
 NATURAL FAIR COVER
 "OPEN BRUSH"              C        7.00      0.25      1.00    77
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"     D        0.40      0.20      1.00    81
 NATURAL FAIR COVER
 "GRASS"                   D        7.50      0.20      1.00    84
 NATURAL FAIR COVER
 "OPEN BRUSH"              D        1.80      0.20      1.00    83
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   18.10      SUBAREA RUNOFF(CFS) =   49.62
 EFFECTIVE AREA(ACRES) =     58.30   AREA-AVERAGED Fm(INCH/HR) =  0.22
 AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     58.30       PEAK FLOW RATE(CFS) =     160.26

****************************************************************************
 FLOW PROCESS FROM NODE    837.00 TO NODE    838.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  15.27
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.269
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "WOODLAND"                D        0.20      0.20      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    0.20      SUBAREA RUNOFF(CFS) =    0.55
 EFFECTIVE AREA(ACRES) =     58.50   AREA-AVERAGED Fm(INCH/HR) =  0.21
 AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     58.50       PEAK FLOW RATE(CFS) =     160.82

****************************************************************************
 FLOW PROCESS FROM NODE    838.00 TO NODE    839.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    591.00  DOWNSTREAM(FEET) =    526.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   973.00   CHANNEL SLOPE =  0.0668
 CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    160.82
 FLOW VELOCITY(FEET/SEC.) =  11.80   FLOW DEPTH(FEET) =   2.48
 TRAVEL TIME(MIN.) =   1.37   Tc(MIN.) =  16.65
 LONGEST FLOWPATH FROM NODE    830.00 TO NODE    839.00 =  3730.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    838.00 TO NODE    839.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  16.65
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.116
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL POOR COVER
 "FALLOW"                  D        3.00      0.20      1.00    94
 NATURAL FAIR COVER
 "GRASS"                   D       16.40      0.20      1.00    84
 NATURAL FAIR COVER
 "WOODLAND"                D        0.60      0.20      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   20.00      SUBAREA RUNOFF(CFS) =   52.48
 EFFECTIVE AREA(ACRES) =     78.50   AREA-AVERAGED Fm(INCH/HR) =  0.21
 AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =     78.50       PEAK FLOW RATE(CFS) =     205.19

****************************************************************************
 FLOW PROCESS FROM NODE    839.00 TO NODE    840.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
```

```
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    526.00  DOWNSTREAM(FEET) =    455.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1045.00   CHANNEL SLOPE =  0.0679
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    205.19
  FLOW VELOCITY(FEET/SEC.) =  12.62   FLOW DEPTH(FEET) =   2.80
  TRAVEL TIME(MIN.) =   1.38   Tc(MIN.) =  18.03
  LONGEST FLOWPATH FROM NODE    830.00 TO NODE    840.00 =  4775.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    839.00 TO NODE    840.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.03
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.974
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     C        1.00      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        0.50      0.25      1.00    77
  NATURAL FAIR COVER
  "GRASS"                     D       31.60      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        1.60      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   35.10      SUBAREA RUNOFF(CFS) =   87.55
  EFFECTIVE AREA(ACRES) =   113.60   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    113.60       PEAK FLOW RATE(CFS) =     282.71

****************************************************************************
  FLOW PROCESS FROM NODE    840.00 TO NODE    841.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    455.00  DOWNSTREAM(FEET) =    409.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   675.00   CHANNEL SLOPE =  0.0681
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    282.71
  FLOW VELOCITY(FEET/SEC.) =  13.65   FLOW DEPTH(FEET) =   2.97
  TRAVEL TIME(MIN.) =   0.82   Tc(MIN.) =  18.85
  LONGEST FLOWPATH FROM NODE    830.00 TO NODE    841.00 =  5450.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    840.00 TO NODE    841.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  18.85
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.901
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                    B        6.00      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                     B        7.40      0.30      1.00    69
  AGRICULTURAL POOR COVER
  "FALLOW"                    D        4.10      0.20      1.00    94
  NATURAL FAIR COVER
  "GRASS"                     D       24.80      0.20      1.00    84
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.90      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   43.20      SUBAREA RUNOFF(CFS) =  103.81
  EFFECTIVE AREA(ACRES) =   156.80   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    156.80       PEAK FLOW RATE(CFS) =     379.11

****************************************************************************
  FLOW PROCESS FROM NODE    841.00 TO NODE    842.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    409.00  DOWNSTREAM(FEET) =    405.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   142.00   CHANNEL SLOPE =  0.0282
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    379.11
  FLOW VELOCITY(FEET/SEC.) =  10.56   FLOW DEPTH(FEET) =   3.99
  TRAVEL TIME(MIN.) =   0.22   Tc(MIN.) =  19.08
  LONGEST FLOWPATH FROM NODE    830.00 TO NODE    842.00 =  5592.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    841.00 TO NODE    842.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.08
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.881
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C        0.10      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C        7.90      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C       26.10      0.25      1.00    77
  NATURAL FAIR COVER
  "GRASS"                     D       19.30      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        2.10      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.90      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   56.40      SUBAREA RUNOFF(CFS) =  134.57
  EFFECTIVE AREA(ACRES) =   213.20   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    213.20       PEAK FLOW RATE(CFS) =     510.89

****************************************************************************
  FLOW PROCESS FROM NODE    842.00 TO NODE    843.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    405.00  DOWNSTREAM(FEET) =    348.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2041.00   CHANNEL SLOPE =  0.0279
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    510.89
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 FLOW VELOCITY(FEET/SEC.) =  11.36   FLOW DEPTH(FEET) =   4.66
 TRAVEL TIME(MIN.) =   2.99   Tc(MIN.) =  22.07
 LONGEST FLOWPATH FROM NODE    830.00 TO NODE    843.00 =  7633.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    842.00 TO NODE    843.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  22.07
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.643
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 AGRICULTURAL POOR COVER
 "FALLOW"                   B        0.60      0.30      1.00    86
 NATURAL FAIR COVER
 "GRASS"                    B        2.80      0.30      1.00    69
 NATURAL FAIR COVER
 "GRASS"                    C       10.20      0.25      1.00    79
 NATURAL FAIR COVER
 "OPEN BRUSH"               C       17.70      0.25      1.00    77
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      D        0.30      0.20      1.00    81
 AGRICULTURAL POOR COVER
 "FALLOW"                   D        0.80      0.20      1.00    94
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   32.40      SUBAREA RUNOFF(CFS) =   69.67
 EFFECTIVE AREA(ACRES) =    245.60   AREA-AVERAGED Fm(INCH/HR) =  0.22
 AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    245.60       PEAK FLOW RATE(CFS) =     534.77

****************************************************************************
 FLOW PROCESS FROM NODE    842.00 TO NODE    843.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  22.07
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.643
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                    D       78.70      0.20      1.00    84
 NATURAL FAIR COVER
 "OPEN BRUSH"               D        0.70      0.20      1.00    83
 NATURAL FAIR COVER
 "WOODLAND"                 D        2.00      0.20      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   81.40      SUBAREA RUNOFF(CFS) =  178.95
 EFFECTIVE AREA(ACRES) =    327.00   AREA-AVERAGED Fm(INCH/HR) =  0.22
 AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    327.00       PEAK FLOW RATE(CFS) =     713.72

****************************************************************************
 FLOW PROCESS FROM NODE    843.00 TO NODE    844.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    348.00  DOWNSTREAM(FEET) =    302.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1986.00   CHANNEL SLOPE =  0.0232
 CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    713.72
 FLOW VELOCITY(FEET/SEC.) =  11.51   FLOW DEPTH(FEET) =   5.43
 TRAVEL TIME(MIN.) =   2.88   Tc(MIN.) =  24.95
 LONGEST FLOWPATH FROM NODE    830.00 TO NODE    844.00 =  9619.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    843.00 TO NODE    844.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  24.95
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.463
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      C        0.40      0.25      1.00    75
 NATURAL FAIR COVER
 "GRASS"                    C       10.70      0.25      1.00    79
 NATURAL FAIR COVER
 "OPEN BRUSH"               C       23.90      0.25      1.00    77
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"      D        0.30      0.20      1.00    81
 NATURAL FAIR COVER
 "GRASS"                    D       55.10      0.20      1.00    84
 NATURAL FAIR COVER
 "OPEN BRUSH"               D        9.40      0.20      1.00    83
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   99.80      SUBAREA RUNOFF(CFS) =  201.71
 EFFECTIVE AREA(ACRES) =    426.80   AREA-AVERAGED Fm(INCH/HR) =  0.22
 AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    426.80       PEAK FLOW RATE(CFS) =     862.61

****************************************************************************
 FLOW PROCESS FROM NODE    843.00 TO NODE    844.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  24.95
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.463
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "WOODLAND"                 D        1.70      0.20      1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    1.70      SUBAREA RUNOFF(CFS) =    3.46
 EFFECTIVE AREA(ACRES) =    428.50   AREA-AVERAGED Fm(INCH/HR) =  0.22
 AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    428.50       PEAK FLOW RATE(CFS) =     866.07

****************************************************************************
 FLOW PROCESS FROM NODE    844.00 TO NODE    845.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    302.00  DOWNSTREAM(FEET) =    273.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1696.00   CHANNEL SLOPE =  0.0171
 CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
 MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   7.00
 CHANNEL FLOW THRU SUBAREA(CFS) =    866.07
 FLOW VELOCITY(FEET/SEC.) =  10.78   FLOW DEPTH(FEET) =   6.12
 TRAVEL TIME(MIN.) =   2.62   Tc(MIN.) =  27.57
 LONGEST FLOWPATH FROM NODE    830.00 TO NODE    845.00 = 11315.00 FEET.
```

```
****************************************************************************
  FLOW PROCESS FROM NODE    844.00 TO NODE    845.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  27.57
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.327
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       C         0.40      0.25      1.00    75
  NATURAL FAIR COVER
  "GRASS"                     C         4.90      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C         4.10      0.25      1.00    77
  AGRICULTURAL POOR COVER
  "FALLOW"                    D        10.10      0.20      1.00    94
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D         0.40      0.20      1.00    81
  NATURAL FAIR COVER
  "GRASS"                     D        35.60      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   55.50      SUBAREA RUNOFF(CFS) =  105.82
  EFFECTIVE AREA(ACRES) =    484.00   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    484.00       PEAK FLOW RATE(CFS) =     919.34

****************************************************************************
  FLOW PROCESS FROM NODE    844.00 TO NODE    845.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  27.57
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.327
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                D         3.80      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D         2.00      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    5.80      SUBAREA RUNOFF(CFS) =   11.10
  EFFECTIVE AREA(ACRES) =    489.80   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    489.80       PEAK FLOW RATE(CFS) =     930.45

****************************************************************************
  FLOW PROCESS FROM NODE    845.00 TO NODE    846.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    273.00  DOWNSTREAM(FEET) =    260.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   959.00   CHANNEL SLOPE =  0.0136
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    930.45
  FLOW VELOCITY(FEET/SEC.) =  10.07   FLOW DEPTH(FEET) =   6.73
  TRAVEL TIME(MIN.) =   1.59   Tc(MIN.) =  29.16
  LONGEST FLOWPATH FROM NODE    830.00 TO NODE    846.00 = 12274.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    845.00 TO NODE    846.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  29.16
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.257
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                    B         0.90      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                     B         0.10      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                  B         0.80      0.30      1.00    60
  NATURAL FAIR COVER
  "GRASS"                     C         2.20      0.25      1.00    79
  AGRICULTURAL POOR COVER
  "FALLOW"                    D         3.60      0.20      1.00    94
  NATURAL FAIR COVER
  "GRASS"                     D         2.50      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   10.10      SUBAREA RUNOFF(CFS) =   18.44
  EFFECTIVE AREA(ACRES) =    499.90   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    499.90       PEAK FLOW RATE(CFS) =     930.45
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE    845.00 TO NODE    846.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  29.16
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.257
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                D         0.50      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                  D         0.20      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.70      SUBAREA RUNOFF(CFS) =    1.30
  EFFECTIVE AREA(ACRES) =    500.60   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    500.60       PEAK FLOW RATE(CFS) =     930.45
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE    846.00 TO NODE    847.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    260.00  DOWNSTREAM(FEET) =    250.00
  FLOW LENGTH(FEET) =  1251.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN 108.0 INCH PIPE IS  78.5 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  18.78
  ESTIMATED PIPE DIAMETER(INCH) = 108.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =    930.45
  PIPE TRAVEL TIME(MIN.) =   1.11    Tc(MIN.) =  30.27
  LONGEST FLOWPATH FROM NODE    830.00 TO NODE    847.00 = 13525.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    846.00 TO NODE    847.00 IS CODE =  81
```

```
------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==============================================================================
  MAINLINE Tc(MIN) =  30.27
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.210
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                    B        1.90      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                     B        1.60      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        1.00      0.30      1.00    66
  COMMERCIAL                  B        1.60      0.30      0.10    56
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.50      0.30      1.00    60
  AGRICULTURAL POOR COVER
  "FALLOW"                    C        0.20      0.25      1.00    91
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.30
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.79
  SUBAREA AREA(ACRES) =    6.80      SUBAREA RUNOFF(CFS) =   12.09
  EFFECTIVE AREA(ACRES) =    507.40   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    507.40       PEAK FLOW RATE(CFS) =     930.45
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE    846.00 TO NODE    847.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==============================================================================
  MAINLINE Tc(MIN) =  30.27
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.210
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     C        7.40      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        3.30      0.25      1.00    77
  AGRICULTURAL POOR COVER
  "FALLOW"                    D        2.30      0.20      1.00    94
  NATURAL FAIR COVER
  "GRASS"                     D       24.90      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        6.20      0.20      1.00    83
  COMMERCIAL                  D        9.30      0.20      0.10    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.84
  SUBAREA AREA(ACRES) =   53.40      SUBAREA RUNOFF(CFS) =   97.62
  EFFECTIVE AREA(ACRES) =    560.80   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =    560.80       PEAK FLOW RATE(CFS) =    1007.80

****************************************************************************
  FLOW PROCESS FROM NODE    846.00 TO NODE    847.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==============================================================================
  MAINLINE Tc(MIN) =  30.27
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.210
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.20      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.20      SUBAREA RUNOFF(CFS) =    0.36
  EFFECTIVE AREA(ACRES) =    561.00   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =    561.00       PEAK FLOW RATE(CFS) =    1008.16

****************************************************************************
  FLOW PROCESS FROM NODE    847.00 TO NODE    848.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
==============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    250.00  DOWNSTREAM(FEET) =    175.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1353.00   CHANNEL SLOPE =  0.0554
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1008.16
  FLOW VELOCITY(FEET/SEC.) =  17.35   FLOW DEPTH(FEET) =   4.89
  TRAVEL TIME(MIN.) =   1.30   Tc(MIN.) =  31.57
  LONGEST FLOWPATH FROM NODE    830.00 TO NODE    848.00 = 14878.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    847.00 TO NODE    848.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==============================================================================
  MAINLINE Tc(MIN) =  31.57
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.160
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                    B        5.00      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                     B        1.60      0.30      1.00    69
  NATURAL FAIR COVER
  "OPEN BRUSH"                B        0.40      0.30      1.00    66
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.40      0.30      1.00    60
  AGRICULTURAL POOR COVER
  "FALLOW"                    C        3.30      0.25      1.00    91
  NATURAL FAIR COVER
  "GRASS"                     C        0.50      0.25      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.28
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   11.20      SUBAREA RUNOFF(CFS) =   18.92
  EFFECTIVE AREA(ACRES) =    572.20   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =    572.20       PEAK FLOW RATE(CFS) =    1008.16
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE    847.00 TO NODE    848.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==============================================================================
  MAINLINE Tc(MIN) =  31.57
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.160
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        3.30      0.25      1.00    77
  AGRICULTURAL POOR COVER
  "FALLOW"                    D        0.10      0.20      1.00    94
  NATURAL FAIR COVER
```

```
  "GRASS"                    D        1.80      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        2.80      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    8.00      SUBAREA RUNOFF(CFS) =   13.97
  EFFECTIVE AREA(ACRES) =    580.20   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.98
  TOTAL AREA(ACRES) =    580.20       PEAK FLOW RATE(CFS) =    1016.12

****************************************************************************
  FLOW PROCESS FROM NODE    848.00 TO NODE    848.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  31.57
  RAINFALL INTENSITY(INCH/HR) =   2.16
  AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.22
  AREA-AVERAGED Ap =  0.98
  EFFECTIVE STREAM AREA(ACRES) =   580.20
  TOTAL STREAM AREA(ACRES) =   580.20
  PEAK FLOW RATE(CFS) AT CONFLUENCE =   1016.12
  ** CONFLUENCE DATA **
  STREAM      Q         Tc      AREA      HEADWATER
  NUMBER    (CFS)     (MIN.)   (ACRES)      NODE
     1      4748.70   63.58     4603.60     3100.00
     2      1016.12   31.57      580.20      830.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
  S-GRAPH: VALLEY(DEV.)= 16.0%;VALLEY(UNDEV.)/DESERT=  8.0%
           MOUNTAIN= 62.0%;FOOTHILL= 14.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.06; LAG(HR) = 0.85; Fm(INCH/HR) = 0.24; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.78; 30M = 0.78; 1HR = 0.78;
  3HR = 0.97; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) =  5.00   TOTAL AREA(ACRES) =   5183.80
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    848.00 = 41239.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0295; Lca/L=0.4,n=.0265; Lca/L=0.5,n=.0243;Lca/L=0.6,n=.0227
  TIME OF PEAK FLOW(HR) = 16.58  RUNOFF VOLUME(AF) =    1524.92
  PEAK FLOW RATE(CFS) =   4134.05
    (UPSTREAM NODE PEAK FLOW RATE(CFS) =   4748.70)
  PEAK FLOW RATE(CFS) USED =   4748.70

****************************************************************************
  FLOW PROCESS FROM NODE    848.00 TO NODE    864.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    175.00  DOWNSTREAM(FEET) =    154.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  6117.00   CHANNEL SLOPE =  0.0034
  CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   4748.70
  FLOW VELOCITY(FEET/SEC.) =   8.52   FLOW DEPTH(FEET) =   5.77
  TRAVEL TIME(MIN.) =  11.97   Tc(MIN.) =  75.55
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    864.00 = 47356.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    848.00 TO NODE    864.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  75.55
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.305
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    A        0.90      0.40      1.00    50
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 A        0.80      0.40      1.00    44
  NATURAL FAIR COVER
  "OPEN BRUSH"               A        3.10      0.40      1.00    46
  COMMERCIAL                 A       13.10      0.40      0.10    32
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       A        0.20      0.40      0.20    32
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"       A        2.60      0.40      0.60    32
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.37
  SUBAREA AREA(ACRES) =   20.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
  S-GRAPH: VALLEY(DEV.)= 16.0%;VALLEY(UNDEV.)/DESERT=  8.0%
           MOUNTAIN= 62.0%;FOOTHILL= 14.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.26; LAG(HR) = 1.01; Fm(INCH/HR) = 0.24; Ybar = 0.42
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.78; 30M = 0.78; 1HR = 0.78;
  3HR = 0.97; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =   5204.50
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    864.00 = 47356.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0309; Lca/L=0.4,n=.0277; Lca/L=0.5,n=.0254;Lca/L=0.6,n=.0237
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1531.04
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3617.22
  TOTAL AREA(ACRES) =   5204.50       PEAK FLOW RATE(CFS) =    4748.70
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE    848.00 TO NODE    864.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  75.55
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.305
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 A       13.70      0.40      1.00    36
  AGRICULTURAL POOR COVER
  "FALLOW"                   B        2.90      0.30      1.00    86
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       B       16.50      0.30      0.50    56
  NATURAL FAIR COVER
  "GRASS"                    B        1.80      0.30      1.00    69
  AGRICULTURAL FAIR COVER
  "ORCHARDS"                 B        0.20      0.30      1.00    65
  NATURAL FAIR COVER
  "OPEN BRUSH"               B        0.60      0.30      1.00    66
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.35
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.77
  SUBAREA AREA(ACRES) =   35.70
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
  S-GRAPH: VALLEY(DEV.)= 16.0%;VALLEY(UNDEV.)/DESERT=  8.0%
```

```
          MOUNTAIN= 62.0%;FOOTHILL= 14.0%;DESERT(UNDEV.)=  0.0%
 Tc(HR) = 1.26; LAG(HR) = 1.01; Fm(INCH/HR) = 0.24; Ybar = 0.42
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.78; 30M = 0.78; 1HR = 0.78;
 3HR = 0.97; 6HR = 0.98; 24HR= 0.99
 UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =   5240.20
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    864.00 = 47356.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0309; Lca/L=0.4,n=.0277; Lca/L=0.5,n=.0254;Lca/L=0.6,n=.0237
 TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1538.84
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3636.95
 TOTAL AREA(ACRES) =   5240.20       PEAK FLOW RATE(CFS) =    4748.70
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

********************************************************************************
 FLOW PROCESS FROM NODE    848.00 TO NODE    864.00 IS CODE =  81
--------------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
 MAINLINE Tc(MIN) =  75.55
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.305
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 COMMERCIAL                  B       23.00      0.30       0.10    56
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           B        9.40      0.30       1.00    69
 RESIDENTIAL
 "11+ DWELLINGS/ACRE"        B        0.70      0.30       0.20    56
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"        B        0.10      0.30       0.60    56
 NATURAL FAIR COVER
 "WOODLAND"                  B        4.50      0.30       1.00    60
 NATURAL FAIR COVER
 "GRASS"                     C       91.40      0.25       1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.84
 SUBAREA AREA(ACRES) =  129.10
 UNIT-HYDROGRAPH DATA:
 RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
 S-GRAPH: VALLEY(DEV.)= 16.0%;VALLEY(UNDEV.)/DESERT=  8.0%
          MOUNTAIN= 62.0%;FOOTHILL= 14.0%;DESERT(UNDEV.)=  0.0%
 Tc(HR) = 1.26; LAG(HR) = 1.01; Fm(INCH/HR) = 0.24; Ybar = 0.42
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.78; 30M = 0.78; 1HR = 0.78;
 3HR = 0.97; 6HR = 0.98; 24HR= 0.99
 UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =   5369.30
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    864.00 = 47356.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0309; Lca/L=0.4,n=.0277; Lca/L=0.5,n=.0254;Lca/L=0.6,n=.0237
 TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1577.86
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3715.89
 TOTAL AREA(ACRES) =   5369.30       PEAK FLOW RATE(CFS) =    4748.70
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

********************************************************************************
 FLOW PROCESS FROM NODE    848.00 TO NODE    864.00 IS CODE =  81
--------------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
 MAINLINE Tc(MIN) =  75.55
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.305
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "OPEN BRUSH"                C        5.70      0.25       1.00    77
 COMMERCIAL                  C        6.60      0.25       0.10    69
 PUBLIC PARK                 C        0.20      0.25       0.85    69
 NATURAL FAIR COVER
 "WOODLAND"                  C       10.50      0.25       1.00    73
 AGRICULTURAL POOR COVER
 "FALLOW"                    D       16.50      0.20       1.00    94
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"        D       32.20      0.20       0.50    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.69
 SUBAREA AREA(ACRES) =   71.70
 UNIT-HYDROGRAPH DATA:
 RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
 S-GRAPH: VALLEY(DEV.)= 16.0%;VALLEY(UNDEV.)/DESERT=  8.0%
          MOUNTAIN= 62.0%;FOOTHILL= 14.0%;DESERT(UNDEV.)=  0.0%
 Tc(HR) = 1.26; LAG(HR) = 1.01; Fm(INCH/HR) = 0.23; Ybar = 0.42
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.77; 30M = 0.77; 1HR = 0.77;
 3HR = 0.96; 6HR = 0.98; 24HR= 0.99
 UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =   5441.00
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    864.00 = 47356.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0309; Lca/L=0.4,n=.0277; Lca/L=0.5,n=.0254;Lca/L=0.6,n=.0237
 TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1602.79
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3763.63
 TOTAL AREA(ACRES) =   5441.00       PEAK FLOW RATE(CFS) =    4748.70
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

********************************************************************************
 FLOW PROCESS FROM NODE    848.00 TO NODE    864.00 IS CODE =  81
--------------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
 MAINLINE Tc(MIN) =  75.55
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.305
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                     D       22.50      0.20       1.00    84
 AGRICULTURAL FAIR COVER
 "ORCHARDS"                  D        0.70      0.20       1.00    82
 NATURAL FAIR COVER
 "OPEN BRUSH"                D       12.90      0.20       1.00    83
 COMMERCIAL                  D        5.50      0.20       0.10    75
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           D        1.80      0.20       1.00    84
 RESIDENTIAL
 "11+ DWELLINGS/ACRE"        D       20.20      0.20       0.20    75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.67
 SUBAREA AREA(ACRES) =   63.60
 UNIT-HYDROGRAPH DATA:
 RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
 S-GRAPH: VALLEY(DEV.)= 16.0%;VALLEY(UNDEV.)/DESERT=  8.0%
          MOUNTAIN= 62.0%;FOOTHILL= 14.0%;DESERT(UNDEV.)=  0.0%
 Tc(HR) = 1.26; LAG(HR) = 1.01; Fm(INCH/HR) = 0.23; Ybar = 0.41
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.77; 30M = 0.77; 1HR = 0.77;
 3HR = 0.96; 6HR = 0.98; 24HR= 0.99
 UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =   5504.60
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    864.00 = 47356.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0309; Lca/L=0.4,n=.0277; Lca/L=0.5,n=.0254;Lca/L=0.6,n=.0237
 TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1625.53
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3806.73
 TOTAL AREA(ACRES) =   5504.60       PEAK FLOW RATE(CFS) =    4748.70
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  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE    848.00 TO NODE    864.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  75.55
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.305
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                  D       23.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   23.10
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
  S-GRAPH: VALLEY(DEV.)= 16.0%;VALLEY(UNDEV.)/DESERT=  8.0%
           MOUNTAIN= 62.0%;FOOTHILL= 14.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.26; LAG(HR) = 1.01; Fm(INCH/HR) = 0.23; Ybar = 0.41
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.77; 30M = 0.77; 1HR = 0.77;
  3HR = 0.96; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =   5527.70
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    864.00 = 47356.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0309; Lca/L=0.4,n=.0277; Lca/L=0.5,n=.0254;Lca/L=0.6,n=.0237
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1632.36
  UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3820.89
  TOTAL AREA(ACRES) =   5527.70       PEAK FLOW RATE(CFS) =    4748.70
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE    864.00 TO NODE    864.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  PEAK FLOW RATE(CFS) =    4748.70    Tc(MIN.) =  75.55
  AREA-AVERAGED Fm(INCH/HR) =  0.23   Ybar = 0.41
  TOTAL AREA(ACRES) =    5527.70

****************************************************************************
  FLOW PROCESS FROM NODE    850.00 TO NODE    851.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
============================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   328.00
  ELEVATION DATA: UPSTREAM(FEET) =    718.00  DOWNSTREAM(FEET) =    600.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    5.000
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  6.190
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS   Tc
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D        0.80      0.20      0.50    75    5.00
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.50
  SUBAREA RUNOFF(CFS) =      4.38
  TOTAL AREA(ACRES) =      0.80   PEAK FLOW RATE(CFS) =      4.38

****************************************************************************
  FLOW PROCESS FROM NODE    851.00 TO NODE    852.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    600.00  DOWNSTREAM(FEET) =    560.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   144.00   CHANNEL SLOPE =  0.2778
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      4.38
  FLOW VELOCITY(FEET/SEC.) =   7.99   FLOW DEPTH(FEET) =   0.39
  TRAVEL TIME(MIN.) =   0.30   Tc(MIN.) =   5.30
  LONGEST FLOWPATH FROM NODE    850.00 TO NODE    852.00 =   472.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    851.00 TO NODE    852.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   5.30
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  6.035
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D        1.10      0.20      0.50    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.50
  SUBAREA AREA(ACRES) =    1.10      SUBAREA RUNOFF(CFS) =    5.88
  EFFECTIVE AREA(ACRES) =      1.90   AREA-AVERAGED Fm(INCH/HR) =  0.10
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.50
  TOTAL AREA(ACRES) =      1.90       PEAK FLOW RATE(CFS) =      10.15

****************************************************************************
  FLOW PROCESS FROM NODE    852.00 TO NODE    853.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    560.00  DOWNSTREAM(FEET) =    540.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   100.00   CHANNEL SLOPE =  0.2000
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     10.15
  FLOW VELOCITY(FEET/SEC.) =   8.85   FLOW DEPTH(FEET) =   0.68
  TRAVEL TIME(MIN.) =   0.19   Tc(MIN.) =   5.49
  LONGEST FLOWPATH FROM NODE    850.00 TO NODE    853.00 =   572.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    852.00 TO NODE    853.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   5.49
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.938
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D        1.30      0.20      0.50    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.50
  SUBAREA AREA(ACRES) =    1.30      SUBAREA RUNOFF(CFS) =    6.83
  EFFECTIVE AREA(ACRES) =      3.20   AREA-AVERAGED Fm(INCH/HR) =  0.10
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.50
  TOTAL AREA(ACRES) =      3.20       PEAK FLOW RATE(CFS) =      16.81
```

```
****************************************************************************
  FLOW PROCESS FROM NODE    853.00 TO NODE    854.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    540.00  DOWNSTREAM(FEET) =    510.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   115.00   CHANNEL SLOPE =  0.2609
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     16.81
  FLOW VELOCITY(FEET/SEC.) =  11.13   FLOW DEPTH(FEET) =   0.83
  TRAVEL TIME(MIN.) =   0.17   Tc(MIN.) =   5.66
  LONGEST FLOWPATH FROM NODE    850.00 TO NODE    854.00 =   687.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    853.00 TO NODE    854.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   5.66
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.849
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D        2.40      0.20       0.50    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.50
  SUBAREA AREA(ACRES) =    2.40      SUBAREA RUNOFF(CFS) =   12.42
  EFFECTIVE AREA(ACRES) =      5.60    AREA-AVERAGED Fm(INCH/HR) =  0.10
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.50
  TOTAL AREA(ACRES) =      5.60       PEAK FLOW RATE(CFS) =      28.97

****************************************************************************
  FLOW PROCESS FROM NODE    854.00 TO NODE    855.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    510.00  DOWNSTREAM(FEET) =    468.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   167.00   CHANNEL SLOPE =  0.2515
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     28.97
  FLOW VELOCITY(FEET/SEC.) =  12.36   FLOW DEPTH(FEET) =   0.83
  TRAVEL TIME(MIN.) =   0.23   Tc(MIN.) =   5.89
  LONGEST FLOWPATH FROM NODE    850.00 TO NODE    855.00 =   854.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    854.00 TO NODE    855.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   5.89
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.733
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D        2.80      0.20       0.50    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.50
  SUBAREA AREA(ACRES) =    2.80      SUBAREA RUNOFF(CFS) =   14.19
  EFFECTIVE AREA(ACRES) =      8.40    AREA-AVERAGED Fm(INCH/HR) =  0.10
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.50
  TOTAL AREA(ACRES) =      8.40       PEAK FLOW RATE(CFS) =      42.58

****************************************************************************
  FLOW PROCESS FROM NODE    855.00 TO NODE    856.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    468.00  DOWNSTREAM(FEET) =    445.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   115.00   CHANNEL SLOPE =  0.2000
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     42.58
  FLOW VELOCITY(FEET/SEC.) =  12.67   FLOW DEPTH(FEET) =   1.09
  TRAVEL TIME(MIN.) =   0.15   Tc(MIN.) =   6.04
  LONGEST FLOWPATH FROM NODE    850.00 TO NODE    856.00 =   969.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    855.00 TO NODE    856.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   6.04
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.655
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                    D        0.40      0.20       1.00    94
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D        3.10      0.20       0.50    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.56
  SUBAREA AREA(ACRES) =    3.50      SUBAREA RUNOFF(CFS) =   17.46
  EFFECTIVE AREA(ACRES) =     11.90   AREA-AVERAGED Fm(INCH/HR) =  0.10
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.52
  TOTAL AREA(ACRES) =     11.90       PEAK FLOW RATE(CFS) =      59.45

****************************************************************************
  FLOW PROCESS FROM NODE    856.00 TO NODE    857.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    445.00  DOWNSTREAM(FEET) =    366.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   423.00   CHANNEL SLOPE =  0.1868
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     59.45
  FLOW VELOCITY(FEET/SEC.) =  13.42   FLOW DEPTH(FEET) =   1.33
  TRAVEL TIME(MIN.) =   0.53   Tc(MIN.) =   6.56
  LONGEST FLOWPATH FROM NODE    850.00 TO NODE    857.00 =  1392.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    856.00 TO NODE    857.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   6.56
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  5.384
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                    D        2.30      0.20       1.00    94
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D        1.00      0.20       0.50    75
```

```
  NATURAL FAIR COVER
  "GRASS"                  D        1.30      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.89
  SUBAREA AREA(ACRES) =    4.60      SUBAREA RUNOFF(CFS) =   21.55
  EFFECTIVE AREA(ACRES) =     16.50   AREA-AVERAGED Fm(INCH/HR) =  0.12
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.62
  TOTAL AREA(ACRES) =     16.50       PEAK FLOW RATE(CFS) =      78.10

****************************************************************************
  FLOW PROCESS FROM NODE    857.00 TO NODE    858.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    366.00  DOWNSTREAM(FEET) =    300.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   574.00   CHANNEL SLOPE =  0.1150
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     78.10
  FLOW VELOCITY(FEET/SEC.) =  12.05   FLOW DEPTH(FEET) =   1.73
  TRAVEL TIME(MIN.) =   0.79   Tc(MIN.) =   7.36
  LONGEST FLOWPATH FROM NODE    850.00 TO NODE    858.00 =  1966.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    857.00 TO NODE    858.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   7.36
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.974
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B        0.20      0.30      1.00    69
  AGRICULTURAL POOR COVER
  "FALLOW"                   D        0.50      0.20      1.00    94
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        0.10      0.20      0.50    75
  NATURAL FAIR COVER
  "GRASS"                    D        2.80      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.99
  SUBAREA AREA(ACRES) =    3.60      SUBAREA RUNOFF(CFS) =   15.46
  EFFECTIVE AREA(ACRES) =     20.10   AREA-AVERAGED Fm(INCH/HR) =  0.14
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.69
  TOTAL AREA(ACRES) =     20.10       PEAK FLOW RATE(CFS) =      87.48

****************************************************************************
  FLOW PROCESS FROM NODE    858.00 TO NODE    859.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    300.00  DOWNSTREAM(FEET) =    276.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   341.00   CHANNEL SLOPE =  0.0704
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     87.48
  FLOW VELOCITY(FEET/SEC.) =  10.26   FLOW DEPTH(FEET) =   1.78
  TRAVEL TIME(MIN.) =   0.55   Tc(MIN.) =   7.91
  LONGEST FLOWPATH FROM NODE    850.00 TO NODE    859.00 =  2307.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    858.00 TO NODE    859.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   7.91
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.779
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B        1.10      0.30      1.00    69
  AGRICULTURAL POOR COVER
  "FALLOW"                   D        1.10      0.20      1.00    94
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        9.10      0.20      0.50    75
  NATURAL FAIR COVER
  "GRASS"                    D        4.00      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.70
  SUBAREA AREA(ACRES) =   15.30      SUBAREA RUNOFF(CFS) =   63.77
  EFFECTIVE AREA(ACRES) =     35.40   AREA-AVERAGED Fm(INCH/HR) =  0.14
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  0.69
  TOTAL AREA(ACRES) =     35.40       PEAK FLOW RATE(CFS) =     147.71

****************************************************************************
  FLOW PROCESS FROM NODE    859.00 TO NODE    860.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    276.00  DOWNSTREAM(FEET) =    250.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   634.00   CHANNEL SLOPE =  0.0410
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    147.71
  FLOW VELOCITY(FEET/SEC.) =   9.62   FLOW DEPTH(FEET) =   2.70
  TRAVEL TIME(MIN.) =   1.10   Tc(MIN.) =   9.01
  LONGEST FLOWPATH FROM NODE    850.00 TO NODE    860.00 =  2941.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    859.00 TO NODE    860.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =   9.01
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.453
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                   B        0.60      0.30      1.00    86
  NATURAL FAIR COVER
  "GRASS"                    B        1.50      0.30      1.00    69
  AGRICULTURAL POOR COVER
  "FALLOW"                   D        3.40      0.20      1.00    94
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"       D        3.40      0.20      0.50    75
  NATURAL FAIR COVER
  "GRASS"                    D        6.30      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.89
  SUBAREA AREA(ACRES) =   15.20      SUBAREA RUNOFF(CFS) =   58.30
  EFFECTIVE AREA(ACRES) =     50.60   AREA-AVERAGED Fm(INCH/HR) =  0.16
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  0.75
  TOTAL AREA(ACRES) =     50.60       PEAK FLOW RATE(CFS) =     195.65

****************************************************************************
  FLOW PROCESS FROM NODE    860.00 TO NODE    861.00 IS CODE =  51
----------------------------------------------------------------------------
```

```
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    250.00  DOWNSTREAM(FEET) =    230.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   885.00   CHANNEL SLOPE =  0.0226
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    195.65
  FLOW VELOCITY(FEET/SEC.) =   8.24   FLOW DEPTH(FEET) =   3.27
  TRAVEL TIME(MIN.) =   1.79   Tc(MIN.) =  10.80
  LONGEST FLOWPATH FROM NODE    850.00 TO NODE    861.00 =  3826.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    860.00 TO NODE    861.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.80
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.000
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                    B        0.10      0.30       1.00    86
  NATURAL FAIR COVER
  "GRASS"                     B        0.10      0.30       1.00    69
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        B        2.60      0.30       0.20    56
  AGRICULTURAL POOR COVER
  "FALLOW"                    D        0.20      0.20       1.00    94
  NATURAL FAIR COVER
  "GRASS"                     D        2.30      0.20       1.00    84
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        D        2.40      0.20       0.20    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.48
  SUBAREA AREA(ACRES) =    7.70      SUBAREA RUNOFF(CFS) =   26.99
  EFFECTIVE AREA(ACRES) =     58.30   AREA-AVERAGED Fm(INCH/HR) =  0.15
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  0.72
  TOTAL AREA(ACRES) =     58.30       PEAK FLOW RATE(CFS) =     202.00

****************************************************************************
  FLOW PROCESS FROM NODE    861.00 TO NODE    862.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   230.00  DOWNSTREAM(FEET) =   225.00
  FLOW LENGTH(FEET) =    83.00   MANNING'S N =  0.013
  DEPTH OF FLOW IN  42.0 INCH PIPE IS  30.1 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  27.39
  ESTIMATED PIPE DIAMETER(INCH) =  42.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =    202.00
  PIPE TRAVEL TIME(MIN.) =   0.05    Tc(MIN.) =  10.85
  LONGEST FLOWPATH FROM NODE    850.00 TO NODE    862.00 =  3909.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    861.00 TO NODE    862.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.85
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.990
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  AGRICULTURAL POOR COVER
  "FALLOW"                    B        0.40      0.30       1.00    86
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        B       17.00      0.30       0.20    56
  AGRICULTURAL POOR COVER
  "FALLOW"                    D       11.00      0.20       1.00    94
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D       59.60      0.20       0.50    75
  NATURAL FAIR COVER
  "GRASS"                     D        5.60      0.20       1.00    84
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        D       51.80      0.20       0.20    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.42
  SUBAREA AREA(ACRES) =  145.40      SUBAREA RUNOFF(CFS) =  510.89
  EFFECTIVE AREA(ACRES) =    203.70   AREA-AVERAGED Fm(INCH/HR) =  0.10
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  0.50
  TOTAL AREA(ACRES) =    203.70       PEAK FLOW RATE(CFS) =     712.35

****************************************************************************
  FLOW PROCESS FROM NODE    862.00 TO NODE    863.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    225.00  DOWNSTREAM(FEET) =    165.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2196.00   CHANNEL SLOPE =  0.0273
  CHANNEL BASE(FEET) =    6.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   6.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    712.35
  FLOW VELOCITY(FEET/SEC.) =  12.24   FLOW DEPTH(FEET) =   5.20
  TRAVEL TIME(MIN.) =   2.99   Tc(MIN.) =  13.84
  LONGEST FLOWPATH FROM NODE    850.00 TO NODE    863.00 =  6105.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    862.00 TO NODE    863.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  13.84
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.467
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        A        6.50      0.40       0.20    32
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        0.10      0.30       1.00    69
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        B       57.20      0.30       0.20    56
  RESIDENTIAL
  "5-7 DWELLINGS/ACRE"        D       23.50      0.20       0.50    75
  NATURAL FAIR COVER
  "GRASS"                     D       11.70      0.20       1.00    84
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        D       53.10      0.20       0.20    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.23
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.31
  SUBAREA AREA(ACRES) =  152.10      SUBAREA RUNOFF(CFS) =  464.86
  EFFECTIVE AREA(ACRES) =    355.80   AREA-AVERAGED Fm(INCH/HR) =  0.09
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  0.42
  TOTAL AREA(ACRES) =    355.80       PEAK FLOW RATE(CFS) =    1081.32

****************************************************************************
  FLOW PROCESS FROM NODE    862.00 TO NODE    863.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
  MAINLINE Tc(MIN) =  13.84
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.467
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "CHAPARRAL,BROADLEAF"       D        4.90      0.20       1.00    81
  NATURAL FAIR COVER
  "WOODLAND"                  D        0.20      0.20       1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    5.10      SUBAREA RUNOFF(CFS) =   14.99
  EFFECTIVE AREA(ACRES) =    360.90   AREA-AVERAGED Fm(INCH/HR) =  0.09
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  0.43
  TOTAL AREA(ACRES) =    360.90       PEAK FLOW RATE(CFS) =    1096.31

****************************************************************************
  FLOW PROCESS FROM NODE    863.00 TO NODE    864.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    165.00  DOWNSTREAM(FEET) =    154.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1172.00   CHANNEL SLOPE =  0.0094
  CHANNEL BASE(FEET) =    8.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   8.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1096.31
  FLOW VELOCITY(FEET/SEC.) =   9.13   FLOW DEPTH(FEET) =   7.66
  TRAVEL TIME(MIN.) =   2.14   Tc(MIN.) =  15.98
  LONGEST FLOWPATH FROM NODE    850.00 TO NODE    864.00 =  7277.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    863.00 TO NODE    864.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  15.98
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.190
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                  B        0.40      0.30       0.10    56
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        B        0.10      0.30       0.20    56
  NATURAL FAIR COVER
  "WOODLAND"                  B        0.20      0.30       1.00    60
  URBAN FAIR COVER
  "TURF"                      D        1.20      0.20       1.00    82
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.20      0.20       1.00    83
  COMMERCIAL                  D        0.90      0.20       0.10    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.58
  SUBAREA AREA(ACRES) =    3.00      SUBAREA RUNOFF(CFS) =    8.28
  EFFECTIVE AREA(ACRES) =    363.90   AREA-AVERAGED Fm(INCH/HR) =  0.09
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  0.43
  TOTAL AREA(ACRES) =    363.90       PEAK FLOW RATE(CFS) =    1096.31
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE    863.00 TO NODE    864.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  15.98
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.190
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap      SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"        D        5.30      0.20       0.20    75
  NATURAL FAIR COVER
  "WOODLAND"                  D        4.60      0.20       1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.57
  SUBAREA AREA(ACRES) =    9.90      SUBAREA RUNOFF(CFS) =   27.41
  EFFECTIVE AREA(ACRES) =    373.80   AREA-AVERAGED Fm(INCH/HR) =  0.09
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  0.43
  TOTAL AREA(ACRES) =    373.80       PEAK FLOW RATE(CFS) =    1096.31
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE    864.00 TO NODE    864.00 IS CODE =  1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  15.98
  RAINFALL INTENSITY(INCH/HR) =   3.19
  AREA-AVERAGED Fm(INCH/HR) =  0.09
  AREA-AVERAGED Fp(INCH/HR) =  0.21
  AREA-AVERAGED Ap =  0.43
  EFFECTIVE STREAM AREA(ACRES) =   373.80
  TOTAL STREAM AREA(ACRES) =   373.80
  PEAK FLOW RATE(CFS) AT CONFLUENCE =   1096.31
  ** CONFLUENCE DATA **
  STREAM      Q         Tc      AREA      HEADWATER
  NUMBER    (CFS)     (MIN.)   (ACRES)      NODE
     1      4748.70   75.55     5527.70     3100.00
     2      1096.31   15.98      373.80      850.00

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  UNIT-HYDROGRAPH DATA:
  RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
  S-GRAPH: VALLEY(DEV.)= 16.0%;VALLEY(UNDEV.)/DESERT=  8.0%
           MOUNTAIN= 62.0%;FOOTHILL= 14.0%;DESERT(UNDEV.)=  0.0%
  Tc(HR) = 1.26; LAG(HR) = 1.01; Fm(INCH/HR) = 0.22; Ybar = 0.40
  USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
  DEPTH-AREA FACTORS: 5M = 0.76; 30M = 0.76; 1HR = 0.76;
  3HR = 0.96; 6HR = 0.98; 24HR= 0.99
  UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =   5901.50
  LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    864.00 = 47356.00 FEET.
   EQUIVALENT BASIN FACTOR APPROXIMATIONS:
   Lca/L=0.3,n=.0309; Lca/L=0.4,n=.0277; Lca/L=0.5,n=.0254;Lca/L=0.6,n=.0237
  TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1772.69
  PEAK FLOW RATE(CFS) =   4083.69
    (UPSTREAM NODE PEAK FLOW RATE(CFS) =   4748.70)
  PEAK FLOW RATE(CFS) USED =   4748.70

****************************************************************************
  FLOW PROCESS FROM NODE    864.00 TO NODE    884.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    154.00  DOWNSTREAM(FEET) =    135.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  6117.00   CHANNEL SLOPE =  0.0031
  CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   4748.70
  FLOW VELOCITY(FEET/SEC.) =   8.24   FLOW DEPTH(FEET) =   5.95
  TRAVEL TIME(MIN.) =  12.37   Tc(MIN.) =  87.92
```

```
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    884.00 = 53473.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    864.00 TO NODE    884.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  87.92
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.197
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "CHAPARRAL,BROADLEAF"       A        1.30      0.40       1.00    40
 AGRICULTURAL POOR COVER
 "FALLOW"                    A        0.30      0.40       1.00    77
 NATURAL FAIR COVER
 "GRASS"                     A        0.10      0.40       1.00    50
 AGRICULTURAL FAIR COVER
 "ORCHARDS"                  A        0.10      0.40       1.00    44
 COMMERCIAL                  A        8.50      0.40       0.10    32
 AGRICULTURAL FAIR COVER
 "PASTURE,DRYLAND"           A        1.00      0.40       1.00    49
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.32
 SUBAREA AREA(ACRES) =   11.30
 UNIT-HYDROGRAPH DATA:
 RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
 S-GRAPH: VALLEY(DEV.)= 16.0%;VALLEY(UNDEV.)/DESERT=  8.0%
          MOUNTAIN= 62.0%;FOOTHILL= 14.0%;DESERT(UNDEV.)=  0.0%
 Tc(HR) = 1.47; LAG(HR) = 1.17; Fm(INCH/HR) = 0.22; Ybar = 0.40
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.76; 30M = 0.76; 1HR = 0.76;
 3HR = 0.96; 6HR = 0.98; 24HR= 0.99
 UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =   5912.80
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    884.00 = 53473.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0321; Lca/L=0.4,n=.0288; Lca/L=0.5,n=.0265;Lca/L=0.6,n=.0247
 TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1776.50
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3843.56
 TOTAL AREA(ACRES) =   5912.80       PEAK FLOW RATE(CFS) =    4748.70
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE    864.00 TO NODE    884.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  87.92
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.197
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"        A        0.30      0.40       0.60    32
 NATURAL FAIR COVER
 "WOODLAND"                  A        2.80      0.40       1.00    36
 AGRICULTURAL POOR COVER
 "FALLOW"                    B        0.10      0.30       1.00    86
 NATURAL FAIR COVER
 "GRASS"                     B        0.20      0.30       1.00    69
 AGRICULTURAL FAIR COVER
 "ORCHARDS"                  B        0.20      0.30       1.00    65
 COMMERCIAL                  B       11.80      0.30       0.10    56
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.36
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.30
 SUBAREA AREA(ACRES) =   15.40
 UNIT-HYDROGRAPH DATA:
 RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
 S-GRAPH: VALLEY(DEV.)= 16.0%;VALLEY(UNDEV.)/DESERT=  8.0%
          MOUNTAIN= 62.0%;FOOTHILL= 14.0%;DESERT(UNDEV.)=  0.0%
 Tc(HR) = 1.47; LAG(HR) = 1.17; Fm(INCH/HR) = 0.22; Ybar = 0.40
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.76; 30M = 0.76; 1HR = 0.76;
 3HR = 0.96; 6HR = 0.98; 24HR= 0.99
 UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =   5928.20
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    884.00 = 53473.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0321; Lca/L=0.4,n=.0288; Lca/L=0.5,n=.0265;Lca/L=0.6,n=.0247
 TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1781.84
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3853.43
 TOTAL AREA(ACRES) =   5928.20       PEAK FLOW RATE(CFS) =    4748.70
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE    864.00 TO NODE    884.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  87.92
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.197
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
      LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "GRASS"                     D        1.10      0.20       1.00    84
 AGRICULTURAL FAIR COVER
 "ORCHARDS"                  D        0.40      0.20       1.00    82
 COMMERCIAL                  D        1.40      0.20       0.10    75
 NATURAL FAIR COVER
 "WOODLAND"                  D        3.90      0.20       1.00    79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.81
 SUBAREA AREA(ACRES) =    6.80
 UNIT-HYDROGRAPH DATA:
 RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
 S-GRAPH: VALLEY(DEV.)= 16.0%;VALLEY(UNDEV.)/DESERT=  8.0%
          MOUNTAIN= 62.0%;FOOTHILL= 14.0%;DESERT(UNDEV.)=  0.0%
 Tc(HR) = 1.47; LAG(HR) = 1.17; Fm(INCH/HR) = 0.22; Ybar = 0.40
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.76; 30M = 0.76; 1HR = 0.76;
 3HR = 0.96; 6HR = 0.98; 24HR= 0.99
 UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =   5935.00
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    884.00 = 53473.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0321; Lca/L=0.4,n=.0288; Lca/L=0.5,n=.0265;Lca/L=0.6,n=.0247
 TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    1784.06
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   3857.50
 TOTAL AREA(ACRES) =   5935.00       PEAK FLOW RATE(CFS) =    4748.70
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
 FLOW PROCESS FROM NODE    884.00 TO NODE    884.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 PEAK FLOW RATE(CFS) =    4748.70    Tc(MIN.) =  87.92
 AREA-AVERAGED Fm(INCH/HR) =  0.22   Ybar = 0.40
 TOTAL AREA(ACRES) =    5935.00

****************************************************************************
 FLOW PROCESS FROM NODE    870.00 TO NODE    871.00 IS CODE =  21
```

```
------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
  >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
========================================================================
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   257.00
  ELEVATION DATA: UPSTREAM(FEET) =   1123.00  DOWNSTREAM(FEET) =   1075.00

  Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
  SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) =    9.089
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.430
  SUBAREA Tc AND LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS   Tc
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
  NATURAL FAIR COVER
  "GRASS"                     D        0.60      0.20       1.00    84    9.09
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =      2.28
  TOTAL AREA(ACRES) =      0.60   PEAK FLOW RATE(CFS) =      2.28

************************************************************************
  FLOW PROCESS FROM NODE    871.00 TO NODE    872.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1075.00  DOWNSTREAM(FEET) =   1025.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   160.00   CHANNEL SLOPE =  0.3125
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      2.28
  FLOW VELOCITY(FEET/SEC.) =   6.90   FLOW DEPTH(FEET) =   0.26
  TRAVEL TIME(MIN.) =   0.39   Tc(MIN.) =   9.48
  LONGEST FLOWPATH FROM NODE    870.00 TO NODE    872.00 =   417.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE    871.00 TO NODE    872.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =   9.48
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.315
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     D        0.80      0.20       1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.80      SUBAREA RUNOFF(CFS) =    2.96
  EFFECTIVE AREA(ACRES) =      1.40   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      1.40       PEAK FLOW RATE(CFS) =       5.19

************************************************************************
  FLOW PROCESS FROM NODE    872.00 TO NODE    873.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1025.00  DOWNSTREAM(FEET) =   1000.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    89.00   CHANNEL SLOPE =  0.2809
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      5.19
  FLOW VELOCITY(FEET/SEC.) =   8.38   FLOW DEPTH(FEET) =   0.43
  TRAVEL TIME(MIN.) =   0.18   Tc(MIN.) =   9.65
  LONGEST FLOWPATH FROM NODE    870.00 TO NODE    873.00 =   506.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE    872.00 TO NODE    873.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =   9.65
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.263
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     D        0.70      0.20       1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    0.70      SUBAREA RUNOFF(CFS) =    2.56
  EFFECTIVE AREA(ACRES) =      2.10   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      2.10       PEAK FLOW RATE(CFS) =       7.68

************************************************************************
  FLOW PROCESS FROM NODE    873.00 TO NODE    874.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1000.00  DOWNSTREAM(FEET) =    980.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    61.00   CHANNEL SLOPE =  0.3279
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      7.68
  FLOW VELOCITY(FEET/SEC.) =   9.87   FLOW DEPTH(FEET) =   0.51
  TRAVEL TIME(MIN.) =   0.10   Tc(MIN.) =   9.76
  LONGEST FLOWPATH FROM NODE    870.00 TO NODE    874.00 =   567.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE    873.00 TO NODE    874.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
  MAINLINE Tc(MIN) =   9.76
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.232
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp          Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     D        2.00      0.20       1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        0.30      0.20       1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    2.30      SUBAREA RUNOFF(CFS) =    8.35
  EFFECTIVE AREA(ACRES) =      4.40   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      4.40       PEAK FLOW RATE(CFS) =      15.97

************************************************************************
  FLOW PROCESS FROM NODE    874.00 TO NODE    875.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    980.00  DOWNSTREAM(FEET) =    950.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   179.00   CHANNEL SLOPE =  0.1676
  CHANNEL BASE(FEET) =    1.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   1.00
```

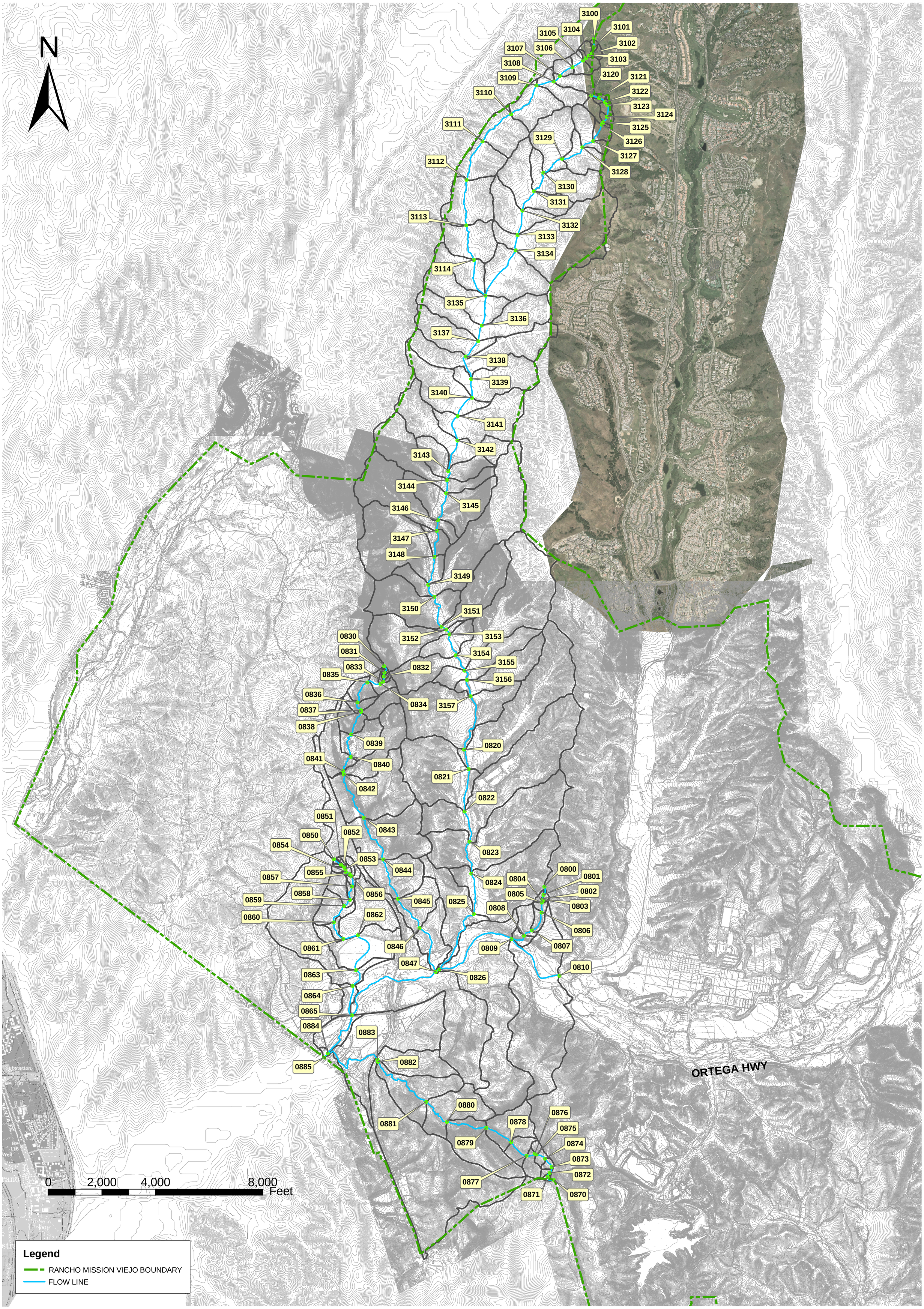
```
  CHANNEL FLOW THRU SUBAREA(CFS) =     15.97
  FLOW VELOCITY(FEET/SEC.) =   9.38   FLOW DEPTH(FEET) =   0.90
  TRAVEL TIME(MIN.) =   0.32   Tc(MIN.) =  10.07
  LONGEST FLOWPATH FROM NODE    870.00 TO NODE    875.00 =   746.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    874.00 TO NODE    875.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.07
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.145
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D        1.00      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.80      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    1.80      SUBAREA RUNOFF(CFS) =    6.39
  EFFECTIVE AREA(ACRES) =      6.20   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      6.20       PEAK FLOW RATE(CFS) =      22.01

****************************************************************************
  FLOW PROCESS FROM NODE    875.00 TO NODE    876.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    950.00  DOWNSTREAM(FEET) =    925.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   146.00   CHANNEL SLOPE =  0.1712
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     22.01
  FLOW VELOCITY(FEET/SEC.) =   9.98   FLOW DEPTH(FEET) =   0.79
  TRAVEL TIME(MIN.) =   0.24   Tc(MIN.) =  10.32
  LONGEST FLOWPATH FROM NODE    870.00 TO NODE    876.00 =   892.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    875.00 TO NODE    876.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.32
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.096
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D        0.60      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        1.70      0.20      1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    2.30      SUBAREA RUNOFF(CFS) =    8.07
  EFFECTIVE AREA(ACRES) =      8.50   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =      8.50       PEAK FLOW RATE(CFS) =      29.81

****************************************************************************
  FLOW PROCESS FROM NODE    876.00 TO NODE    877.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    925.00  DOWNSTREAM(FEET) =    905.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   144.00   CHANNEL SLOPE =  0.1389
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     29.81
  FLOW VELOCITY(FEET/SEC.) =  10.01   FLOW DEPTH(FEET) =   0.99
  TRAVEL TIME(MIN.) =   0.24   Tc(MIN.) =  10.56
  LONGEST FLOWPATH FROM NODE    870.00 TO NODE    877.00 =  1036.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    876.00 TO NODE    877.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  10.56
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.049
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D        0.30      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        0.90      0.20      1.00    83
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D        1.30      0.20      0.20    75
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.58
  SUBAREA AREA(ACRES) =    2.50      SUBAREA RUNOFF(CFS) =    8.85
  EFFECTIVE AREA(ACRES) =     11.00   AREA-AVERAGED Fm(INCH/HR) =  0.18
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.91
  TOTAL AREA(ACRES) =     11.00       PEAK FLOW RATE(CFS) =      38.29

****************************************************************************
  FLOW PROCESS FROM NODE    877.00 TO NODE    878.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    905.00  DOWNSTREAM(FEET) =    860.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   803.00   CHANNEL SLOPE =  0.0560
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     38.29
  FLOW VELOCITY(FEET/SEC.) =   7.69   FLOW DEPTH(FEET) =   1.44
  TRAVEL TIME(MIN.) =   1.74   Tc(MIN.) =  12.30
  LONGEST FLOWPATH FROM NODE    870.00 TO NODE    878.00 =  1839.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    877.00 TO NODE    878.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  12.30
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.701
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D        2.50      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        6.20      0.20      1.00    83
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D        4.30      0.20      0.20    75
  NATURAL FAIR COVER
  "WOODLAND"                 D        0.40      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
```

```
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.74
  SUBAREA AREA(ACRES) =   13.40      SUBAREA RUNOFF(CFS) =   42.84
  EFFECTIVE AREA(ACRES) =     24.40   AREA-AVERAGED Fm(INCH/HR) =  0.16
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.82
  TOTAL AREA(ACRES) =     24.40       PEAK FLOW RATE(CFS) =      77.68

****************************************************************************
  FLOW PROCESS FROM NODE    878.00 TO NODE    879.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    860.00  DOWNSTREAM(FEET) =    755.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1104.00   CHANNEL SLOPE =  0.0951
  CHANNEL BASE(FEET) =    2.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =     77.68
  FLOW VELOCITY(FEET/SEC.) =  11.24   FLOW DEPTH(FEET) =   1.81
  TRAVEL TIME(MIN.) =   1.64   Tc(MIN.) =  13.93
  LONGEST FLOWPATH FROM NODE    870.00 TO NODE    879.00 =  2943.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    878.00 TO NODE    879.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  13.93
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.453
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D        0.80      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       10.40      0.20      1.00    83
  RESIDENTIAL
  "11+ DWELLINGS/ACRE"       D        5.40      0.20      0.20    75
  NATURAL FAIR COVER
  "WOODLAND"                 D        2.90      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.78
  SUBAREA AREA(ACRES) =   19.50      SUBAREA RUNOFF(CFS) =   57.88
  EFFECTIVE AREA(ACRES) =     43.90   AREA-AVERAGED Fm(INCH/HR) =  0.16
  AREA-AVERAGED Fp(INCH/HR) =  0.20  AREA-AVERAGED Ap =  0.80
  TOTAL AREA(ACRES) =     43.90       PEAK FLOW RATE(CFS) =     130.13

****************************************************************************
  FLOW PROCESS FROM NODE    879.00 TO NODE    880.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    755.00  DOWNSTREAM(FEET) =    533.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1578.00   CHANNEL SLOPE =  0.1407
  CHANNEL BASE(FEET) =    3.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   3.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    130.13
  FLOW VELOCITY(FEET/SEC.) =  14.68   FLOW DEPTH(FEET) =   1.83
  TRAVEL TIME(MIN.) =   1.79   Tc(MIN.) =  15.73
  LONGEST FLOWPATH FROM NODE    870.00 TO NODE    880.00 =  4521.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    879.00 TO NODE    880.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  15.73
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.219
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C        9.80      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       11.40      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        1.10      0.25      1.00    73
  NATURAL FAIR COVER
  "GRASS"                    D        8.30      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       38.20      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D        8.70      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.21
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   77.50      SUBAREA RUNOFF(CFS) =  209.55
  EFFECTIVE AREA(ACRES) =    121.40   AREA-AVERAGED Fm(INCH/HR) =  0.19
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  0.93
  TOTAL AREA(ACRES) =    121.40       PEAK FLOW RATE(CFS) =     330.40

****************************************************************************
  FLOW PROCESS FROM NODE    880.00 TO NODE    881.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    533.00  DOWNSTREAM(FEET) =    415.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1236.00   CHANNEL SLOPE =  0.0955
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    330.40
  FLOW VELOCITY(FEET/SEC.) =  16.12   FLOW DEPTH(FEET) =   2.95
  TRAVEL TIME(MIN.) =   1.28   Tc(MIN.) =  17.00
  LONGEST FLOWPATH FROM NODE    870.00 TO NODE    881.00 =  5757.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    880.00 TO NODE    881.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  17.00
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.076
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    C       30.10      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       15.30      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        2.00      0.25      1.00    73
  NATURAL FAIR COVER
  "GRASS"                    D       11.30      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D        5.10      0.20      1.00    83
  NATURAL FAIR COVER
  "WOODLAND"                 D        1.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.24
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   64.90      SUBAREA RUNOFF(CFS) =  165.83
  EFFECTIVE AREA(ACRES) =    186.30   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.95
  TOTAL AREA(ACRES) =    186.30       PEAK FLOW RATE(CFS) =     480.59
```

```
****************************************************************************
  FLOW PROCESS FROM NODE    881.00 TO NODE    882.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    415.00  DOWNSTREAM(FEET) =    190.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2805.00   CHANNEL SLOPE =  0.0802
  CHANNEL BASE(FEET) =    4.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   4.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    480.59
  FLOW VELOCITY(FEET/SEC.) =  16.63   FLOW DEPTH(FEET) =   3.74
  TRAVEL TIME(MIN.) =   2.81   Tc(MIN.) =  19.82
  LONGEST FLOWPATH FROM NODE    870.00 TO NODE    882.00 =  8562.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    881.00 TO NODE    882.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.82
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.816
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B        0.50      0.30      1.00    69
  NATURAL FAIR COVER
  "WOODLAND"                 B        0.20      0.30      1.00    60
  NATURAL FAIR COVER
  "GRASS"                    C       18.20      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       10.80      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        1.20      0.25      1.00    73
  NATURAL FAIR COVER
  "GRASS"                    D       36.30      0.20      1.00    84
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.22
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   67.20      SUBAREA RUNOFF(CFS) =  156.81
  EFFECTIVE AREA(ACRES) =    253.50   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =    253.50       PEAK FLOW RATE(CFS) =     593.92

****************************************************************************
  FLOW PROCESS FROM NODE    881.00 TO NODE    882.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.82
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.816
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "WOODLAND"                 D        7.10      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    7.10      SUBAREA RUNOFF(CFS) =   16.72
  EFFECTIVE AREA(ACRES) =    260.60   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =    260.60       PEAK FLOW RATE(CFS) =     610.64

****************************************************************************
  FLOW PROCESS FROM NODE    882.00 TO NODE    883.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    190.00  DOWNSTREAM(FEET) =    184.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    86.00   CHANNEL SLOPE =  0.0698
  CHANNEL BASE(FEET) =    5.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.040   MAXIMUM DEPTH(FEET) =   5.00
  CHANNEL FLOW THRU SUBAREA(CFS) =    610.64
  FLOW VELOCITY(FEET/SEC.) =  16.72   FLOW DEPTH(FEET) =   4.04
  TRAVEL TIME(MIN.) =   0.09   Tc(MIN.) =  19.90
  LONGEST FLOWPATH FROM NODE    870.00 TO NODE    883.00 =  8648.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    882.00 TO NODE    883.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.90
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.809
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    B        1.70      0.30      1.00    69
  COMMERCIAL                 B        0.30      0.30      0.10    56
  NATURAL FAIR COVER
  "GRASS"                    C       46.00      0.25      1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"               C       20.20      0.25      1.00    77
  NATURAL FAIR COVER
  "WOODLAND"                 C        4.40      0.25      1.00    73
  NATURAL POOR COVER
  "BARREN"                   D        0.40      0.20      1.00    93
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.25
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   73.00      SUBAREA RUNOFF(CFS) =  168.11
  EFFECTIVE AREA(ACRES) =    333.60   AREA-AVERAGED Fm(INCH/HR) =  0.22
  AREA-AVERAGED Fp(INCH/HR) =  0.23  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =    333.60       PEAK FLOW RATE(CFS) =     776.98

****************************************************************************
  FLOW PROCESS FROM NODE    882.00 TO NODE    883.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  19.90
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.809
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                    D      187.70      0.20      1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"               D       94.40      0.20      1.00    83
  COMMERCIAL                 D        7.70      0.20      0.10    75
  NATURAL FAIR COVER
  "WOODLAND"                 D        7.90      0.20      1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.98
  SUBAREA AREA(ACRES) =  297.70      SUBAREA RUNOFF(CFS) =  700.20
  EFFECTIVE AREA(ACRES) =    631.30   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.21  AREA-AVERAGED Ap =  0.97
  TOTAL AREA(ACRES) =    631.30       PEAK FLOW RATE(CFS) =    1477.18

****************************************************************************
  FLOW PROCESS FROM NODE    883.00 TO NODE    884.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
```

```
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    184.00  DOWNSTREAM(FEET) =    135.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2633.00   CHANNEL SLOPE =  0.0186
  CHANNEL BASE(FEET) =    7.00   "Z" FACTOR =   1.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =   7.00
  CHANNEL FLOW THRU SUBAREA(CFS) =   1477.18
  FLOW VELOCITY(FEET/SEC.) =  15.79   FLOW DEPTH(FEET) =   6.79
  TRAVEL TIME(MIN.) =   2.78   Tc(MIN.) =  22.68
  LONGEST FLOWPATH FROM NODE    870.00 TO NODE    884.00 = 11281.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    883.00 TO NODE    884.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  22.68
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.599
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  NATURAL FAIR COVER
  "GRASS"                     A        0.70      0.40       1.00    50
  COMMERCIAL                  A        1.60      0.40       0.10    32
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           A        0.60      0.40       1.00    49
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"        A       30.70      0.40       0.60    32
  NATURAL FAIR COVER
  "WOODLAND"                  A        1.50      0.40       1.00    36
  NATURAL POOR COVER
  "BARREN"                    B        2.00      0.30       1.00    86
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.39
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.63
  SUBAREA AREA(ACRES) =   37.10      SUBAREA RUNOFF(CFS) =   78.55
  EFFECTIVE AREA(ACRES) =    668.40   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.96
  TOTAL AREA(ACRES) =    668.40       PEAK FLOW RATE(CFS) =    1477.18
  NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

****************************************************************************
  FLOW PROCESS FROM NODE    883.00 TO NODE    884.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  22.68
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.599
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                  B        7.20      0.30       0.10    56
  AGRICULTURAL FAIR COVER
  "PASTURE,DRYLAND"           B        1.10      0.30       1.00    69
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"        B       14.80      0.30       0.60    56
  NATURAL FAIR COVER
  "WOODLAND"                  B        2.00      0.30       1.00    60
  NATURAL FAIR COVER
  "GRASS"                     C       23.10      0.25       1.00    79
  NATURAL FAIR COVER
  "OPEN BRUSH"                C        7.30      0.25       1.00    77
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.26
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.78
  SUBAREA AREA(ACRES) =   55.50      SUBAREA RUNOFF(CFS) =  119.56
  EFFECTIVE AREA(ACRES) =    723.90   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.94
  TOTAL AREA(ACRES) =    723.90       PEAK FLOW RATE(CFS) =    1556.26

****************************************************************************
  FLOW PROCESS FROM NODE    883.00 TO NODE    884.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  22.68
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.599
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                  C        6.20      0.25       0.10    69
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"        C        0.90      0.25       0.60    69
  NATURAL FAIR COVER
  "WOODLAND"                  C        0.30      0.25       1.00    73
  NATURAL POOR COVER
  "BARREN"                    D        0.20      0.20       1.00    93
  NATURAL FAIR COVER
  "GRASS"                     D       21.80      0.20       1.00    84
  NATURAL FAIR COVER
  "OPEN BRUSH"                D        1.60      0.20       1.00    83
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.81
  SUBAREA AREA(ACRES) =   31.00      SUBAREA RUNOFF(CFS) =   67.94
  EFFECTIVE AREA(ACRES) =    754.90   AREA-AVERAGED Fm(INCH/HR) =  0.21
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.94
  TOTAL AREA(ACRES) =    754.90       PEAK FLOW RATE(CFS) =    1624.20

****************************************************************************
  FLOW PROCESS FROM NODE    883.00 TO NODE    884.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  MAINLINE Tc(MIN) =  22.68
  * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.599
  SUBAREA LOSS RATE DATA(AMC  II):
   DEVELOPMENT TYPE/       SCS SOIL   AREA      Fp         Ap     SCS
       LAND USE             GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
  COMMERCIAL                  D       44.40      0.20       0.10    75
  RESIDENTIAL
  "3-4 DWELLINGS/ACRE"        D        6.00      0.20       0.60    75
  NATURAL FAIR COVER
  "WOODLAND"                  D        1.40      0.20       1.00    79
  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.20
  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  0.18
  SUBAREA AREA(ACRES) =   51.80      SUBAREA RUNOFF(CFS) =  119.48
  EFFECTIVE AREA(ACRES) =    806.70   AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.22  AREA-AVERAGED Ap =  0.89
  TOTAL AREA(ACRES) =    806.70       PEAK FLOW RATE(CFS) =    1743.68

****************************************************************************
  FLOW PROCESS FROM NODE    884.00 TO NODE    884.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  22.68
  RAINFALL INTENSITY(INCH/HR) =   2.60
  AREA-AVERAGED Fm(INCH/HR) =  0.20
  AREA-AVERAGED Fp(INCH/HR) =  0.22
  AREA-AVERAGED Ap =  0.89
  EFFECTIVE STREAM AREA(ACRES) =   806.70
  TOTAL STREAM AREA(ACRES) =   806.70
  PEAK FLOW RATE(CFS) AT CONFLUENCE =   1743.68
```

```
 ** CONFLUENCE DATA **
 STREAM       Q        Tc      AREA      HEADWATER
 NUMBER     (CFS)    (MIN.)   (ACRES)      NODE
    1      4748.70   87.92     5935.00     3100.00
    2      1743.68   22.68      806.70      870.00

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 UNIT-HYDROGRAPH DATA:
 RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
 S-GRAPH: VALLEY(DEV.)= 16.0%;VALLEY(UNDEV.)/DESERT=  8.0%
          MOUNTAIN= 62.0%;FOOTHILL= 14.0%;DESERT(UNDEV.)=  0.0%
 Tc(HR) = 1.47; LAG(HR) = 1.17; Fm(INCH/HR) = 0.22; Ybar = 0.39
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.74; 30M = 0.74; 1HR = 0.74;
 3HR = 0.96; 6HR = 0.98; 24HR= 0.99
 UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =   6741.70
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    884.00 = 53473.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0321; Lca/L=0.4,n=.0288; Lca/L=0.5,n=.0265;Lca/L=0.6,n=.0247
 TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    2036.33
 PEAK FLOW RATE(CFS) =   4308.35
   (UPSTREAM NODE PEAK FLOW RATE(CFS) =   4748.70)
 PEAK FLOW RATE(CFS) USED =   4748.70

****************************************************************************
 FLOW PROCESS FROM NODE    884.00 TO NODE    885.00 IS CODE =  51
----------------------------------------------------------------------------
 >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    135.00  DOWNSTREAM(FEET) =    132.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   207.00   CHANNEL SLOPE =  0.0145
 CHANNEL BASE(FEET) =   85.00   "Z" FACTOR =   2.000
 MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =  15.00
 CHANNEL FLOW THRU SUBAREA(CFS) =   4748.70
 FLOW VELOCITY(FEET/SEC.) =  13.57   FLOW DEPTH(FEET) =   3.78
 TRAVEL TIME(MIN.) =   0.25   Tc(MIN.) =  88.17
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    885.00 = 53680.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    884.00 TO NODE    885.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 MAINLINE Tc(MIN) =  88.17
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.195
 SUBAREA LOSS RATE DATA(AMC  II):
  DEVELOPMENT TYPE/      SCS SOIL   AREA      Fp         Ap     SCS
      LAND USE            GROUP   (ACRES)  (INCH/HR)  (DECIMAL)  CN
 NATURAL FAIR COVER
 "WOODLAND"                 A        1.30      0.40      1.00    36
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =  0.40
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    1.30
 UNIT-HYDROGRAPH DATA:
 RAINFALL(INCH): 5M= 0.52;30M= 1.09;1H= 1.45;3H= 2.43;6H= 3.36;24H= 5.63
 S-GRAPH: VALLEY(DEV.)= 16.0%;VALLEY(UNDEV.)/DESERT=  8.0%
          MOUNTAIN= 62.0%;FOOTHILL= 14.0%;DESERT(UNDEV.)=  0.0%
 Tc(HR) = 1.47; LAG(HR) = 1.18; Fm(INCH/HR) = 0.22; Ybar = 0.39
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC  II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.74; 30M = 0.74; 1HR = 0.74;
 3HR = 0.96; 6HR = 0.98; 24HR= 0.99
 UNIT-INTERVAL(MIN) = 10.00   TOTAL AREA(ACRES) =   6743.00
 LONGEST FLOWPATH FROM NODE   3100.00 TO NODE    885.00 = 53680.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0321; Lca/L=0.4,n=.0288; Lca/L=0.5,n=.0265;Lca/L=0.6,n=.0247
 TIME OF PEAK FLOW(HR) = 16.83  RUNOFF VOLUME(AF) =    2036.45
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) =   4301.63
 TOTAL AREA(ACRES) =   6743.00       PEAK FLOW RATE(CFS) =    4748.70
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
============================================================================
 END OF STUDY SUMMARY:
 TOTAL AREA(ACRES)     =   6743.00  TC(MIN.) =     88.17
 AREA-AVERAGED Fm(INCH/HR)=  0.22   Ybar =  0.39
 PEAK FLOW RATE(CFS)   =   4748.70
============================================================================
============================================================================
 END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
```



HYDROLOGIC MAP FOR EXISTING CONDITION

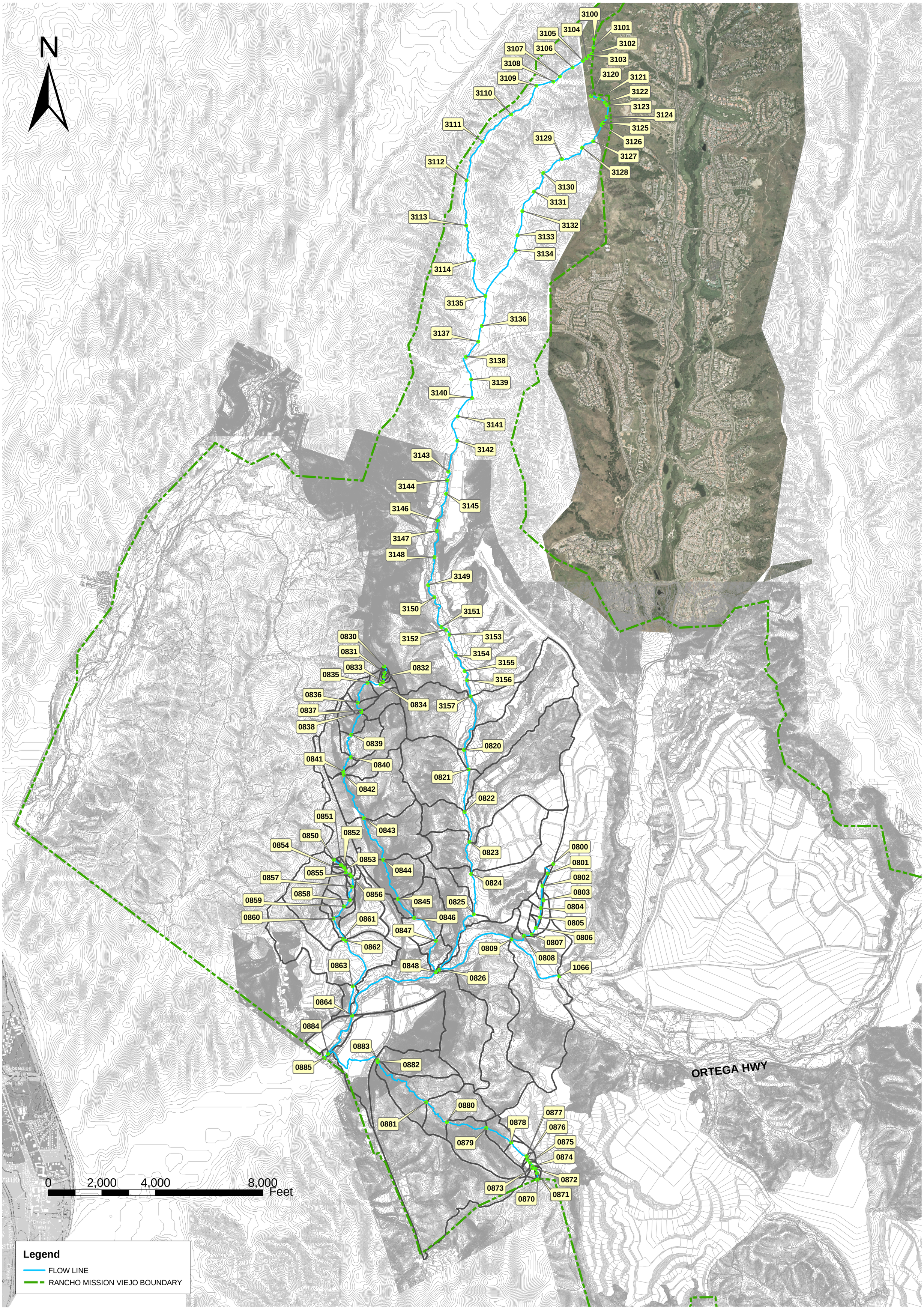
CANADA CHIQUITA CREEK CHANNEL

DATE: APRIL 1, 2004

H:/10075501/PH801/RMV WATERSHED/EX/SUBAREA EXISTING 08.MXD

HUITT~ZOLLARS

(714) 734-5100
430 EXCHANGE, SUITE 200
IRVINE, CA 92602



HYDROLOGIC MAP FOR PROPOSED CONDITION

CANADA CHIQUITA CREEK CHANNEL

DATE: APRIL 1, 2004

H:/10075501/PH801/RMV WATERSHED/EX/SUBAREA PROPOSED 08.MXD

HUITT~ZOLLARS

(714) 734-5100
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Detailed Detention Basin Analysis

Introduction

This analysis has been completed to determine the detention basin storage requirements for a specific proposed village basin to mitigate the increased flows due to development. The intent is that the results from this specific basin analysis can be extrapolated to other development areas in order to estimate planning level basin storage requirements throughout the entire Rancho Mission Viejo project.

The specific location of this analysis is an approximate 320 acre tributary to Canada Gobernadora near it's confluence with San Juan Creek. The drainage area is located west of Canada Gobernadora and encompasses 318.0 acres in the existing condition and 323.1 acres in the proposed condition.

Model Overview

10- and 100-Year expected value and 100-Year high confidence rational method analyses were completed for both the existing and proposed drainage conditions in order to develop the lag parameter for the hydrograph analyses. Single area hydrographs were also prepared for the same return events for both the existing and proposed drainage conditions, based on the lag parameter from the rational method analyses and other parameters. The proposed condition hydrographs were routed through the proposed basins in order to reduce the peak outflow to the existing condition level for all return events analyzed.

Assumptions

Since a detailed basin design has not been contemplated at this stage of the planning process, the basin has been conceptually designed. The basin is assumed to have a square bottom footprint with 3:1 side slopes on the wet side of the basin walls. A maximum hydraulic depth of 10' was assumed and the rating curves for the analysis were extended to a depth 12' to account for any freeboard requirements.

Two basin outlet types were contemplated, a notched weir and a box opening, in order to gauge sensitivity of the basin storage requirements to the outlet design.

The notched weir was designed as follows:

30" opening from basin floor up to a height of 3'
38" opening from a height of 3' to a height of 6'
46" opening from a height of 6' to a height of 9'
54" opening from a height of 9' to a height of 12'

The weir outflow was calculated using a weir coefficient of 3.0.

The box opening was assumed to have a base of 5.5' and a height of 8.0' with the invert positioned at the basin floor. The box outflow was calculated using a weir coefficient of 3.0 and an orifice coefficient of 0.6, dependent of the flow depth.

Detailed Detention Basin Analysis

Results

The results indicate that the box opening design is more efficient in regards to basin storage requirements and also in matching the flow characteristics of the existing condition hydrograph. This is mainly due to the basin allowing more outflow at lower depths, thus not detaining the flows as long and, therefore, not as much. The notched weir design requires approximately 19.5 ac-ft of hydraulic storage while the box opening design requires approximately 14.3 ac-ft of storage. Both detention basin outlet designs allow for the basins to drain within 24 hours of the peak, therefore, multi-day storm analysis should not be necessary.

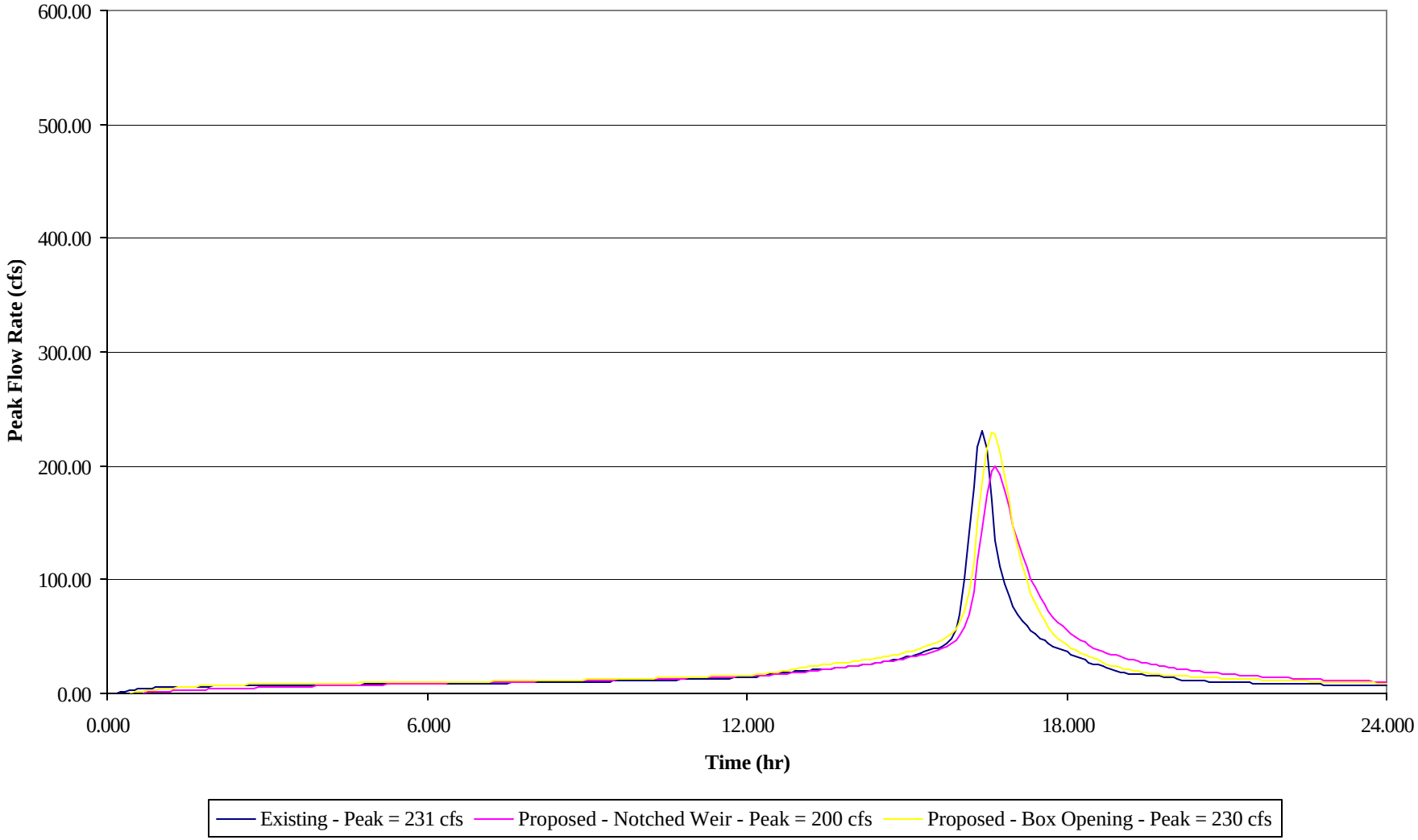
Many different basin designs are possible, outlet configuration and basin geometry will change from these conceptual planning level analyses to final design. Based on the assumptions of this analysis, these results should provide a range of probable basin storage requirements for planning purposes. However, final design of the outlet configuration and basin geometry, as well as the hydrologic analysis, may change these results.

A summary of the hydrologic analysis and graphs of the hydrographs are as follows:

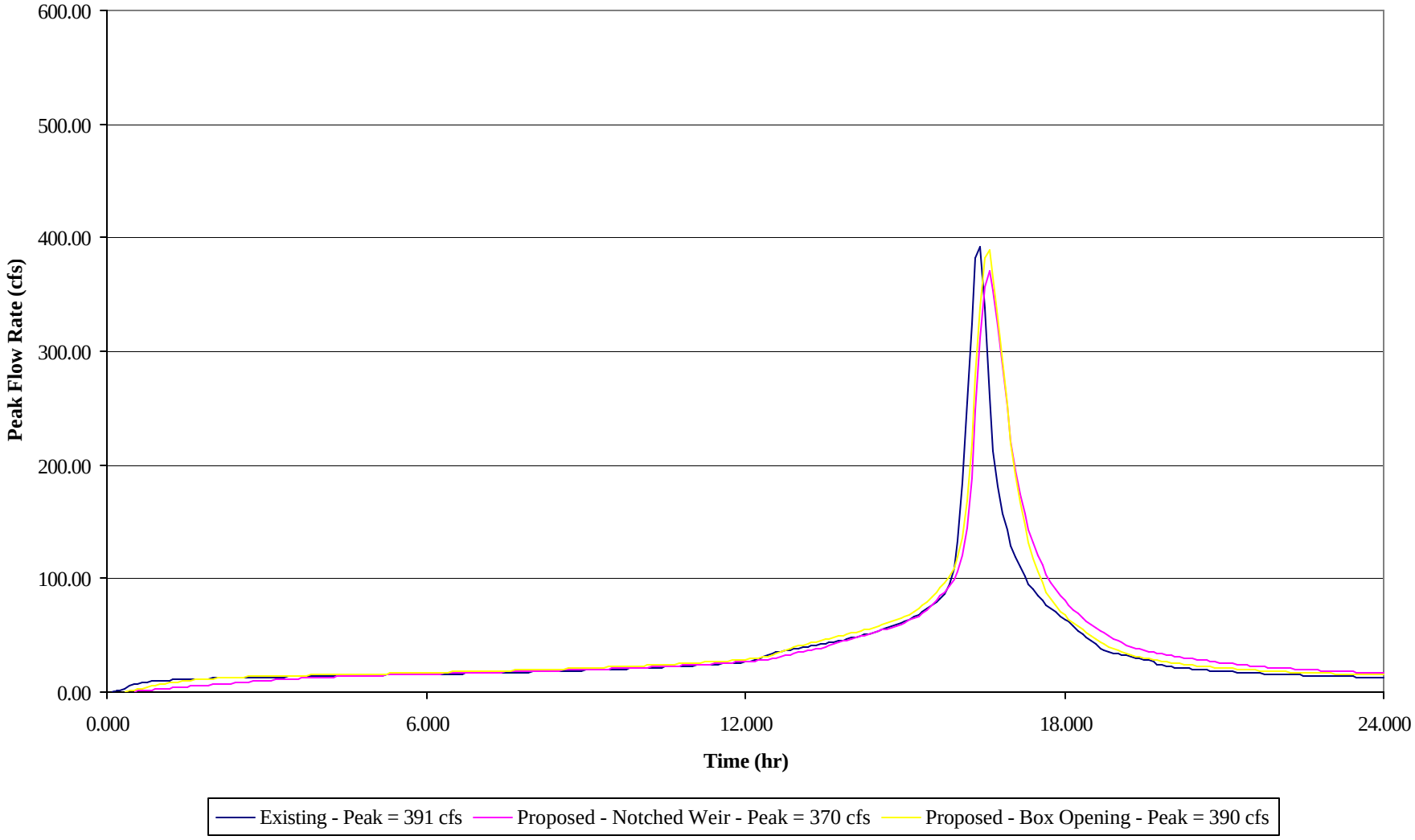
Hydrologic Summary

		Existing Condition	Proposed Condition - Notched Weir				Proposed Condition - Box Opening			
Return Event (yr)	Conf. Level (EV / HC)	Peak Flow Rate (cfs)	Peak Basin Inflow (cfs)	Maximum Basin Depth (ft)	Maximum Basin Storage (ac-ft)	Peak Basin Outflow (cfs)	Peak Basin Inflow (cfs)	Maximum Basin Depth (ft)	Maximum Basin Storage (ac-ft)	Peak Basin Outflow (cfs)
10	EV	230.7	316.4	6.6	11.9	199.7	316.4	5.8	7.6	229.8
100	EV	391.4	531.8	8.7	16.4	370.4	531.8	8.2	11.4	389.7
100	HC	521.8	700.3	10.0	19.5	512.1	700.3	9.9	14.3	508.7

Hydrologic Comparison
10-Year - Expected Value



Hydrologic Comparison
100-Year - Expected Value



Hydrologic Comparison
100-Year - High Confidence

